TRANSMITTAL

To: **THE COUNCIL**

Date: SEP 01 2010

From: **THE MAYOR**

TRANSMITTED FOR YOUR CONSIDERATION. PLEASE SEE ATTACHED.

Brett Messing

ANTONIO R. VILLARAIGOSA
Mayor

CITY OF LOS ANGELES
CALIFORNIA

DEPARTMENT OF
BUILDING AND SAFETY
201 NORTH FIGUEROA STREET
LOS ANGELES, CA 90012

ROBERT R "BUD" OVROM
GENERAL MANAGER

RAYMOND S. CHAN, C.E., S.E.
EXECUTIVE OFFICER

August 27, 2010

Honorable Antonio R. Villaraigosa
Mayor, City of Los Angeles
Room 303, City Hall

Attention: Pamela A. Finely, Legislative Coordinator

PROPOSED ORDINANCES AMENDING CHAPTER IX OF THE LOS ANGELES MUNICIPAL CODE IN THE ADOPTION OF THE 2010 CALIFORNIA BUILDING CODES, INCLUDING THE ELECTRICAL, MECHANICAL, PLUMBING AND THE NEW 2010 CALIFORNIA RESIDENTIAL CODE.

A public hearing was held on August 17, 2010, by the Board of Building and Safety Commissioners (BBSC) to receive and consider public comments regarding the proposed ordinances amending Articles 1 through 8 and the proposed addition of Article 1R to the Los Angeles Municipal Code (LAMC), in the adoption of the 2010 state codes including the, electrical, mechanical, plumbing and the new residential code. There were no public comments at the hearing. The BBSC has recommended the proposed ordinances to be adopted and referred the matter back to LADBS for further processing.

In addition to the proposed ordinances, the following items are included in this transmittal:

a. Letter, dated August 19, 2010, noting the Commission's action.
b. Minutes of the public hearing.
c. Notice of Public Hearing to Building and Safety Commissioners regarding the proposed ordinance.

I respectfully request the proposed ordinances to be reviewed and forwarded to the City Council for its consideration at your earliest convenience.

Please direct any questions regarding the proposed ordinance to Victor Cuevas at (213) 482-0409. Should you need my assistance, please contact me at (213) 482-6800 (office).

for

Robert "Bud" Ovrom
General Manager

Attachments

CITY OF LOS ANGELES
CALIFORNIA

ANTONIO R. VILLARAIGOSA
MAYOR

DEPARTMENT OF
BUILDING AND SAFETY
201 NORTH FIGUEROA STREET
LOS ANGELES, CA 90012

ROBERT R. "BUD" OVROM
GENERAL MANAGER

RAYMOND S. CHAN, C.E., S.E.
EXECUTIVE OFFICER

August 19, 2010

BOARD FILE: 10.501.1

Robert R. "Bud" Ovrom, General Manager
Department of Building and Safety
201 North Figueroa Street, Room 1000
Los Angeles, CA 90012

PROPOSED ORDINANCES AMENDING CHAPTER IX OF THE LOS ANGELES MUNICIPAL CODE IN THE ADOPTION OF THE 2010 CALIFORNIA BUILDING CODES, INCLUDING THE NEW 2010 CAL GREEN CODE AND THE 2010 CALIFORNIA RESIDENTIAL CODE- BOARD FILE NO. 10.501.1

On August 17, 2010, the Board of Building and Safety Commissioners conducted a public hearing regarding the above-referenced subject.

BOARD ACTION:

ADOPT Ordinances amending Chapter IX of the Los Angeles Municipal Code in the adoption of the 2010 California Building Codes, including the new 2010 Cal Green Code and the 2010 California Residential Code.

Marsha L. Brown, President
BOARD OF BUILDING AND SAFETY COMMISSIONERS

CJ:ww(213) 482-0466
10.501.1FAL

cc: DAFS
Victor Cuevas, Code Engineer
Grace Harper, Chief, Code Enforcement
Ifa Kashefi, Chief Engineering Bureau
Robert Steinbach, Chief, Inspection Bureau

For further information call the Commission Office at (213) 482-0466.

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities.

E. PUBLIC HEARING

PROPOSED ORDINANCES AMENDING CHAPTER IX OF THE LOS ANGELES MUNICIPAL CODE IN THE ADOPTION OF THE 2010 CALIFORNIA BUILDING CODES, INCLUDING THE NEW 2010 CAL GREEN CODE AND THE 2010 CALIFORNIA RESIDENTIAL CODE- BOARD FILE NO. 10.501.1

EXHIBITS:

Building Code Adoption Ordinance Draft, dated July 23, 2010, pages 1-37; Building Code Adoption Ordinance Draft, dated August, 2010, pages 1-85; 2011 Los Angeles Electrical Code Draft of revisions and new sections, pages 1-7; Plumbing Code with Sprinkler Adoption Ordinance, dated July 21, 2010, pages 1-48; Mechanical Code Adoption Ordinance, dated July 21, 2010, pages 1-7; and the Green Code Adoption Ordinance, last modified on August 3, 2010.

SUMMARY:

Mr. Cuevas, LADBS Code Engineer, presented the Building Code Adoption Ordinances to the Board, prior to being forwarded to the City Council, per the Mayor's directive.

MOTION:

By Jubany, seconded by Cuevas, that the following action be taken:

ADOPT Ordinances amending Chapter IX of the Los Angeles Municipal Code in the adoption of the 2010 California Building Codes , including the new 2010 Cal Green Code and the 2010 California Residential Code.

FOR: Brown, Ambatielos, Cuevas, Jubany

AGAINST: None

MOTION PASSED

F. WRITTEN COMMUNICATIONS TO THE BOARD

1. Correspondence from Francisco Lamanna, dated August 10, 2010

2. Correspondence from Steven Appleton, President of the Elysian Valley Riverside

CITY OF LOS ANGELES
CALIFORNIA

DEPARTMENT OF
BUILDING AND SAFETY
201 NORTH FIGUEROA STREET
LOS ANGELES, CA 90012

ROBERT R. "BUD" OVROM
GENERAL MANAGER

RAYMOND S. CHAN, C.E., S.E.
EXECUTIVE OFFICER

July 26, 2010

BOARD FILE: 10.501.1

HEARING NOTICE

PROPOSED ORDINANCE AMENDING VARIOUS SECTIONS OF THE BUILDING PROVISIONS OF THE 2010 LOS ANGELES MUNICIPAL CODE

On Tuesday, August 17, 2010, the Board of Building and Safety Commissioners will conduct a public hearing regarding the above referenced subject. Hearings will commence at 9:30 a.m. at:

9th Floor, Room 900
201 North Figueroa Street
Los Angeles, CA 90012

Comments from interested persons may be presented at the hearing. However, any matter requiring clarification or response from the Department shall be submitted by August 2, 2010, in writing. The written comments and inquiries must be submitted to the Department of Building and Safety, Code Engineer (Attention; Victor Cuevas and/or Catherine Nuezca Gaba), Room 1030, 201 North Figueroa Street, Los Angeles.

The Building Code Ordinance, amends Article 1, Chapter IX, of the Los Angeles Municipal Code by adopting the 2010 California Building Code (C.B.C.) and the 2010 California Residential Code (C.R.C) by reference with local amendments. The California Building Code adopts the 2009 International Residential Code by reference and the 2010 California Residential Code adopts the 2009 International Residential Code. Many of the local amendments to the code were based on the recommendations of the Los Angeles Regional Code Program. The Regional Code Program has the support of 89 jurisdictions to provide consistency in code interpretation in the Los Angeles County region.

Copies of the proposed 2011 City of Los Angeles Building and Residential Ordinance will be available upon request. Please direct requests to Mr. Victor Cuevas at victor.cuevas@lacity.org or Ms. Catherine Nuezca Gaba at catherine.nuezcagaba@lacity.org.

Cora Johnson, Board Secretary
BOARD OF BUILDING AND SAFETY COMMISSIONERS

ORDINANCE NO. _____

An ordinance amending the Los Angeles Municipal Code and incorporating by reference the portions of the 2009 International Building Code and the 2010 Edition of the California Building Code and further adopt all the current amendments of the Article 1 and 8 of Chapter IX of the Los Angeles Municipal Code except for the following changes.

THE PEOPLE OF THE CITY OF LOS ANGELES

DO ORDAIN AS FOLLOWS:

Section 1. Sections 91.101. of the Los Angeles Municipal Code IS amended to read:

SEC. 91.101. TITLE, PURPOSE, AND SCOPE.
91.101.1. Title. This article shall be known as the Los Angeles Building Code or Building Code or LABC, a portion of the Los Angeles Municipal Code (LAMC), and wherever the word Code is used in this article it shall mean the Los Angeles Building Code. Sections of Article 1 of Chapter 9 of LAMC preceded by the letter R (e.g. 91.R301) shall collectively be known as the Los Angeles Residential Code or LARC. The LARC shall be applicable only to one and two-family buildings and townhouses. In addition to the LARC, appropriate Sections of Divisions 1, 11A, 11B, 17, 31B, 34, 67, 70, 71, 72, 81, 89, 92, 93 and 96 of the LABC shall also be applicable to one and two-family dwellings and townhouses unless stated otherwise.
The Los Angeles Building Code and the Los Angeles Residential Code adopts by reference portions of the California Building Code (CBC) or the California Residential Code (CRC) respectively.

Section 2. Sections 91.105.5.4 and 91.106.4.1 of the Los Angeles Municipal Code are amended to read:

91.105.5.4. Authority of the Commission. The commission shall have and exercise the following powers:

1. To hear and determine written appeals brought by any person from actions taken by the Department of Building and Safety (department) in the enforcement of the requirements of Section 19955, et seq., of the California Health and Safety Code, the provisions of state law dealing with access to public accommodations by physically disabled persons.

2. To hear and determine written appeals brought by any person from the rulings, decisions and determinations of the department granting or denying applications for exceptions pursuant to Health and Safety Code Section 19957.

3. To hear and determine written appeals brought by any persons where it is alleged that there is error or abuse of discretion in any order, requirement, decision, interpretation or other determination made by the Department in the enforcement or administration of California Building Code Section ~~108~~ 1.8 *et seq.*, and any other federal, state or municipal handicapped access and adaptability requirements.

All appeals shall be reviewed by the Department. The Department may reverse or modify the action appealed from at any time prior to final action by the commission. Any such new action may then be appealed to the commission.

4. To respond to the department's request for advice on any matter within the department's jurisdiction relating to access to public accommodations and housing by the physically disabled.

5. To exercise the authority granted in Section 91.105.6.

91.106.4.1. Issuance. When the department determines that the information on the application and plans is in conformance with this Code and other relevant codes and ordinances, the department shall issue a permit upon receipt of the total fees.

EXCEPTIONS:

5. The department shall have the authority to withhold a demolition or relocation permit for a residential building composed of two or more residential rental units, under the following circumstances:

~~B. When the applicant states that the demolition or relocation is not for the purpose of constructing a condominium, stock cooperative or community apartment project, permits shall be withheld until the department receives a sworn affidavit from the real property owner, which has been recorded by the county recorder, stating that said owner waives the right to construct on the subject lot, a condominium, stock cooperative or community apartment project for a period of 10 years from the date of the demolition or relocation, and that such waiver will bind any purchaser, encumbrancer, assignee, devisee and transferee of said property during said 10 year period.~~

~~C.~~ B. This Exception 5 shall not apply if the building is to be demolished and is:

(i) Constructed of unreinforced masonry construction and built pursuant to a building permit issued prior to October 1, 1933, or

(ii) To be demolished pursuant to a demolition order issued by the department under authority set forth in Division 89 of Article 1 of Chapter IX of the Los Angeles Municipal Code.

~~D.~~C. This Exception 5 shall not apply if the applicant demonstrates to the satisfaction of the department that the site will be developed with housing for low to moderate income households, which housing is to be developed, constructed or acquired with federal, state or local government financial assistance.

~~E.~~D. This Exception 5 shall not apply to two family dwellings or to apartment houses and apartment hotels containing three dwelling units, provided that at least one dwelling unit in each such building is occupied by a record owner of the property.

11. The Department shall have the authority to withhold a building permit for a residential building composed of two or more residential rental units, under the following circumstances:

~~B. When the applicant states that the purpose for a building permit is for the construction of a building other than a condominium, stock cooperative or community apartment project, a building permit shall be withheld until the Department receives a sworn affidavit from the real property owner, which has been recorded by the County Recorder, stating that the owner waives the right to construct on the subject lot, a condominium, stock cooperative or community apartment project for a period of ten years from the date of the issuance of the building permit, and that the waiver will bind any purchaser, encumbrancer, assignee, devisee and transferee of the property during that ten year period. Notwithstanding the above, the Department shall have the authority to issue a building permit after the Director of Planning certifies that the project conforms to all of the current standards of approval for new condominiums.~~

Reason: This Administrative amendment eliminates sections which are no longer required to process permit approvals.

Sec. 2. Division 4 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.403 SECTION 403 HIGH-RISE BUILDINGS AND GROUP I-2 OCCUPANCIES HAVING OCCUPIED FLOORS LOCATED MORE THAN 75 FEET ABOVE THE LOWEST LEVEL OF FIRE DEPARTMENT VEHICLE ACCESS.

Section 403 of the California Building Code is adopted by reference, except Section 403.5.2, 403.6, 403.6.1 and 403.6.2 are not adopted and in lieu, Sections 91.403.5.2 and 91.403.6 are added.

91.403.5.2 Additional exit stairway. For buildings other than Group R-2 that are more than 420 feet (128 m) in *building height*, one additional *exit stairway* meeting the requirements of Sections 1009 and 1022 shall be provided in addition to the minimum number of *exits* required by Section 1021.1. The total width of any combination of remaining *exit stairways* with one *exit stairway* removed shall not be less than the total width required by Section 1005.1. *Scissor stairs* shall not be considered the additional *exit stairway* required by this section.

~~**Exception:** An additional *exit stairway* shall not be required to be installed in buildings having elevators used for occupant self-evacuation in accordance with Section 3008.~~

Reason: This Administrative amendment is to be consistent with the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. This is an example of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

91.403.6 Elevators. Elevator installation and operation in high-rise buildings shall comply with CBC Chapter 30 ~~and Sections 403.6.1 and 403.6.2~~.

Reason: This Administrative amendment is to be consistent with the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. This is an example of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**403.6.1 Fire service access elevator.** In buildings with an occupied floor more than 120 feet (36 576 mm) above the lowest level of fire department vehicle access, a minimum of one fire service access elevator shall be provided in accordance with Section 3007.~~

Reason: This Administrative amendment is to be consistent with the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. This is an example of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**403.6.2 Occupant evacuation elevators.** Where installed in accordance with Section 3008, passenger elevators for general public use shall be permitted to be used for occupant self-evacuation.~~

Reason: This Administrative amendment is to be consistent with the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. This is an example of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

Sec. 3. Section 91.703.3 of the Los Angeles Municipal Code is amended to read:

91.703.3. Alternative Methods for Determining Fire Resistance. The application of any of the alternative methods listed in this section shall be based on the fire exposure and acceptance criteria specified in ASTM E 119 or UL 263. The required fire resistance of a building element shall be permitted to be established by any of the following methods or procedures:

1. Fire-resistance designs documented in approved sources.

2. Prescriptive designs of fire-resistance-rated building elements, component or assemblies as prescribed in CBC Section 720.

3. Calculations in accordance with CBC Section 721.

4. Engineering analysis based on a comparison of building element, component or assemblies designs having fire-resistance ratings as determined by the test procedures set forth in ASTM E 119 or UL 263.

5. Alternative protection methods as allowed by Section 91.104.2.6 of this ~~chapter~~ Code.

Reason: This Administrative amendment is to be consistent with the State of California Code.

Sec. 4. Section 91.1207.11.3 of the Los Angeles Municipal Code is amended to read:

91.1207.11.3. Airport Noise Sources. Residential structures and all other structures identified in Section 91.1207.1 located where the annual L_{dn} or CNEL (as defined in Title 21, Division 2.5, ~~Subchapter~~ Chapter 6, Section 5001, California Code of Regulations) exceeds 60 db, shall require an acoustical analysis showing that the proposed design will achieve prescribed allowable interior level.

EXCEPTION: New single family detached dwellings and all non- residential noise sensitive structures located outside the noise impact boundary of 65 db CNEL are exempt from Section 91.1207.

Alterations or additions to all noise sensitive structures, within the 65db and greater CNEL shall comply with the Section 91.1207. If the addition or alteration cost exceeds 75% of the replacement cost of the existing structure, then the entire structure must comply with Section 91.1207.

For public-use airports or heliports, the L_{dn} or CNEL shall be determined from the Aircraft Noise Impact Area Map prepared by the Airport Authority. For military bases, the ~~Ldn~~ L_{dn} shall be determined from the facility Air Installation Compatible Use Zone (AICUZ) plan. For all other airports or heliports, or public-use airports or heliports for which a land-use plan has not

been developed, the L_{dn} or CNEL shall be determined from the noise element of the general plan of the local jurisdiction.

When aircraft noise is not the only significant source, noise levels from all sources shall be added to determine the composite site noise level.

Reason: This Administrative amendment is to correct the typo.

Sec. 5. Division 13 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

91.1300. GENERAL.

In order to comply with the purpose of this division, buildings shall be designed to comply with requirements of Part 6, Title 24 of the California Building Standards Code - California Energy Code, ~~1998~~ 2008 Edition.

Reason: This Administrative amendment is made to update and make the reference consistent with the 2010 California Building Code.

91.1301. SOLAR ENERGY COLLECTORS.

Approved collectors which function as building components shall comply with the applicable provisions of the Code.

Approved collectors located above or upon a roof and not functioning as building components shall not reduce the required fire-resistance or fire-retardancy classification of the roof-covering materials.

~~Approved collectors shall be considered a rooftop structure and shall comply with the construction limitations of CBC Section 1509.2.~~

~~**EXCEPTIONS:**~~

~~1. Approved collectors installed in one- and two-family dwellings outside the Very High Fire Hazard Severity Zone.~~

~~2. Approved noncombustible collectors located on buildings not over three stories in height or 9,000 square feet (836 m^2) in total floor area.~~

~~3. Approved collectors that comply with the provisions of CBC Section 2603.14.~~

Reason: This Administrative amendment is to eliminate confusion of the requirements found in other chapters of the code, such as Chapter 15 (roofing), and Chapter 26 (plastics).

Sec. 6. Division 14 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.1405. INSTALLATION OF WALL COVERINGS.

Section 1405 of the California Building Code is adopted by reference~~, except Section 1405.6 of the CBC is not adopted and in lieu, Sections 91.1405.6, 91.1405.6.1 and 91.1405.6.2 are added.~~

~~**91.1405.6. Masonry or Stone Veneer.** Support of masonry and stone veneer shall be designed, unless the masonry or stone veneer complies with the following.~~

~~**91.1405.6.1. Masonry and Stone Units [Five inches (127 mm) Maximum in Thickness].** Masonry and stone veneer not exceeding five inches (127 mm) in thickness may be anchored directly to structural masonry, concrete or studs in one of the following manners:~~

~~1. Wall ties shall be corrosion resistant, made of sheet metal, have a minimum thickness of .0785 inch (02.00 mm) (No. 14 galvanized sheet gage) by one inch (25.4 mm) and shall be attached to the backing, as the veneer is laid, by minimum #10 hex head galvanized screws with penetration of at least two inches (51 mm) into the framing member, placed not more than 1/4 of an inch (6.35 mm) above the extended leg of the angle tie. Wall ties shall be spaced so as to support not more than two square feet (0.19 m^2) of wall area but shall not be more than 24 inches (610 mm) on center horizontally. In Seismic Zone 4, wall ties shall have a lip or hook on the extended leg that will engage or enclose a horizontal joint reinforcement wire having a diameter of 0.148 of an inch (3.76 mm) (No. 9 B.W. gage) or equivalent. The joint reinforcement shall be continuous with butt splices between ties permitted.~~

~~When applied over wood stud construction, the studs shall be spaced a maximum of 16 inches (406 mm) on center and approved paper, a minimum 30# fiberglass felt, four inch (102 mm) minimum on horizontal laps and six inch (152 mm) minimum on end laps shall first be applied over minimum 15/32 inch (12 mm) plywood sheathing, except as otherwise provided in CBC Section 1402, and an air space of at least one inch (25 mm) shall be maintained between the backing and the veneer. Spot bedding at all ties shall be of cement mortar.~~

~~2. Veneer may be applied with one inch minimum (25 mm) grouted backing space, which is reinforced by not less than two inch by two inch (51 mm by 51 mm) 0.065 of an inch (1.65 mm) (No. 16 B.W. gage) galvanized wire mesh placed over waterproof paper backing and anchored directly to stud construction. Construction shall be allowed to a height not to exceed four feet (1219 mm) above grade.~~

~~The stud spacing shall not exceed 16 inches (406 mm) on center. The galvanized wire mesh shall be anchored to wood studs by galvanized steel wire furring nails at four inches (102 mm) on center or by barbed galvanized nails at six inches (152 mm) on center with a 1 1/8 inch minimum (29 mm) penetration. The galvanized wire mesh may be attached to steel studs by equivalent wire ties. If this method is applied over solid sheathing, the mesh shall be furred for embedment in grout. The wire mesh shall be attached at the top and bottom with not less than 8d~~

~~common wire nails. The grout fill shall be placed to fill the space intimately around the mesh and veneer facing.~~

~~**91.1405.6.2. Stone Units [10 inches (254 mm) Maximum in Thickness].** Stone veneer units not exceeding ten inches (254 mm) in thickness may be anchored directly to structural masonry or concrete. Anchor ties shall not be less than 0.109 inch (2.77 mm) (No. 12 B.W. gage) galvanized wire, or an approved equal, formed as an exposed eye and extending not less than 1/2 inch (12.7 mm) beyond the face of the backing. The legs of the loops shall not be less than six inches (152 mm) in length bent at right angles and laid in the masonry mortar joint and spaced so that the eyes or loops are 12 inches (254 mm) maximum on center in both directions. There shall be provided not less than a 0.109 inch (2.77 mm) (No. 12 B.W. gage) galvanized wire tie, or approved equal, threaded through the exposed loops for every two square feet (0.19 m^2) of stone veneer. This tie shall be a loop having legs not less than 15 inches (381 mm) in length bent so that it will lie in the stone veneer mortar joint. The last two inches (51 mm) of each wire leg shall have a right angle bend. One inch (25 mm) of cement grout shall be placed between the backing and the stone veneer.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. Sections referring to masonry and stone veneer have been added under section 1405.6 and 1405.7 of the 2010 California Building Code.

Sec. 7. Division 15 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

TABLE 1507.3.7
CLAY AND CONCRETE TILE ATTACHMENT [a, b, c]

GENERAL – CLAY OR CONCRETE ROOF TILE			
Maximum basic wind speed (mph)	**Mean roof height (feet)**	**Roof slope up to <3:12**	**Roof slope 3:12 and over**
85	0-60	Two fasteners per tile.	Two fasteners per tile.
100	0-40		
100	>40-60	The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.	

110	0-60	The fastening system shall resist the wind forces in CBC Section ~~1609.5.2~~ 1609.5.3.
120	0-60	The fastening system shall resist the wind forces in CBC Section ~~1609.5.2~~ 1609.5.3.
130	0-60	The fastening system shall resist the wind forces in CBC Section ~~1609.5.2~~ 1609.5.3.
All	>60	The fastening system shall resist the wind forces in CBC Section ~~1609.5.2~~ 1609.5.3.

TABLE 1507.3.7 (Cont.)
CLAY AND CONCRETE TILE ATTACHMENT [a, b, c]

INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS [d, e] **(Installations on solid sheathing with battens)**				
Maximum basic wind speed (mph)	**Mean roof height (feet)**	**Roof slope up to <5:12**	**Roof slope 5:12 <12:12**	**Roof slope 12:12 and over**
85	0-60	Minimum slope is 4:12. One fastener per tile.	One fastener per tile. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.	One fastener required for every tile. Tiles with installed weight less than 9 lbs./sq. ft. require a minimum of one fastener per tile.
100	0 - 40			

100	>40-60	The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails. The nose of all ridge, hip and rake tiles shall be set in a bead of roofer's mastic.
110	0-60	The fastening system shall resist the wind forces in CBC Section ~~1609.5.2~~ 1609.5.3.
120	0-60	The fastening system shall resist the wind forces in CBC Section ~~1609.5.2~~ 1609.5.3.
130	0-60	The fastening system shall resist the wind forces in CBC Section ~~1609.5.2~~ 1609.5.3.
All	>60	The fastening system shall resist the wind forces in CBC Section ~~1609.5.2~~ 1609.5.3.

TABLE 1507.3.7 (Cont.)
CLAY AND CONCRETE TILE ATTACHMENT [a, b, c]

INTERLOCKING CLAY OR CONCRETE ROOF TILE WITH PROJECTING ANCHOR LUGS (Installations on solid sheathing without battens)		
Maximum basic wind speed (mph)	**Mean roof height (feet)**	**Minimum roof slopes 4 units vertical in 12 units horizontal Maximum slope 7 units vertical in 12 units horizontal**
85	0-60	One fastener per tile.
100	0-40	One fastener per tile.
100	>40-60	The head of all tiles shall be nailed. The nose of all eave tiles shall be fastened with approved clips. All rake tiles shall be nailed with two nails The nose of all ridge, hip and rake tiles

		shall be set in a bead of roofer's mastic.
110	0-60	The fastening system shall resist the wind forces in CBC Section ~~1609.5.2~~ 1609.5.3.
120	0-60	The fastening system shall resist the wind forces in CBC Section ~~1609.5.2~~ 1609.5.3.
130	0-60	The fastening system shall resist the wind forces in CBC Section ~~1609.5.2~~ 1609.5.3.
All	>60	The fastening system shall resist the wind forces in CBC Section ~~1609.5.2~~ 1609.5.3.

For SI: one inch = 25.4 mm, one foot = 304.8 mm, one mile per hour = 0.447 m/s, one pound per square foot= 4.882 kg/m^2.

[a] Minimum fastener size. Hot dipped galvanized ring shank or other corrosion-resistant nails not less than No. 11 gage with 5/16-inch head. Fasteners shall be long enough to penetrate into the sheathing 0.75 inch or through the thickness of the sheathing, whichever is less. Attaching wire for clay and concrete tile shall not be smaller than 0.083 inch and shall be copper, brass or stainless steel.

[b] Snow areas. A minimum of two fasteners per tile are required or battens and one fastener.

[c] Roof slopes greater than 24:12. The nose of all tiles shall be securely fastened.

[d] Horizontal battens. Battens shall be not less than one-inch by two-inch nominal. Provisions shall be made for drainage by a minimum of 1/8-inch riser at each nail or by four-foot-long battens with at least a 0.5-inch separation between battens. Horizontal battens are required for slopes over 7:12.

[e] Perimeter fastening areas include three tile courses but not less than 36 inches from either side of hips or ridges and edges of eaves and gable rakes.

Sec. 8. Division 16 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.1609. WIND LOADS.

Section 1609 of the CBC is adopted by reference, except Section ~~91.1609.1.1.2~~ 91.1609.1.1.3 is added.

~~**91.1609.1.1.2**~~ **91.1609.1.1.3 High Wind Velocity Areas.** The Superintendent of Building may designate certain areas of the City as "**high wind velocity areas**" when evidence or studies indicate that the wind velocity results in damage to structures conforming to the minimum requirements of this Code. The Superintendent of Building may specify additional requirements over and above those required by this Code with respect to the following:

1. Glazing of openings in exterior walls.
2. Anchorage of post and beam construction.
3. Cantilever overhangs.
4. Roofing and roof framing.

Reason: This Administrative amendment is to be consistent with the 2010 California Building Code, correcting the code section number referenced in the first paragraph

SEC. 91.1613. EARTHQUAKE LOADS.

Section 1613 of the CBC is adopted by reference, CBC Section ~~1613.6.1 and~~ 1613.6.7 ~~are~~ is not adopted and in lieu, Sections 91.1613.6.7, ~~91.1613.7 through 91.1613.7.2~~, 91.1613.8 through ~~91.1613.8.5~~ 91.1613.8.2, 91.1613.9 through 91.1613.9.10.5 and 91.1613.10 through 91.1613.10.5 are added.

Reason: This Administrative amendment is to be consistent with the State of California Code, correcting the code section number referenced in the first paragraph

~~**91.1613.6.1. Assumption of Flexible Diaphragm.** The following text is added at the end of Section 12.3.1.1 of ASCE 7:~~

~~Diaphragms constructed of wood structural panels or untopped steel decking shall also be permitted to be idealized as flexible, provided all of the following conditions are met:~~

~~1. Toppings of concrete or similar materials are not placed over wood structural panel diaphragms except for nonstructural toppings no greater than 1 1/2 inches (38 mm) thick.~~

~~2. Each line of vertical elements of the lateral force resisting system complies with the allowable story drift of Table 12.12-1 of ASCE 7.~~

~~3. Vertical elements of the lateral force resisting system are light framed walls sheathed with wood structural panels rated for shear resistance or steel sheets.~~

~~4. Portions of wood structural panel diaphragms that cantilever beyond the vertical elements of the lateral force resisting system are designed in accordance with Section 91.2305.2.5 of this Code 4.2.5.2 of AF&PA SDPWS.~~

~~**EXCEPTION:** In lieu of CBC Section 2305.2.5 4.2.5.2 of AF&PA SDPWS, flexible diaphragm assumption is permitted to be used for buildings up to two stories in height provided cantilevered diaphragms supporting lateral force resisting elements from above does not exceed 15 percent of the distance between lines of lateral force resisting elements from which the diaphragm cantilevers nor one fourth the diaphragm width perpendicular to the overhang.~~

Reason: This Administrative amendment is made to be consistent with the 2010 California Code Building Code.

91.1613.6.7 Minimum distance for building separation. Delete the importance factor (I) from Equation 16-44

$$\delta_M = \frac{C_d \delta_{max}}{I} \qquad \text{(Equation 16-44)}$$

where:

Cd = Deflection amplification factor in Table 12.2-1 of ASCE 7.
δmax = Maximum displacement defined in Section 12.8.4.3 of ASCE 7.
~~I = Importance factor in accordance with Section 11.5.1of ASCE 7.~~

Reason: This technical amendment is made due to geological conditions. The inclusion of the importance factor in this equation has the unintended consequence of reducing the minimum seismic separation distance for important facilities such as hospital, school, police and fire station, etc. from adjoining structures. The proposal to omit the importance factor from Equation 16-44 will ensure that a safe seismic separation distance is provided.

~~91.1613.7~~ 91.1613.8. Additional Seismic Requirements.

Reason: This Administrative amendment is made to change the section and subsequent subsections to be consistent with the 2010 California Code Building Code.

~~91.1613.7.1.~~ 91.1613.8.1. Suspended Ceilings. Minimum design and installation standards for suspended ceilings shall be determined in accordance with the requirements of ~~Division 25~~ C.B.C. Section 2506.2.1 ~~of this Code~~ and this section.

Reason: This Administrative amendment is made to revise LA City Amended sections due to changes in the 2010 California Building Code and to correct the referenced section.

~~91.1613.7.1.1~~ 91.1613.8.1.1. Scope. This part contains special requirements for suspended ceilings and lighting systems. The provisions of Section 13.5.6 of ASCE 7 shall apply except as modified here.

Reason: This Administrative amendment is made to revise this LA City amended section due to section changes and addition of changes in the 2010 California Building Code.

~~91.1613.7.1.2~~ 91.1613.8.1.2. General. The suspended ceilings and lighting systems shall not be located more than six feet (1828 mm) below the structural floor or roof system above unless the entire system is designed by a licensed engineer or architect.

Reason: This Administrative amendment is made to revise LA City amended sections due to changes in the 2010 California Building Code.

~~91.1613.7.1.3~~ 91.1613.8.1.3. Design and Installation Requirements.

Reason: This Administrative amendment is made to revise LA City amended sections due to changes in the 2010 California Building Code.

~~91.1613.7.1.3.1~~ 91.1613.8.1.3.1 **Bracing at Discontinuity.** Positive bracing to the structure shall be provided at changes in the ceiling plane elevation or at discontinuities in the ceiling grid system.

Reason: This Administrative amendment is made to revise LA City amended sections due to changes in the 2010 California Building Code.

~~91.1613.7.1.3.2~~ 91.1613.8.1.3.2. **Support for Appendages.** Cable trays, electrical conduits and piping shall be independently supported and independently braced from the structure.

Reason: This Administrative amendment is made to revise LA City amended sections due to changes in the 2010 California Building Code.

~~91.1613.7.1.3.3~~ 91.1613.8.1.3.3. **Sprinkler Heads.** All sprinkler heads (drops) except fire-resistance-rated floor/ceiling or roof/ ceiling assemblies, shall be designed to allow for free movement of the sprinkler pipes with oversize rings, sleeves or adaptors through the ceiling tile in accordance with Section 13.5.6.2.2(e) of ASCE 7.

Sprinkler heads penetrating fire-resistance-rated floor/ceiling or roof/ceiling assemblies shall comply with CBC Section ~~712~~ 713.

Reason: This Administrative amendment is made to revise LA City Amended sections due to changes in the 2010 California Building Code and to correct the referenced section.

~~91.1613.7.1.3.4~~ 91.1613.8.1.3.4. **Perimeter Members.** A minimum wall angle size of at least a two-inch (51 mm) horizontal leg shall be used at perimeter walls and interior full height partitions. The first ceiling tile shall maintain 3/4-inch (19 mm) clear from the finish wall surface. An equivalent alternative detail that will provide sufficient movement due to anticipated lateral building displacement may be used in lieu of the long leg angle subject to the approval of the Superintendent of Building.

Reason: This Administrative amendment is made to revise LA City amended sections due to changes in the 2010 California Building Code.

~~91.1613.7.1.3.2~~ 91.1613.8.1.4. **Special Requirements for Means of Egress.** Suspended ceiling assemblies located along means of egress serving an occupant load of 30 or more shall comply with the following provisions:

1. **General.** Ceiling suspension systems shall be connected and braced with vertical hangers attached directly to the structural floor or roof system above and along the means of egress serving an occupant load of 30 or more and at lobbies accessory to Group A Occupancies. Spacing of vertical hangers shall not exceed two feet (610 mm) on center along

the entire length of the suspended ceiling assembly located along the means of egress or at the lobby.

2. **Assembly Device.** All lay-in panels shall be secured to the suspension ceiling assembly with two hold-down clips minimum for each tile within a four-foot (1219 mm) radius of the exit lights and exit signs.

3. **Emergency Systems.** Independent supports and braces shall be provided for light fixtures required for exit illumination. Power supply for exit illumination shall comply with the requirements of CBC Section 1006.3.

4. **Supports for Appendage.** Separate support from the structural floor or roof system above shall be provided for all appendages such as light fixtures, air diffusers, exit signs, and similar elements.

Reason: This Administrative amendment is made to revise LA City amended sections due to changes in the 2010 California Building Code.

~~**91.1613.7.2.**~~ **91.1613.8.2. Wood Diaphragms Supporting Concrete or Masonry Walls.** In addition to other requirements of this division for lateral-force-resisting systems, wood diaphragms shall comply with the following provisions:

1. **Continuous Tie Spacing.** The spacing of continuous ties shall not exceed 40 feet. Added chords of diaphragms may be used to form subdiaphragms to transmit the anchorage forces to the main continuous crossties.

2. **Anchorage Force.** The maximum diaphragm shear used to determine the depth of the subdiaphragm shall not exceed 75% of the maximum diaphragm shear.

3. **Horizontal Irregularities.** Chords and drag strut members in diaphragms having horizontal structural irregularities listed in Table 12.3-1 of ASCE 7 shall be designed for forces in Section 12.3.3.4 of ASCE 7.

Reason: This Administrative amendment is made to revise LA City Amended sections due to changes in the 2010 California Building Code.

91.1613.9.4.2.2. Base Shear. In developing the base shear for seismic design, the response modification coefficient (R) shall not exceed ~~4.5~~ 5.0 or bearing wall and building frame systems. The total base shear shall include the forces tributary to the base level diaphragm including forces from the base level diaphragm.

Reason: Reason: This Administrative amendment is made to be consistent with the State of California Code, to reflect the current R value based on strength design.

91.1613.9.8. Primary and Secondary Anchorage and Diaphragm Strut Design. Primary and secondary anchors and diaphragm struts shall be designed in accordance with the following provisions:

1. **Fasteners.** All bolted fasteners used to develop connections to wood members shall be provided with square plate washers at all bolt heads and nuts. Washers shall be minimum 3/16 inch (4.8 mm) thick and two-inch (51 mm) square for 1/2-inch (12.7 mm) diameter bolts, and 1/4-inch (6.4 mm) thick and 2-1/2-inch (64 mm) square for 5/8-inch (15.9 mm) diameter or larger bolts. ~~Nuts shall be wrench tightened prior to covering.~~ Nuts shall be finger tight with ½ wrench turn prior to covering.

6. ~~**Seismic Load Factor.**~~ **Steel Element of Structural Wall Anchorage System.** ~~The seismic load factor shall be 1.7 for steel and concrete anchorage when the strength design method is used.~~ The strength design forces for steel elements of the structural wall anchorage system, with the exception of anchor bolts and reinforcing steel, shall be increased by 1.4 times the forces otherwise required.

Reason: Technical Amendment - This is a technical amendment justified by local geological conditions and is one of the LARUCP recommended amendments. This amendment provides and clarifies design requirements for structural anchorage elements consistent with the latest version of ASCE 7 design standards.

91.1613.9.9.2. Base Shear. In developing the base shear for seismic design, the response modification coefficient (R) shall not exceed ~~4.5~~ 5.0 for bearing wall and building frame systems.

Reason: Technical Amendment - This is a technical amendment justified by local geological conditions and is one of the LARUCP recommended amendments. This amendment is made to be more consistent with design parameters based on current ASCE design standards.

91.1613.9.9.4. Drift Limitations. The story drift below the base level diaphragm shall not exceed ~~0.005~~ 0.007 times the story height at strength design force level. The total drift from the base level diaphragm to the top of the foundation shall not exceed ¾ of an inch (19 mm). Where the story height or the height from the base level diaphragm to the top of the foundation varies because of a stepped footing or story offset, the height shall be measured from the average height of the top of the foundation. The story drift shall not be reduced by the effect of horizontal diaphragm stiffness.

~~Where code prescribed wind forces govern the design of the lateral force resisting system normal to the downhill direction, the drift limitation shall be 0.0025 for the story drift and the total drift from the base level diaphragm to the top of the foundation may exceed 3/4 of an inch (19 mm) when approved by the Department. In no case, however, shall the drift limitations for seismic forces be exceeded.~~

Reason: Technical Amendment - This is a technical amendment justified by local geological conditions and is one of the LARUCP recommended amendments. This amendment is to be consistent with the current strength design limitations based on current ASCE design standards.

~~**91.1613.8**~~ **91.1613.10. Earthquake Recording Instrumentation.**

Reason: This Administrative amendment is to revise this code section due to additions of code sections to the 2010 California Building Code.

~~91.1613.8.1~~ 91.1613.10.1. **Applicability.** The requirements of this section shall apply to buildings for which permits were issued after July 1, 1965.

Reason: This Administrative amendment is to revise this code section by renumbering it due to additions of code sections to the 2010 California Building Code.

~~91.1613.8.2~~ 91.1613.10.2. **General.** Every new building over six stories in height with an aggregate floor area of 60,000 square feet (5574 m^2) or more and every new building over ten stories in height regardless of the floor area shall be equipped with at least three approved recording accelerographs.

EXCEPTION: A building selected by the State of California as part of its Strong Motion Instrumentation Program (Section 2700, Chapter 8, Division 2, California Public Resources Code) need not comply with this section until it ceases to be part of the program.

All new buildings that are designed using the nonlinear response history procedure of "Seismic Response History Procedures" of Chapter 16 of ASCE 7 shall be equipped with a structural monitoring system in accordance with standards established by the Superintendent of Building.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1613.8.3~~ 91.1613.10.3. **Maintenance.** Maintenance and service of the instruments shall be provided by the owner of the building subject to the approval of the Superintendent of Building. Data produced by the instruments shall be made available to the Superintendent of Building on request.

Maintenance and service of the instruments shall be performed annually and shall be performed only by an approved testing agency. The owner shall file with the Department a written report from an approved testing agency certifying that each instrument has been serviced and is in proper working condition. This report shall be submitted when the instruments are installed and annually thereafter. Each instrument shall have affixed to it an externally visible tag specifying the date of the last maintenance or service and the printed name and address of the testing agency performing the service.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1613.8.4~~ 91.1613.10.4. **Location.** For new buildings requiring accelerographs per Section ~~91.1613.8.2~~ 91.1613.10.2, the instruments shall be located in the basement, mid-height and near the top of the building. Each instrument shall be located so that access is maintained at all times and is unobstructed by room contents. A sign stating "MAINTAIN CLEAR ACCESS TO THIS INSTRUMENT" in one-inch block letters shall be posted in a conspicuous location at the instrument.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1613.8.5~~ 91.1613.10.5. **Instrumentation of Existing Buildings.** All owners of existing structures selected by the Department shall provide accessible space for the installation of appropriate earthquake-recording instruments. Locations of the instruments shall be determined by the engineer of record and approved by the Department. The owners shall make arrangements with the Department to provide, maintain and service the instruments as required above. Data shall be the property of the Department, but copies of individual records shall be made available to the public on request with the payment of an appropriate fee.

All legally existing instruments shall be maintained and serviced in proper working condition. Each instrument shall be maintained and serviced as specified by Section ~~91.1613.8.3~~ 91.1613.10.3 and shall be provided with a sign as required by Section ~~91.1613.8.4~~ 91.1613.10.3.

Reason: This Administrative amendment is made to correct the code section number referenced in the first paragraph

~~**91.1613.10. Modifications to ASCE 7.** Chapter 12 of ASCE 7 is adopted by reference, except Section 12.12.3 of ASCE 7 is not adopted. It is replaced with the following modification:~~

~~**12.12.3. Building Separation.** All portions of the structure shall be designed and constructed to act as an integral unit in resisting seismic forces unless separated structurally by a distance sufficient to avoid damaging contact under the maximum inelastic response displacement. The maximum inelastic response displacement shall be determined at critical locations with consideration for both translational displacement and torsional displacements of the structure using δ_{max} (defined in Section 12.8.4.3 of ASCE 7) as follows:~~

~~$$\delta_M = C_d \delta_{max} / I \qquad (12.12\text{-}1)$$~~

~~Where δ_M is the Maximum Inelastic Response Displacement, which is the total drift or total story drift that occurs when the structure is subjected to the Design Basis Ground Motion, including estimated elastic and inelastic contributions to the total deformation as determined in Section 12.8.6 of ASCE 7.~~

~~All structures shall be separated from adjoining structures. Adjacent buildings on the same property shall be separated by at least a distance δ_{MT}, where~~

~~$$\delta_{MT} = \sqrt{(\delta_{M1})^2 + (\delta_{M2})^2} \qquad (12.12\text{-}2)$$~~

~~and δ_{M1} and δ_{M2} are the maximum inelastic response displacements of the adjacent buildings.~~

~~Where a structure adjoins a property line not common to a public way, the structure shall also be set back from the property line by at least the displacement, δ_M, of that structure.~~

~~**EXCEPTION:** Smaller separations or property line setbacks shall be permitted when justified by rational analysis based on maximum expected ground motions.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. 2009 CBC Section 1613.6.7 adopted this section already.

SEC. ~~91.1614.~~ 91.1616 MODIFICATIONS TO ASCE 7.

~~**91.1614.1.**~~ **91.1616.1 General.** The text of ASCE 7 shall be modified as indicated in this section. Modify ASCE 7, Section 12.2.3.1 Exception 3 to read as follows:

3. Detached one and two family dwellings up to two stories in height of light frame construction.

~~**91.1614.2. ASCE 7, Section 12.3.1.1.** ASCE 7, Section 12.3.1.1 is modified to read as follows:~~

~~**12.3.1.1. Flexible Diaphragm Condition.** Diaphragm constructed of untopped steel decking or wood structural panels are permitted to be idealized as flexible in structures in which the vertical elements are steel or composite steel and concrete braced frames, or concrete, masonry, steel, or composite shear walls. Diaphragms of wood structural panels or untopped steel decks in one- and two-family residential buildings of lightframe construction shall also be permitted to be idealized as flexible.~~

~~Flexible diaphragm assumption is permitted to be used for buildings up to two stories in height provided cantilevered diaphragms supporting lateral seismic force resisting elements from above do not exceed 15 percent of the distance between lines of lateral force resisting elements from which the diaphragm cantilevers nor one-fourth the diaphragm width perpendicular to the overhang.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. No longer supported by LARUCP

~~**91.1614.3.** The text of ASCE 7 shall be modified as indicated in this section. Modify ASCE 7, Section 12.8.1.1 by amending Equation 12.8-5 as follows:~~

~~$C_S = 0.044 S_{DS} I$ 0.01 (Eq. 12.8-5)~~

Reason: This Administrative amendment is to be consistent with the State of California Code. ASCE Supplement No. 2 adopted this already.

~~**91.1614. 4.**~~ **91.1616.2.** The text of ASCE 7 shall be modified as indicated in this section. Modify ASCE 7, Table 12.8-2 by adding the following:

Structure Type	Ct	x
Eccentrically braced steel frames and buckling-restrained braced frames	0.03 (0.0731)[a]	0.75

Reason: This Administrative amendment is made to correct the Code Section number referenced in the first paragraph

~~91.1614.5.~~ 91.1616.3. **General.** The text of ASCE 7 shall be modified as indicated in this Section. Modify ASCE 7, Section 12.8.7 by amending Equation 12.8-16 as follows:

$$\theta = P_x \Delta I / V_x h_{sx} C_d \quad (12.8\text{-}16)$$

Reason: This Administrative amendment is made to correct the Code Section number referenced in the first paragraph

~~91.1614.6.1~~ 91.1616.4. **General.** The text of ASCE 7, Section 12.11.2.2.3 is modified to read as follows:

12.11.2.2.3. Wood Diaphragms. In wood diaphragms, the continuous ties shall be in addition to the diaphragm sheathing. Anchorage shall not be accomplished by use of toe nails or nails subject to withdrawal nor shall wood ledgers or framing be used in cross-grain bending or cross-grain tension. The diaphragm sheathing shall not be considered effective as providing ties or struts required by this section.

For wood diaphragms supporting concrete or masonry walls, wood diaphragms shall comply with the following when structures assigned to seismic Design Category D, E, or F:

1. The spacing of continuous ties shall not exceed 40 feet. Added chords of diaphragms may be used to form subdiaphragms to transmit the anchorage forces to the main continuous crossties.

2. The maximum diaphragm shear used to determine the depth of the subdiaphragm shall not exceed 75% of the maximum diaphragm shear.

Reason: This Administrative amendment is made to correct the Code Section number referenced in the first paragraph and to be consistent with the State of California Code.

~~91.1614.7~~ 91.1616.5. **General.** The text of ASCE 7, Section 12.12.4 is modified to read as follows:

12.12.4. Deformation Compatibility for Seismic Design Category D through F. For structures assigned to Seismic Design Category D, E, or F, every structural component not included in the seismic force-resisting system in the direction under consideration shall be designed to be adequate for the gravity load effects and the seismic forces resulting from displacement to the design story drift (Δ) as determined in accordance with Section 12.8.6 (see also Section 12.12.1).

EXCEPTION: Reinforced concrete frame members not designed as part of the seismic force-resisting system shall comply with Section 21.9 of ACI 318.

Where determining the moments and shears induced in components that are not included in the seismic force-resisting system in the direction under consideration, the stiffening effects of

adjoining rigid structural and nonstructural elements shall be considered and a rational value of member and restraint stiffness shall be used.

When designing the diaphragm to comply with the requirements stated above, the return walls and fins/canopies at entrances shall be considered. Seismic compatibility with the diaphragm shall be provided by either seismically isolating the element or by attaching the element and integrating its load into the diaphragm.

Reason: This Administrative amendment is made to correct the Code Section number referenced in the first paragraph

Sec. 9. Division 17 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.1703. APPROVALS.

Section 1703 of the CBC is adopted by reference, except Sections 1703.1, 1703.2, 1703.3, 1703.4, 1703.4.1, ~~and~~ 1703.4.2, 1703.6, and 1703.6.2 of the CBC are not adopted and in lieu, Sections 91.1703.1, 91.1703.2, 91.1703.3, 91.1703.4, 91.1703.4.1, ~~and~~ 91.1703.4.2, 91.1703.6, and 91.703.6.2 are added.

91.1703.6 Evaluation and follow-up inspection services. Where structural components or other items regulated by this code are not visible for inspection after completion of a prefabricated assembly, the applicant shall submit a report of each prefabricated assembly. The report shall indicate the complete details of the assembly, including a description of the assembly and its components, the basis upon which the assembly is being evaluated, test results and similar information and other data as necessary for the Superintendent of Building to determine conformance to this code. Such a report shall be *approved* by the Superintendent of Building.

Reason: This Administrative amendment is to be consistent with the State of California Code.

1703.6.2 Test and inspection records. Copies of necessary test and inspection records shall be filed with the Superintendent of Building.

Reason: This Administrative amendment is to be consistent with the State of California Code.

SEC. 91.1704. SPECIAL INSPECTIONS.

Section 1704 of the CBC is adopted by reference, except that Sections 1704.1, 1704.1.1, 1704.1.2, 1704.2.2, 1704.3.1.1, 1704.3.1.2, 1704.3.1.3, 1704.4, 1704.7, ~~and~~ 1704.8 and 1704.9

of the CBC are not adopted and in lieu, Sections 91.1704.1, 91.1704.1.1, 91.1704.1.2, 91.1704.1.3, 91.1704.1.4, 91.1704.1.4.1, 91.1704.1.4.2, 91.1704.2.2, 91.1704.3.1.1, 91.1704.3.1.2, 91.1704.3.1.3, 91.1704.4, 91.1704.8, 91.1704.9, ~~91.1704.15, 91.1704.16~~, 91.1704.17, 91.1704.18, 91.1704.19, ~~91.1704.19.1, 91.1704.19.2, 91.1704.19.3, 91.1704.19.4, 91.1704.19.5,~~ 91.1704.20, ~~91.1704.20.1 and 91.1704.20.2~~ 91.1704.21, 91.1704.21.1, 91.1704.21.2, 91.1704.21.3, 91.1704.21.4, 1704.21.5, 91.1704.22, 91.1704.22.1, and 91.1704.22.2 are added.

91.1704.1. General. Where application is made for construction as described in this section, the owner or the *registered design professional in responsible charge* who is acting as the owner's agent shall employ one or more deputy inspectors to provide inspections during construction on the types of work listed in Sections 91.1704 and 91.1707. The Registered Deputy Inspector shall be a qualified person as set forth in Section 91.1704.1.3 and shall demonstrate competence to the satisfaction of the Superintendent of Building for inspection of the particular type of construction or operation requiring special inspection. The Registered Deputy Inspector shall be approved by and shall be responsible to the registered design professional in charge of the design of the structure.

The special inspections shall be in addition to the inspections made by the employees of the Department as set forth in Section 91.108 of this Code.

All special inspections shall be made by a Registered Deputy Inspector. Whenever the term "Special Inspector" is used in this Code, it shall mean "Registered Deputy Inspector" as described in Section 91.1704.1.3.

EXCEPTIONS:

1. *Special inspections* are not required for work of a minor nature or as warranted by conditions in the jurisdiction as *approved* by the Superintendent of Building

2. A registered Deputy Inspector for Grading shall be required only as per section 91.1704.7.1

3. *Special inspections* are not required for building components unless the design involves the practice of professional engineering or architecture as defined by applicable state statutes and regulations governing the professional registration and certification of engineers or architects.

4. Unless otherwise required by the Superintendent of Building, *special inspections* are not required for Group U occupancies that are accessory to a residential occupancy including, but not limited to, those listed in Section 312.1.

~~4.~~5 *The provisions of Health and Safety Code Part 6, Division 13 and Chapter 3, Division 1 of Title 25 of the California Code of Regulations, commencing with Section 3000, shall apply to the construction and inspection of factory-built housing as defined in Health and Safety Code Section 19971.*

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.1704.3.1.1 Structural steel. Welding inspection for structural steel shall be in accordance with AWS D1.1.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.1704.3.1.2 Cold-formed steel. Welding inspection for cold-formed steel floor and roof decks shall be in accordance with AWS D1.3.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91. 1704.3.1.3 Reinforcing steel. Welding inspection for reinforcing steel shall be in accordance with AWS D1.4 and ACI 318.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.1704.4. Concrete Construction. *The special inspections* and verifications for concrete construction shall be as required by this section and Table 1704.4.

EXCEPTIONS: Special inspection shall not be required for:

1. Isolated spread concrete footings of buildings three stories or less in height that are fully supported on earth or rock, where the structural design of the footing is based on a specified compressive strength, f'c, no greater than 2,500 pounds per square inch (psi) (17.2 MPa).

2. Continuous concrete footings supporting walls of buildings three stories or less above the *grade plane* ~~in height~~ that are fully supported on earth or rock where:

2.1. The footings support walls of light-frame construction;

2.2. The footings are designed in accordance with CBC Table 1805.4.2; or

2.3. The structural design of the footing is based on a specified compressive strength, f'c, no greater than 2,500 pounds per square inch (psi) (17.2 MPa), regardless of the compressive strength specified in the *construction documents* or used in the footing construction.

3. Nonstructural concrete slabs supported directly on the ground, including prestressed slabs on grade, where the effective prestress in the concrete is less than 150 psi (1.03 MPa).

4. Concrete foundation walls constructed in accordance with CBC Table 1807.1.6.2.

~~4.~~5. Concrete patios, driveways and sidewalks, on grade.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.1704.8. ~~Pile Foundation~~ Driven deep foundations and Connecting Grade Beams. Special inspections shall be performed during installation and testing of driven deep foundation elements as required by CBC Table 1704.8. The approved ~~soils~~ geotechnical report, required by CBC Section ~~1802.2~~ 1803.2, and the construction documents prepared by the *registered design professional* in responsible charge shall be used to determine compliance. Special inspections for connecting grade beams shall be in accordance with Section 91.1704.4 of this Code.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.1704.9. Cast-in-place deep foundations and Connecting Grade Beams. Special inspections shall be performed during installation and testing of cast-in-place deep foundation elements as required by CBC Table 1704.9. The *approved* geotechnical report, required by CBC Section 1803.2, and *the construction documents* prepared by the *registered design professional* in responsible charge shall be used to determine compliance. Special inspections for connecting grade beams shall be in accordance with Section 91.1704.4 of this Code.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1704.15~~ **91.1704.17. Certifications by Architect, Engineer or Geologist.** If a structure or portion of a structure has been designed to utilize higher stresses requiring continuous inspection, the architect or engineer in responsible charge of the design shall certify by signature to the Department that to the best of his or her knowledge, the structure or portion utilizing higher stresses was constructed in conformity with the approved design. If the grading or foundation earthwork has required continuous inspection, the responsible engineering geologist or soils engineer shall certify by signature to the Department that to the best of his or her knowledge the field work was completed in conformity with the technical design data.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1704.16~~ **91.1704.18. Department's Responsibility.** The employment of a Registered Deputy Inspector for any work does not deprive the Department of the right to make periodic or called inspections of all or portions of the work. On any work requiring continuous inspection by a Registered Deputy Inspector, the called inspections required by Section 91.108 of this Code may be delegated to the Registered Deputy Inspector by the Superintendent of Building.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1704.17~~ **91.1704.19. Structural, Termite and Fungus Damage.** Every building raised from its foundation shall be inspected. If there is any superficial evidence of structural damage, termites or fungus growth, the permittee shall remove and renew the damaged or infested members before reseating the building or moving it from its existing site or into the City.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1704.18~~ **91.1704.20. Emergencies or Catastrophes.** In the event of an emergency or of a major catastrophe in the City, the Department may deputize Emergency Building Inspectors for the Department. The inspectors shall receive no compensation from the City, and they shall be appointed for the periods of time the Department deems advisable.

~~91.1704.19~~ **91.1704.21. Special Activity Inspection** ~~**Controlled Activities.**~~ In addition to the construction or work inspected as described in Sections 91.108 and 91.1704 through 91.1718 of this Code, there are other construction activities that are sufficiently important to the structural stability of the structure, the occupants of and the fire and life safety of the structure that inspection by a specially qualified inspector of these activities is necessary in order to ensure

compliance with the requirements of this Code. These ~~controlled activities~~ special activity inspection may occur during off-site fabrication or during on-site construction.

Inspections by ~~Controlled Activity~~ Department Approved Special Activity Inspectors will be required in accordance with regulations promulgated by the Superintendent of Building where:

1. The structure is more than five stories or 60 feet (18,288 mm) in height.

2. The structure exceeds 50,000 square feet (4645 m^2) of ground area or 200,000 square feet (18 580 m^2) of total floor area.

3. Nondestructive structural testing methods are utilized.

4. The quality identification markings of the materials used are not inspectable after installation.

5. The manner of use of materials precludes full inspection after installation.

EXCEPTION: The Department may waive continuous or periodic inspection required by this section where minor quantities are involved and no unusual hazards exist.

In addition to the projects included in the above categories, the Superintendent of Building may require ~~Controlled Activity~~ Special Activity inspections, if the Superintendent determines that these inspections are needed to ensure compliance with the provisions of this Code and the work involves:

1. Unique, novel or innovative construction;

2. Highly complex or intricate construction;

3. Unique, novel or innovative grading, earth support or foundation procedures; or

4. New methods of construction not yet provided for in the rules and regulations.

~~Controlled Activity~~ Special Activity inspection authority will be determined on a case by case basis and will require Deputy Inspector registration. ~~be issued only as a supplement to a valid Deputy Inspector registration.~~ The Superintendent of Building shall adopt rules and regulations implementing the provisions of this section. These regulations may establish and set the requirements for different types of ~~Controlled Activity~~ Department Approved Special Activity Inspectors.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1704.19.1~~ 91.1704.21.1. ~~Controlled Activity~~ Special Inspection Authority.

~~91.1704.19.2~~ 91.1704.21.2. Registration. The procedures and conditions of registration as a ~~Controlled Activity~~ Special Activity Inspector shall be the same as applicable to a Registered Deputy Inspector under Section 91.1704.1.3, except that the extent and duration of special inspection ~~controlled inspection~~ authority shall be as specified in the rules and regulations adopted by the Superintendent of Building.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1704.19.3~~ 91.1704.21.3.**Duties.** Except as otherwise indicated by regulations promulgated by the Superintendent of Building, the duties and responsibilities for a ~~Controlled~~ Special Activity Inspector shall be the same as specified for a Registered Deputy Inspector under Section 91.1704.1.4 of this Code.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1704.19.4~~ 91.1704.21.4. **Fees.** The procedures for the examination, registration and renewal of authority as a ~~Controlled Activity~~ Special Activity Inspector shall be the same as specified for Registered Deputy Inspectors under Section 91.1704.1.3 of this Code. ~~However, the fees for registration are modified as follows:~~

~~**Initial Authority Registration:**~~

~~Examination, including one class $25.00~~

~~Additional classes, per class $6.00~~

~~Registration $13.00~~

~~**Adding classes to existing authority:**~~

~~Examination and registration, per class $13.00~~

~~**Renewal:**~~

~~Examination and registration, per class $6.00~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1704.19.5~~ 91.1704.21.5. **Renewal Process.** Section 91.1704.1.3 applies to the application, examination and renewal process for registration as a ~~Controlled~~ Special Activity Inspector.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1704.20~~ 91.1704.22. **Certification of Welders.**

~~91.1704. 20.1~~ 91.1704.22.1. The Department shall establish procedures, rules and regulations for the issuance of Welder's Certifications.

A fee of $110.00 shall be paid on each application for certification or renewal. $50.00 of the fee shall be paid prior to the Department's examination for a new certification and the remaining amount shall be paid after the examination. Certificates shall be issued for a period of three years and may be renewed for additional three-year periods.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1704. 20.2~~ 91.1704.22.2. The Superintendent of Building shall suspend or revoke any certificate upon evidence of failure of the person so certified to conduct welding operations in compliance with any of the conditions upon which it is based, or where quality of workmanship is not equivalent to that required by the code, or for any of the reasons set forth in Article 8, Chapter IX of the Los Angeles Municipal Code. Any action shall be in accordance with the provisions of Article 8, Chapter IX of the Los Angeles Municipal Code.

Reason: This Administrative amendment is to be consistent with the State of California Code.

SEC. 91.1705. STATEMENT OF SPECIAL INSPECTIONS.

Section 1705 of the CBC is adopted by reference, except Section 1705.2 and 1705.3 of the CBC is not adopted and in lieu, Sections 91.1705.2 and 91.1705.3 ~~is~~ are added.

91.1705.2. Content of Statement of Special Inspections. The statement of special inspections shall identify the following:

1. The materials, systems, components, research reports and work required to have special inspection or testing by the Superintendent of Building or by the *registered design professional* responsible for each portion of the work.

2. The type and extent of each *special inspection.*

3. The type and extent of each test.

4. Additional requirements for special inspection or testing for seismic or wind resistance as specified in CBC Sections 1705.3, 1705.4 ~~and~~ or Sections 91.1707 ~~and~~ or 91.1708 of this Code.

5. For each type of *special inspection*, identification as to whether it will be continuous *special inspection* or periodic *special inspection.*

91. 1705.3 Seismic resistance. The statement of special inspections shall include seismic requirements for cases covered in CBC Sections 1705.3.1 through 1705.3.5.
Exception: Seismic requirements are permitted to be excluded from the statement of special inspections for structures designed and constructed in accordance with the following:

1. The structure consists of light-frame construction; the design spectral response acceleration at short periods, *SDS*, as determined in Section 1613.5.4, does not exceed 0.5g; and the height of the structure does not exceed 35 feet (10 668 mm) above *grade plane*; or
2. The structure is constructed using a reinforced masonry structural system or reinforced concrete structural system; the design spectral response acceleration at short periods, *SDS*, as determined in Section 1613.5.4, does not exceed 0.5g, and the height of the structure does not exceed 25 feet (7620 mm) above *grade plane*; or
3. Detached one- or two-family dwellings not exceeding two *stories above grade plane*, provided the structure is not assigned to Seismic Design Category D, E, or F and

does not have any of the following plan or vertical irregularities in accordance with Section 12.3.2 of ASCE 7:

3.1. Torsional irregularity.

3.2. Nonparallel systems.

3.3. Stiffness irregularity—extreme soft story and soft story.

3.4. Discontinuity in capacity—weak story.

Reason: This Administrative amendment is to be consistent with the State of California Code.

SEC. 91.1707. SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE.

Section 1707 of the CBC is adopted by reference, except Sections 1707.1, 1707.2 and ~~1707.9~~ 1707.8 of the CBC are not adopted and in lieu, Sections 91.1707.1, 91.1707.2, 91.1707.2.1, ~~91.1707.9~~ 91.1707.8 and ~~91.1707.11~~ 91.1707.10 are added.

91.1707.1. Special Inspections for Seismic Resistance. Special inspections itemized in CBC Sections 1707.3 through 1707.7 and Sections 91.1707.2, 91.1707.8 and through ~~91.1707.11~~ 91.1707.10 are required for the following, unless exempted by the exceptions of Section 91.1704.1 ~~of this Code~~ ,91.1705.3, or CBC Section 1705.3.1:

1. The seismic-force-resisting systems in structures assigned to Seismic Design Category C, D, E or F as determined in CBC Section 1613.

2. Designated seismic systems in structures assigned to Seismic Design Category D, E or F.

3. Architectural, mechanical and electrical components in structures assigned to Seismic Design Category C, D, E or F that are required in CBC Sections 1707.7 and 1707.8.

~~91.1707.9~~ **91.1707.8. Designated Seismic System Verifications.** The Registered Deputy Inspector shall examine designated seismic systems requiring seismic qualification in accordance with CBC Section ~~1708.5~~ 1708.4 and verify that the label, anchorage, mounting conforms to the *certificate of compliance* and any applicable research report.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1707.11~~ **91.1707.10. Structural Inspection - Concrete.** During the construction of all buildings over 160 feet (48,768 mm) in height with concrete special moment-resisting space frames, a structural inspector under the supervision of the engineer responsible for the structural design shall be present to inspect the materials and workmanship for conformance with approved plans, specifications and change orders involved in construction of the ductile frames and shear walls. This inspection may be made by one or more structural inspectors, provided that at least one structural inspector is present during the placement of all concrete and reinforcement in the structural frame and shear walls.

The number of structural inspectors to be provided for each structure shall be determined by the engineer responsible for the structural design, provided that more than one structural

inspector shall be provided where the magnitude of a structure prevents a single inspector from adequately performing the inspection.

The owner shall provide for each structural inspector. Each structural inspector shall be paid by the owner directly or through the person responsible for the structural design. Each structural inspector shall be responsible to the person who prepared the structural design.

The inspection by the structural inspector or inspectors shall be in addition to inspections made by Department employees as specified in Section 91.108 of this Code and by Registered Deputy Inspectors as specified for other parts of the work in Section 91.1704.1 this Code.

Prior to the issuance of the Certificate of Occupancy, each structural inspector shall submit a report in writing to the engineer and the Department certifying that the portions of the structural frame inspected by the inspector were constructed in accordance with the approved plans, specifications, change orders and Division 19 of this Code.

Reason: This Administrative amendment is to be consistent with the State of California Code.

SEC. 91.1708. STRUCTURAL TESTING FOR SEISMIC RESISTANCE.

Section 1708 of the CBC is adopted by reference, except Section ~~1708.~~4 1708.3of the CBC is not adopted and in lieu, Section ~~91.1708.4~~ 91.1708.3 is added.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**91.1708.4.**~~ **91.1708.3. Structural Steel.** The testing described in the quality assurance plan shall be as required by AISC 341 and the additional requirements in this section. Nondestructive testing shall be performed by an approved agency and the written report, including the test results, shall be submitted for evaluation by the Superintendent of Building. The acceptance criteria for nondestructive testing shall be as required in AWS D1.1 as specified by the registered design professional.

Base metal thicker than 1.5 inches (38 mm), where subject to through-thickness weld shrinkage strains, shall be ultrasonically tested for discontinuities behind and adjacent to those welds after joint completion. Any material discontinuities shall be accepted or rejected on the basis of ASTM A 435 or ASTM A 898 (Level 1 criteria) and criteria as established by the registered design professional(s) in responsible charge, and the construction documents.

Reason: This Administrative amendment is to be consistent with the State of California Code.

SEC. 91.1709. CONTRACTORS RESPONSIBILITY.

Section 1709 of the CBC is adopted by reference, and Sections 91.1709.2, 91.1709.2.1, 91.1709.2.2, 91.1709.2.3, 91.1709.2.4, 91.1709.2.5, and 91.1709.2.6 are added.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.1709.2. CERTIFIED LICENSED CONTRACTORS.

91.1709.2.1. Registration. Application for registration as a certified licensed contractor shall be made to the Superintendent of Building on a form furnished by the Department and a separate application shall be made for each type of registration desired. Before the application can be accepted, the applicant must furnish proof satisfactory to the Department that the applicant holds a valid active California State Contractor's License in the same specialty as the certification requested.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.1709.2.2. Application.

1. Form. Application for a Certificate of Registration shall be made on a form furnished by the Department.

2. Information Necessary. The application shall bear the name and address of the applicant and, if the applicant is employed by a firm, partnership or corporation, the names of the principal officers should also be included. The application shall carry other information deemed necessary by the Department.

3. Verification. The applicant shall declare that the information contained in the application is true and correct.

4. Fee. The application shall be accompanied by an examination fee of $188.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.1709.2.3. Examination.

1. Examination Required. Before issuance of a Certificate of Registration, the applicant shall have successfully passed the examination required for the issuance of the Certificate of Registration within 90 days preceding the date of the issuance. To be eligible for the examination for a Certificate of Registration, the applicant shall have a valid California State Contractor's License in an appropriate specialty and a valid City Business Tax Certificate.

2. Board of Examiners. The Superintendent of Building and/or Board of Examiners composed of three qualified persons appointed by the Superintendent shall conduct examinations.

The results of every examination shall be subject to the approval of the Superintendent of Building.

Each examiner shall serve at the pleasure of the Superintendent of Building and shall serve for a period of one year unless reappointed by the Superintendent.

3. Scope of Examination. The examination shall, in the judgment of the Superintendent of Building, fairly determine the ability of the applicant to perform

properly the work, which he or she would be authorized to do by the Certificate of Registration requested, and may include the following:

a. A written test.

b. Practical tests as may be required.

c. An oral interview as may be required.

d. Other tests as may be required by the Board of Examiners.

4. Time of Examination. The applicant shall be examined as soon as practicable after filing an application.

5. Rules and Regulations. The Department shall have the authority to establish rules and regulations for the conduct of examinations.

6. Fitness of Applicant. Any applicant may be required to submit satisfactory proof of his or her fitness to carry out the intent of this Code.

7. Failure to Pass. An applicant who fails to pass an examination shall not be eligible for another examination until four weeks after taking the previous examination.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.1709.2.4. Issuance of Certificates.

1. The Superintendent of Building shall issue separate Certificates of Registration for each of the following categories:

a. FAU/AC units; evaporative coolers.

b. Domestic water piping/plumbing fixtures/hot water heaters/solar panels.

c. Reroofing and roof repair.

d. Electrical equipment/fixtures/smoke detectors.

e. Masonry and concrete fences.

f. Masonry chimney repairs.

g. Shower pan replacement.

Nothing here prohibits any person from being qualified for more than one type of certification, provided the person makes application, pays the required fees, takes the required examinations and is duly qualified by the Superintendent of Building for each type of certification.

2. Upon payment of a $45.00 fee, the Department may issue a Certificate of Registration to every applicant who passes the required examination for a Certified Licensed Contractor.

3. Each Certificate of Registration shall expire 12 months from the date of issuance.

4. The Superintendent of Building shall keep on file a list, open to public inspection, of the names of all registered certified licensed contractors, showing the type of work each has been authorized to inspect.

5. **Renewal of Certificates.** Expired Certificates of Registration may be renewed at any time within 30 days following the date of expiration. After a Certificate of Registration has been expired for 30 days, it may not be renewed; rather, a new application for a new certificate must be submitted at that time.

After a Certificate of Registration has been expired for one year, it may not be renewed; rather, a new application for a new certificate must be submitted at that time.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.1709.2.5. Exhibition of Certificate.

1. Every person having a fixed place of business shall keep his or her Certificate of Registration posted in some conspicuous location at his or her place of business during the time the certificate is in force.

2. Every person not having a fixed place of business shall carry his or her Certificate of Registration with him or her at all times while doing any inspections or other work pursuant to this certificate.

91.1709.2.6. Revocation of Certificate. The Superintendent of Building may revoke, suspend or refuse to renew any Certificate of Registration upon a showing of incompetence, willful or negligent failure to observe or report violations of this Code, or failure to maintain a valid active California State Contractor's License in the same specialty as the certification. Prior to any action, the holder shall be given an opportunity to appear before the Superintendent of Building and be heard.

Suspension or revocation of any Certificate of Registration issued under this section shall be in accordance with the provisions of Article 8, Chapter IX of the Los Angeles Municipal Code.

Reason: This Administrative amendment is to be consistent with the State of California Code.

SEC. ~~91.1709~~ 91.1710. STRUCTURAL OBSERVATIONS.

Section ~~1709~~ 1710 of the CBC is adopted by reference, except that Sections ~~1709.1~~ 1710.1 and ~~1709.2~~ 1710.2 of the CBC are not adopted and in lieu, Sections ~~91.1709.1~~ 91.1710.1 and ~~91.1709.2~~ 91.1710.2 are added.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1709.1~~ 91.1710.1. **General.** Where required by the provisions of Section ~~91.1709.2~~ 91.1710.2 of this Code or CBC Section ~~1709.3~~ 1710.3, the owner shall employ the registered design professional in responsible charge for the structural design, or another registered design professional designated by the registered design professional in responsible charge for the structural design to perform structural observations as defined by CBC Section 1702.

The owner or owner's representative shall coordinate and call a preconstruction meeting between the engineer or architect responsible for the structural design, structural observer, contractor, affected subcontractors and deputy inspectors. The structural observer shall preside over the meeting. The purpose of the meeting shall be to identify the major structural elements and connections that affect the vertical and lateral load systems of the structure and to review scheduling of the required observations. A record of the meeting shall be included in the first report submitted to the Superintendent of Building.

Observed deficiencies shall be reported in writing to the owner's representative, Registered Deputy Inspector, contractor and the Superintendent of Building. Upon the form prescribed by the Superintendent of Building, the structural observer shall submit to the Superintendent of Building a written statement at each significant construction stage stating that the site visits have been made and identifying any reported deficiencies, which, to the best of the structural observer's knowledge, have not been resolved. A final report by the structural observer, which states that all observed deficiencies have been resolved, is required before acceptance of the work by the Superintendent of Building.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91.1709.2~~ 91.1710.2. **Structural Observations for Seismic Resistance.** Structural observations shall be provided for those structures included in *Seismic Design Category* D, E or F, as determined in Section 91.1613 of this Code, where one or more of the following conditions exist:

1. The structure is classified as *Occupancy Category* III or IV in accordance with CBC Section 1604.5.

2. The height of the structure is greater than 75 feet (22860 mm) above the base.

3. The structure is classified as *Occupancy Category* I or II in accordance with CBC Section 1604.5 and a lateral design is required for the structure or portion thereof.

EXCEPTION: One-story wood framed Group R-3 and Group U Occupancies less than 2000 square feet in area, provided the adjacent grade is not steeper than 1 unit vertical in 10 units horizontal (10% sloped), assigned to Seismic Design Category D.

4. When so designated by the *registered design professional* in responsible charge of the structural design.

5. When such observation is specifically required by the Department.

Reason: This Administrative amendment is to be consistent with the State of California Code.

SEC. ~~91.1711~~ 91.1712. ALTERNATIVE TEST PROCEDURE.

Section ~~1711~~ 1712 of the CBC is adopted by reference, except Section ~~1711.1~~ 1712.1of the CBC is not adopted and in lieu, Section ~~91.1711.1~~ 91.1712.1 is added.

~~91. 1711.1~~ 91.1712.1.**General.** In the absence of approved rules or other approved standards pertaining to new materials or assemblies, the Superintendent of Building shall make, or cause to be made, any necessary tests and investigations; or the Superintendent of Building shall accept duly authenticated reports from approved agencies in respect to the quality and manner of use of new materials or assemblies as provided for in Section 91.104.2.6 of this Code. The cost of all tests and other investigations required under the provisions of this Code shall be borne by the permit applicant.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**SEC. 91.1716. CERTIFIED LICENSED CONTRACTORS.**~~

~~**91.1716.1. Registration.** Application for registration as a certified licensed contractor shall be made to the Superintendent of Building on a form furnished by the Department and a separate application shall be made for each type of registration desired. Before the application can be accepted, the applicant must furnish proof satisfactory to the Department that the applicant holds a valid active California State Contractor's License in the same specialty as the certification requested.~~

~~**91.1716.2. Application.**~~

~~**91.1716.2.1. Forms.** Application for a Certificate of Registration shall be made on a form furnished by the Department.~~

~~**91.1716.2.2. Information Necessary.** The application shall bear the name and address of the applicant and, if the applicant is employed by a firm, partnership or corporation, the names of the principal officers should also be included. The application shall carry other information deemed necessary by the Department.~~

~~**91.1716.2.3. Verification.** The applicant shall declare that the information contained in the application is true and correct.~~

~~**91.1716.2.4. Fee.** The application shall be accompanied by an examination fee of $188.~~

~~**91.1716.3. Examination.**~~

~~**91.1716.3.1. Examination Required.** Before issuance of a Certificate of Registration, the applicant shall have successfully passed the examination required for the issuance of the Certificate of Registration within 90 days preceding the date of the issuance. To be eligible for the examination for a Certificate of Registration, the applicant shall have a valid California State Contractor's License in an appropriate specialty and a valid City Business Tax Certificate.~~

~~**91.1716.3.2. Board of Examiners.** The Superintendent of Building and/or Board of Examiners composed of three qualified persons appointed by the Superintendent shall conduct examinations.~~

~~The results of every examination shall be subject to the approval of the Superintendent of Building.~~

~~Each examiner shall serve at the pleasure of the Superintendent of Building and shall serve for a period of one year unless reappointed by the Superintendent.~~

~~**91.1716.3.3. Scope of Examination.** The examination shall, in the judgment of the Superintendent of Building, fairly determine the ability of the applicant to perform properly the work, which he or she would be authorized to do by the Certificate of Registration requested, and may include the following:~~

~~1. A written test.~~

~~2. Practical tests as may be required.~~

~~3. An oral interview as may be required.~~

~~4. Other tests as may be required by the Board of Examiners.~~

~~**91.1716.3.4. Time of Examination.** The applicant shall be examined as soon as practicable after filing an application.~~

~~**91.1716.3.5. Rules and Regulations.** The Department shall have the authority to establish rules and regulations for the conduct of examinations.~~

~~**91.1716.3.6. Fitness of Applicant.** Any applicant may be required to submit satisfactory proof of his or her fitness to carry out the intent of this Code.~~

~~**91.1716.3.7. Failure to Pass.** An applicant who fails to pass an examination shall not be eligible for another examination until four weeks after taking the previous examination.~~

~~**91.1716.4. Issuance of Certificates.**~~

~~**91.1716.4.1.** The Superintendent of Building shall issue separate Certificates of Registration for each of the following categories:~~

~~1. FAU/AC units; evaporative coolers.~~

~~2. Domestic water piping/plumbing fixtures/hot water heaters/solar panels.~~

~~3. Reroofing and roof repair.~~

~~4. Electrical equipment/fixtures/smoke detectors.~~

~~5. Masonry and concrete fences.~~

~~6. Masonry chimney repairs.~~

~~7. Shower pan replacement.~~

~~Nothing here prohibits any person from being qualified for more than one type of certification, provided the person makes application, pays the required fees, takes the required examinations and is duly qualified by the Superintendent of Building for each type of certification.~~

~~**91.1716.4.2.** Upon payment of a $45.00 fee, the Department may issue a Certificate of Registration to every applicant who passes the required examination for a Certified Licensed Contractor.~~

~~**91.1716.4.3.** Each Certificate of Registration shall expire 12 months from the date of issuance.~~

~~**91.1716.4.4.** The Superintendent of Building shall keep on file a list, open to public inspection, of the names of all registered certified licensed contractors, showing the type of work each has been authorized to inspect.~~

~~**91.1716.4.5. Renewal of Certificates.** Expired Certificates of Registration may be renewed at any time within 30 days following the date of expiration. After a Certificate of Registration has been expired for 30 days, it may not be renewed; rather, a new application for a new certificate must be submitted at that time.~~

~~After a Certificate of Registration has been expired for one year, it may not be renewed; rather, a new application for a new certificate must be submitted at that time.~~

~~**91.1716.5. Exhibition of Certificate.**~~

~~**91.1716.5.1.** Every person having a fixed place of business shall keep his or her Certificate of Registration posted in some conspicuous location at his or her place of business during the time the certificate is in force.~~

~~**91.1716.5.2.** Every person not having a fixed place of business shall carry his or her Certificate of Registration with him or her at all times while doing any inspections or other work pursuant to this certificate.~~

~~**91.1716.6. Revocation of Certificate.** The Superintendent of Building may revoke, suspend or refuse to renew any Certificate of Registration upon a showing of incompetence, willful or negligent failure to observe or report violations of this Code, or failure to maintain a valid active California State Contractor's License in the same specialty as the certification. Prior to any action, the holder shall be given an opportunity to appear before the Superintendent of Building and be heard.~~

~~Suspension or revocation of any Certificate of Registration issued under this section shall be in accordance with the provisions of Article 8, Chapter IX of the Los Angeles Municipal Code.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

SEC. ~~91.1715~~ 91.1716. MATERIAL AND TEST STANDARDS.

Section ~~1715~~ 1716 of the CBC is adopted by reference, except Sections ~~1715.1, 1715.1.1 and 1715.2~~ 1716.1, 1716.1.1, and 1716.2 of the CBC are not adopted and in lieu, Sections ~~91.1715.1, 91.1715.1.1 and 91.1715.2~~ 91.1716.1, 91.1716.1.1, and 91.1716.2are added.

~~91. 1715 .1~~ 91. 1716.1. Test Standards for Joist Hangers and Connectors.

~~91. 1715.1.1~~ 91. 1716.1.1 . Test Standards for Joist Hangers. The vertical load-bearing capacity, torsional moment capacity, and deflection characteristics of joist hangers shall be determined in accordance with ASTM D 1761 using lumber having a specific gravity of 0.49 or greater, but not greater than 0.55, as determined in accordance with AF&PA NDS for the joist and headers. Required testing shall be conducted or witnessed by an approved agency.

EXCEPTION: The joist length shall not be required to exceed 24 inches (610 mm).

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~91. 1715.1.2~~ 91. 1716.1.2. Concrete and Clay Roof Tiles. Required tests for concrete and clay roof tiles shall be conducted or witnessed by an approved testing agency.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**SEC. 91.1718. PREFABRICATED CONSTRUCTION.**~~

~~**91.1718.1. General.**~~

~~**91.1718.1.1. Purpose.** The purpose of this section is to regulate materials and establish methods of safe construction where any structure or portion of the structure is wholly or partially prefabricated.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1703.6 was added to discuss Prefabrication Construction requirements. This section needs to be removed to avoid duplicates.

~~**91.1718.1.2. Scope.** Unless otherwise specifically stated in this section, all prefabricated construction and all materials used in the construction shall conform to all the requirements of this Code. (See Section 104.2.6.)~~

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1703.6 was added to discuss Prefabrication Construction requirements. This section needs to be removed to avoid duplicates.

~~**91.1718.1.3. Definition.**~~

~~**PREFABRICATED ASSEMBLY** is a structural unit, the integral parts of which have been built up or assembled prior to incorporation in the building.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1703.6 was added to discuss Prefabrication Construction requirements. This section needs to be removed to avoid duplicates.

~~**91.1718.2. Tests of Materials.** Every approval of a material not specifically mentioned in this Code shall incorporate as a proviso, the kind and number of tests to be made during prefabrication.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1703.6 was added to discuss Prefabrication Construction requirements. This section needs to be removed to avoid duplicates.

~~**91.1718.3. Tests of Assemblies.** The Superintendent of Building may require special tests to be made on assemblies to determine their durability and weather resistance.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1703.6 was added to discuss Prefabrication Construction requirements. This section needs to be removed to avoid duplicates.

~~**91.1718.4. Connections.** See Section 1611.11.1 for design requirements of connections for prefabricated assemblies.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1703.6 was added to discuss Prefabrication Construction requirements. This section needs to be removed to avoid duplicates.

~~**91.1718.5. Pipes and Conduits.** See Section 1611.11.2 for design requirements for removal of material for pipes, conduits and other equipment.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1703.6 was added to discuss Prefabrication Construction requirements. This section needs to be removed to avoid duplicates.

~~**91.1718.6. Certificate and Inspection.**~~

~~**91.1718.6.1. Materials.** Materials and the assembly of materials shall be inspected to determine compliance with this Code. Every material shall be graded, marked or labeled where required elsewhere in this Code.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1703.6 was added to discuss Prefabrication Construction requirements. This section needs to be removed to avoid duplicates.

~~**91.1718.6.2. Certificate.** A Certificate of Approval shall be furnished with every prefabricated assembly, except where the assembly is readily accessible to inspection at the site. The Certificate of Approval shall certify that the assembly in question has been inspected and meets all the requirements of this Code. When mechanical equipment is installed so that it cannot be~~

~~inspected at the site, the Certificate of Approval shall certify that the equipment complies with all applicable laws and regulations.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1703 was added to discuss Prefabrication Construction requirements. This section needs to be removed to avoid duplicates.

~~**91.1718.6.3. Certifying Agency.** To be acceptable under this Code, every Certificate of Approval shall be made by an approved agency.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1703 was added to discuss Prefabrication Construction requirements. This section needs to be removed to avoid duplicates.

~~**91.1718.6.4. Field Erection.** Placement of prefabricated assemblies at the building site shall be inspected by the Department to determine compliance with this Code.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1703 was added to discuss Prefabrication Construction requirements. This section needs to be removed to avoid duplicates.

~~**91.1718.6.5. Continuous Inspection.** If continuous inspection is required for certain materials where construction takes place on the site, it shall also be required where the same materials are used in prefabricated construction.~~

~~**EXCEPTION:** Continuous inspection will not be required during prefabrication if the approved agency certifies to the construction and furnishes evidence of compliance.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1703 was added to discuss Prefabrication Construction requirements. This section needs to be removed to avoid duplicates.

Sec. 10. Division 18 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

91.1801.1. Scope. The provisions of this division shall apply to building and foundation systems in those areas not subject to scour or water pressure by wind and wave action. Buildings and foundations subject to those scour or water pressure loads shall be designed in accordance with Division 16 of this Code.

Requirements governing ~~excavation~~, grading and earthwork construction, including excavation and fills ~~and embankments~~ are set forth in Division 70 of this Code.

Hillside buildings (buildings constructed on slopes steeper than one unit vertical in three units horizontal [33.3%] slope) shall comply with Section 91.1613.9 of this Code (seismic design provisions for hillside buildings) and this Chapter ~~division~~.

Reason: Administrative amendment for clarification

SEC. ~~91.1802~~. 91.1803. ~~FOUNDATION AND SOILS INVESTIGATIONS.~~ GEOTECHNICAL INVESTIGATION.

Section ~~1802~~ 1803 of the CBC is adopted by reference, except Sections ~~1802.2.3~~ and ~~1802.2.5~~ 1803.5.6 of the CBC are not adopted and in lieu, Sections ~~91.1802.2.3 and 91.1802.2.5~~ 91.1803.5.6 is ~~are~~ added.

~~**91.1802.2.3. Ground-water Table.** A subsurface soil investigation shall be performed to determine whether the historical high ground-water table is above or within five feet (1524 mm) below the elevation of the lowest floor level where the lowest floor level is located below the finished ground level adjacent to the foundation.~~

~~**EXCEPTION:** A subsurface soil investigation shall not be required where waterproofing is provided in accordance with CBC Section 1807.~~

Reason: Administrative amendment for clarification.

~~**91.1802.2.5**~~ **91.1803.5.6. Rock Strata.** Where subsurface explorations at the project site indicate variations or doubtful characteristics in the structure of the rock upon which foundations are to be constructed, a sufficient number of borings shall be made to a depth of not less than ten feet (3048 mm) below the level of the foundations and to a depth that would allow investigation of any unsupported bedding planes or any other rock discontinuities that could influence the foundation stability to provide assurance of the soundness of the foundation bed and its load-bearing capacity.

Reason: This admentment is required due to local geologic,seismic and topographic conditions.

SEC. ~~91.1804~~ 91.1806 ~~ALLOWABLE LOAD-BEARING VALUES OF SOILS~~ PRESUMPTIVE LOAD BEARING VALUES OF SOILS.

Section ~~1804~~ 1806 of the CBC is adopted by reference, except Section ~~1804.2~~ 1806.2 of the CBC is not adopted and in lieu, Section ~~91.1804.2~~ 91.1806.2 is added.

~~**91.1804.2.**~~ **91.1806.2 Presumptive Load-bearing Values.** ~~The maximum allowable foundation pressure or lateral sliding resistance values for supporting soils near the surface~~ The load-bearing values used in design for supporting soils near the surface shall not exceed the values specified in CBC Table ~~1804.2~~ 1806.2 unless data to substantiate the use of higher values are submitted and approved. Where the Department has reason to doubt the classification, strength or compressibility of the soil, the requirements of Section 1803.5.2 shall be satisfied.

Presumptive load-bearing values shall apply to materials with similar physical characteristics and dispositions.

Mud, organic silt, organic clays, peat or uncertified fill shall not be assumed to have a presumptive load-bearing capacity.

Reason: Administrative amendment for conformance with Chapter 70 of L. A. Building Code.

~~**SEC. 91.1805. FOOTINGS AND FOUNDATIONS.**~~

~~Section 1805 of the CBC is adopted by reference, except Sections 1805.1, 1805.2 and 1805.4.6 of the CBC are not adopted and in lieu, Sections 91.1805.1, 91.1805.2 and 91.1805.4.6 are added.~~

~~**91.1805.1. General.** Footings and foundations shall be designed and constructed in accordance with Section 91.1805. Footings and foundations shall be built on undisturbed soil, compacted fill material or controlled low strength material (CLSM). Compacted fill material shall be placed in accordance with CBC Section 1803.5. CLSM shall be placed in accordance with CBC Section 1803.6.~~

~~The top surface of footings shall be level. The bottom surface of footings is permitted to have a slope not exceeding one unit vertical in ten units horizontal (ten percent slope). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footing or where the surface of the ground slopes more than one unit vertical in ten units horizontal (ten percent slope). This stepping requirement shall also apply to the top surface of grade beams supporting walls. Footings shall be reinforced with four 1/2 inch diameter (12.7 mm) deformed reinforcing bars. Two bars shall be placed at the top and bottom of the footings as shown in Figure 1805.1 of this Code.~~

~~**91.1805.2. Depth of Footings.** The minimum depth of footings below the surface of undisturbed soil, compacted fill material or CLSM shall be 12 inches (305 mm). Where applicable, the depth of footings shall also conform to CBC Sections 1805.2.1 through 1805.2.3.~~

~~**91.1805.4.6. Wood Foundations.** Wood foundation systems shall be designed and installed in accordance with AF&PA Technical Report No. 7 and as otherwise approved by the Superintendent of Building. Lumber and plywood shall be treated in accordance with AWPA U1 (Commodity Specification A, Use Category 4B and Section 5.2) and shall be identified in accordance with CBC Section 2303.1.8.1.~~

~~**EXCEPTION:** Accessory buildings not used for human occupancy and less than 120 square feet (11.1m^2) in area may be supported on treated wood mud sills.~~

SEC. ~~91.1807~~ 91.1805 DAMPPROOFING AND WATERPROOFING.

Section 1805 of the CBC is adopted by reference, except Section ~~1807.4.3~~ 1805.4.3 of the CBC is not adopted and in lieu, Section ~~91.1807.4.3~~ 91.1805.4.3 is added.

~~91.1807.4.3~~ **91.1805.4.3. Drainage Discharge.** The floor base and foundation perimeter drain shall discharge by gravity or mechanical means into an approved drainage system that complies with the Plumbing Code.

Reason: Administrative amendment revised for clarification.

91.1807 FOUNDATION WALLS, RETAINING WALLS, AND EMBEDED POST AND POLES

Section 1807 of the CBC is adopted by reference, except Section 1807.1.4 and 1807.1.6 the CBC is not adopted and in lieu, Sections 91.1807.1.4 and 91.1807.1.6 are added.

91.1807.1.4 Permanent wood foundation systems. Permanent wood foundation systems shall be designed and installed in accordance with AF & PA PWF and as otherwise approved by the Department. Lumber and plywood shall be treated in accordance with AWPA U1 (Commodity Specification A, Use Category 4B and Section 5.2) and shall be identified in accordance with Section 2303.1.8.1. Permanent wood foundation systems shall not be used for structures assigned to Seismic Design Category D, E, F.

Exception: Accessory buildings not used for human occupancy and less than 120 square feet (11.1 m2) in area may be supported on treated wood mud sills.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.1807.1.6 Prescriptive design of concrete and masonry foundation walls. Concrete and masonry foundation walls that are laterally supported at the top and bottom shall be permitted to be designed and constructed in accordance with this section. Prescriptive design of foundation walls shall not be used for structures assigned to Seismic Design Category D, E, or F.

Reason: Administrative amendment revised for clarification.

~~**SEC. 91.1808. PIER AND PILE FOUNDATIONS.**~~

~~Section 1808 of the CBC is adopted by reference, except Sections 1808.2.8.4 and 1808.2.9.1 of the CBC are not adopted and in lieu, Sections 91.1808.2.8.4 and 91.1808.2.9.1 are added.~~

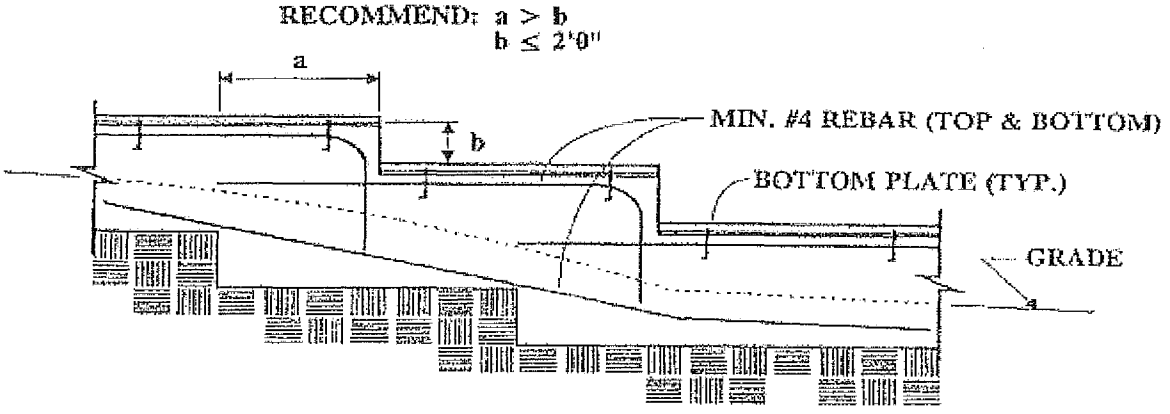
~~**91.1808.2.8.4. Allowable Frictional Resistance.** The assumed frictional resistance developed by any pier or uncased cast-in-place pile shall not exceed one-sixth of the bearing value of the soil material at minimum depth as set forth in CBC Table 1804.2 up to a maximum of 500 psf (24 kPa), unless a greater value is allowed by the Superintendent of Building after a soil investigation as specified in CBC Section 1802 is submitted, or a greater value is substantiated by a load test in accordance with CBC Section 1808.2.8.3. Frictional resistance and bearing resistance shall not be assumed to act simultaneously.~~

~~**91.1808.2.9.1. General.** Only undisturbed soil, compacted fill material or CLSM shall be deemed to afford sufficient lateral support to the pier or pile to prevent buckling and to permit the design of the pier or pile in accordance with accepted engineering practice and the applicable provisions of this Code.~~

SEC. 91.1809. ~~DRIVEN PILE FOUNDATIONS.~~ SHALLOW FOUNDATIONS

Section 1809 of the CBC is adopted by reference, except Section 1809.3 and 1809.4 are not adopted and in lieu, Sections 91.1809.3, 91.1809.4, 91.1809.7 and 91.1809.12 of are added.

91.1809.3 Stepped Footing. The top surface of footings shall be level. The bottom surface of footings shall be ermitted to have a slope not exceeding one unit vertical in 10 units horizontal (10-percent slope). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footing or where the surface of the ground slopes more than one unit vertical in 10 units horizontal (10-percent slope). This stepping requirement shall also apply to the top surface of grade beams supporting walls. Footings shall be reinforced with four ½ inch diameter (12.7 mm) deformed reinforcing bars. Two bars shall be placed at the top and bottom of the footings as shown in Figure 1809.3 of this Code.



STEPPED FOUNDATIONS
FIGURE ~~1805.1~~ 1809.3

Reason: This Administrative amendment is to be consistent with the State of California Code. Required due to local geologic, seismic and topographic conditions

91.1809.4 Depth and width of footings. The minimum depth of footings below the surface of undisturbed soil, compacted fill material or CLSM shall be 12 inches (305 mm). Where applicable, the requirements of CBC Section 1809.5 shall also be satisfied. The minimum width of footings shall be 12 inches (305mm).

Reason: Amendment for clarification

91.1809.7 Prescriptive footings for light-frame construction. Where a specific design is not provided concrete or masonry-unit footings supporting walls of light-frame constructionshall be permitted to be designed in accordance with Table 1809.7. Prescriptive footings in Table 1809.7 shall not exceed one story above grade for structures assigned to Seismic Design Category D, E, or F

TABLE ~~1805.4.2~~ 1809.7
PRESCRIPTIVE FOOTINGS SUPPORTING WALLS OF LIGHT-FRAMED CONSTRUCTION [a, b, c, d, e]

NUMBER OF FLOORS SUPPORTED BY THE FOOTING [f]	WIDTH OF FOOTING (inches)	THICKNESS OF FOOTING (inches)
1	12	6
2	15	6
3	18	8[g]

For SI: one inch = 25.4 mm, one foot = 304.8 mm

a. Depth of footings shall be in accordance with Section ~~91.1805.2.~~ 1809.4.

b. The ground under the floor is permitted to be excavated to the elevation of the top of the footing.

c. Not Adopted.

d. See CBC Section 1908 for additional requirements for footings of structures assigned to Seismic Design Category C, D, E or F.

e. For thickness of foundation walls, see Section ~~91.1805.5~~ 91.1807.1.6 of this Code.

f. Footings are permitted to support a roof in addition to the stipulated number of floors. Footings supporting roof only shall be as required for supporting one floor.

Reason: This Administrative amendment is to be consistent with the State of California Code. Required due to local geologic, seismic and topographic conditions.

91.1809.12 Timber footings. Timber footings shall be permitted for buildings of Type V construction and as otherwise *approved* by the Department Such footings shall be treated in accordance with AWPA U1 (Commodity Specification A, Use Category 4B). Treated timbers are not required where placed entirely below permanent water level, or where used as capping for wood piles that project above the water level over submerged or marsh lands. The compressive stresses perpendicular to grain in untreated timber footings supported upon treated piles shall not exceed 70 percent of the allowable stresses for the species and grade of timber as specified in the AF&PA NDS. Timber footings shall not be used in structures assigned to Seismic Design Category D, E, or F.

Reason: This Administrative amendment is to be consistent with the State of California Code. This is required due to local geologic, seismic and topographic conditions.

SEC. 91.1810. ~~DRIVEN PILE FOUNDATIONS.~~ DEEP FOUNDATIONS

Section 1810 of the CBC is adopted by reference, except Section 1810.3.2.4 and 1810.3.3.1.4 of the CBC is not adopted and in lieu, Sections 91.1810.3.2.4 and 91.1810.3.3.1.4 are added.

91.1810.3.2.4 Timber. Timber deep foundation elements shall be designed as piles or poles in accordance with AF&PA NDS. Round timber elements shall conform to ASTM D 25. Sawn timber elements shall conform to DOC PS-20. Timber deep foundation shall not be used in structures assigned to Seismic Design Category D, E, or F.

91.1810.3.3.1.4 Allowable frictional resistance. The assumed frictional resistance developed by any uncased cast-in-place deep foundation element shall not exceed one-sixth of the bearing value of the soil material at minimum depth as set forth in CBC Table 1806.2, up to a maximum of 500 psf (24 kPa), unless a greater value is allowed by the Department on the basis of a geotechnical investigation as specified in Section 1803 or a greater value is substantiated by a load test in accordance with CBC Section 1810.3.3.1.2. Frictional resistance and bearing resistance shall not be assumed to act simultaneously.

Reason: This Administrative amendment is to be consistent with the State of California Code. This is required due to local geologic, seismic and topographic conditions.

Sec. 11. Division 19 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.1900. BASIC PROVISIONS.

Chapter 19 of the CBC is adopted by reference, except that Sections 1908.1, 1908.1.2, 1908.1.8 and 1909.4 ~~1908.1.15~~ of the CBC are not adopted and Sections 91.1908.1, 91.1908.1.2, 91.1908.1.8 ~~91.1908.1.15, 91.1908.1.17, 91.1908.1.18, 91.1908.1.19, 91.1908.1.20 and 91.1908.1.21~~ 91.1908.11, 1908.12, 1908.13, 1908.14 and 91.1909.4 are added.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.1908.1. General. The text of ACI 318 shall be modified as indicated in CBC Sections 1908.1.1 through ~~1908.1.21.~~ 1908.1.14.

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**91.1908.1.15. ACI 318, Section 22.10.** Delete ACI 318, Section 22.10, and replace with the following:~~

~~22.10 – Plain concrete in structures assigned to Seismic Design Category C, D, E or F.~~

~~22.10.1 – Structures assigned to Seismic Design Category C, D, E or F shall not have elements of structural plain concrete, except as follows:~~

~~(a) Concrete used for fill with a minimum cement content of two (2) sacks of Portland cement per cubic yard.~~

~~(b) Isolated footings of plain concrete supporting pedestals or columns are permitted, provided the projection of the footing beyond the face of the supported member does not exceed the footing thickness.~~

~~(c) Plain concrete footings supporting walls are permitted provided the footings have at least two continuous longitudinal reinforcing bars. Bars shall not be smaller than No. 4 and shall have a total area of not less than 0.002 times the gross cross-sectional area of the footing. A minimum of one bar shall be provided at the top and bottom of the footing. Continuity of reinforcement shall be provided at corners and intersections.~~

~~**EXCEPTION:** In detached one- and two-family dwellings three stories or less in height and constructed with stud-bearing walls, plain concrete footings with at least two continuous longitudinal reinforcing bars not smaller than No. 4 are permitted to have a total area of less than 0.002 times the gross cross-sectional area of the footing.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**91.1908.1.17. ACI 318, Equation 14-9 of Sections 14.8.3 and 14.8.4.** Sections 14.8.3 and 14.8.4. of ACI 318 are modified as follows:~~

~~**Section 14.8.3 of ACI 318:** I_{cr} shall be calculated by Equation (14-7), and M_a shall be obtained by iteration of deflections.~~

$$I_{cr} = \frac{E_s}{E_c}\left(A_s + \frac{P_u}{f_y}\frac{h}{2d}\right)(d-c)^2 + \left(\frac{l_w c^3}{3}\right) \qquad (14\text{-}7)$$

~~and the value E_s/E_c shall not be less than six.~~

~~**Section 14.8.4 of ACI 318:** Maximum out-of-plane deflection, Δ_s, due to service loads, including $P\Delta$ effects, shall not exceed $l_e/150$.~~

~~If M_a, maximum moment at mid-height of wall due to service lateral and eccentric loads, including $P\Delta$ effects, exceed $(2/3)M_{cr}$, then Δ_s shall be calculated by Equation (14-8):~~

$$I_{cr} = \frac{E_s}{E_c}\left(A_s + \frac{P_u}{f_y}\frac{h}{2d}\right)(d-c)^2 + \left(\frac{l_w c^3}{3}\right) \qquad (14\text{-}8)$$

~~If M_a does not exceed $(2/3)M_{cr}$, Δ_s shall be calculated by Equation (14-9):~~

$$I_{cr} = \frac{E_s}{E_c}\left(A_s + \frac{P_u}{f_y}\frac{h}{2d}\right)(d-c)^2 + \left(\frac{l_w c^3}{3}\right) \qquad (14\text{-}9)$$

~~where:~~

$$I_{cr} = \frac{E_s}{E_c}\left(A_s + \frac{P_u\ h}{f_y\ 2d}\right)(d-c)^2 + \left(\frac{l_w c^3}{3}\right)$$

$$I_{cr} = \frac{E_s}{E_c}\left(A_s + \frac{P_u\ h}{f_y\ 2d}\right)(d-c)^2 + \left(\frac{l_w c^3}{3}\right)$$

~~I_{cr} shall be calculated by Equation (14-7), and M_a shall be obtained by iteration of deflections.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**91.1908.1.18. ACI 318, Section 21.4.4.1.** Modify ACI 318, Section 21.4.4.1 as follows:~~

~~Where the calculated point of contraflexure is not within the middle half of the member clear height, provide transverse reinforcement as specified in ACI 318, Sections 21.4.4.1, Items (a) through (c), over the full height of the member.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**91.1908.1.19. ACI 318, Section 21.4.4.7.** Modify ACI 318 by adding Section 21.4.4.7 as follows:~~

~~21.4.4.7 – At any section where the design strength, ϕP_n, of the column is less than the sum of the shears Ve computed in accordance with ACI 318, Sections 21.3.4.1 and 21.4.5.1 for all the beams framing into the column above the level under consideration, transverse reinforcement as specified in ACI 318, Sections 21.4.4.1 through 21.4.4.3 shall be provided. For beams framing into opposite sides of the column, the moment components may be assumed to be of opposite sign. For the determination of the design strength, ϕP_n, of the column, these moments may be assumed to result from the deformation of the frame in any one principal axis.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**91.1908.1.20. ACI 318, Section 21.7.4.6.** Modify ACI 318 by adding Section 21.7.4.6 as follows:~~

~~21.7.4.6 – Walls and portions of walls with $P_u > 0.35P_o$ shall not be considered to contribute to the calculated strength of the structure for resisting earthquake-induced forces. These walls shall conform to the requirements of ACI 318, Section 21.11.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**91.1908.1.21. ACI 318, Section 21.9.4.** Modify ACI 318 section 21.9.4 by adding the following:~~

~~Collector and boundary elements in topping slabs placed over precast floor and roof elements shall not be less than 3 inches (76 mm) or 6 d_b thick, where d_b is the diameter of the largest reinforcement in the topping slab.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.1908.1.2 ACI 318, Section 21.1.1. Modify ACI 318 Sections 21.1.1.3 and 21.1.1.7 to read as follows:

21.1.1.3 – Structures assigned to Seismic Design Category A shall satisfy requirements of Chapters 1 to 19 and 22; *Chapter 21 does not apply.* Structures assigned to *Seismic Design Category* B, C, D, E or F also shall satisfy 21.1.1.4 through 21.1.1.8, as applicable. *Except for structural elements of plain concrete complying with Section 1908.1.8 of the California Building Code, structural elements of plain concrete are prohibited in structures assigned to Seismic Design Category C, D, E or F.*

21.1.1.7 – Structural systems designated as part of the seismic-force-resisting system shall be restricted to those *permitted by ASCE 7.* Except for *Seismic Design Category* A, for which Chapter 21 does not apply, the following provisions shall be satisfied for each structural system designated as part of the seismic-force-resisting system, regardless of the *Seismic Design Category*:

(a) Ordinary moment frames shall satisfy 21.2.
(b) Ordinary reinforced concrete structural walls *and ordinary precast structural walls* need not satisfy any provisions in Chapter 21.
(c) Intermediate moment frames shall satisfy 21.3.
(d) Intermediate precast *structural* walls shall satisfy 21.4.
(e) Special moment frames shall satisfy 21.5 through 21.8.
(f) Special structural walls shall satisfy 21.9.
(g) Special structural walls constructed using precast concrete shall satisfy 21.10.

All special moment frames and special structural walls shall also satisfy 21.1.3 through 21.1.7. Concrete tilt-up wall panels classified as intermediate precast structural wall system shall satisfy 21.9 in addition to 21.4.2 and 21.4.3 for structures assigned to Seismic Design Category D, E, or F.

Reason: This Administrative amendment is to be consistent with the State of California Code. This is required due to local geologic, seismic and topographic conditions.

91.1908.1.8 ACI 318, Section 22.10. Delete ACI 318, Section 22.10, and replace with the following:

22.10 – Plain concrete in structures assigned to Seismic Design Category C, D, E or F.

22.10.1 – Structures assigned to Seismic Design Category C, D, E or F shall not have elements of structural plain concrete, except as follows:

(a) ~~Structural plain concrete basement, foundation or other walls below the base are permitted in detached one- and two-family dwellings three stories or less in height constructed with stud bearing walls. In dwellings assigned to Seismic Design Category D or E, the height of the wall shall not exceed 8 feet (2438 mm), the thickness shall not be less than 71/2 inches (190 mm), and the wall shall retain no more than 4 feet (1219 mm) of unbalanced fill. Walls shall have reinforcement in accordance with 22.6.6.5.~~ Concrete used for fill with a minimum cement content of two (2) sacks of Porland cement per cubic yard.

(b) Isolated footings of plain concrete supporting pedestals or columns are permitted, provided the projection of the footing beyond the face of the supported member does not exceed the footing thickness.

~~**Exception:** In detached one- and two-family dwellings three stories or less in height, the projection of the footing beyond the face of the supported member is permitted to exceed the footing thickness.~~

(c) Plain concrete footings supporting walls are permitted, provided the footings have at least two continuous longitudinal reinforcing bars. Bars shall not be smaller than No. 4 and shall have a total area of not less than 0.002 times the gross cross-sectional area of the footing. For footings that exceed 8 inches (203 mm) in thickness, a minimum of one bar shall be provided at the top and bottom of the footing. Continuity of reinforcement shall be provided at corners and intersections.

~~**Exceptions:**~~

~~1.~~ In detached one- and two-family dwellings three stories or less in height and constructed with stud-bearing walls, plain concrete footings. ~~without longitudinal reinforcement supporting walls are permitted.~~ With at least two continuous longitudinal reinforcing bars not smaller than No. 4 are permitted to have a total area of less than 0.002 times the gross cross-setional area of the footing.

~~2. For foundation systems consisting of a plain concrete footing and a plain concrete stemwall, a minimum of one bar shall be provided at the top of the stemwall and at the bottom of the footing.~~

~~3. Where a slab on ground is cast monolithically with the footing, one No. 5 bar is permitted to be located at either the top of the slab or bottom of the footing.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. This is required due to local geologic, seismic and topographic conditions.

91.1908.1.11. ACI 318, Section 21.6.4.1. Modify ACI 318, Section 21.6.4.1 to read as follows:

Where the calculated point of contraflexure is not within the middle half of the member clear height, provide transverse reinforcement as specified in ACI 318 Section 21.6.4.1. Items (a) through (c), over the full height of the member.

Reason: This Administrative amendment is to be consistent with the State of California Code. This is required due to local geologic, seismic and topographic conditions.

91.1908.1.12. ACI 318, Section 21.6.4. Modify ACI 318, Section 21.6.4, by adding Section 21.6.4.8 to read as follows:

21.6.4.8 – At any section where the design strength, φP_n, of the column is less than the sum of the shears V_e computed in accordance with ACI 318 Sections 21.5.4.1 and 21.6.5.1 for all the beams framing into the column above the level under consideration, transverse reinforcement as specified in ACI 318 Sections 21.6.4.1 through 21.6.4.3 shall be provided. For beams framing into opposite sides of the column, the moment components may be assumed to be of opposite sign. For determination of the design strength, φP_n, of the column, these moments may be assumed to result from the deformation of the frame in any one principal axis.

Reason: This Administrative amendment is to be consistent with the State of California Code. This is required due to local geologic, seismic and topographic conditions.

91.1908.1.13. ACI 318, Section 21.6.4. Modify ACI 318, Section 21.9.4, by adding Section 21.9.4.6 to read as follows:

21.9.4.6 – Walls and portions of walls with $P_u > 0.35P_o$ shall not be considered to contribute to the calculated strength of the structure for resisting earthquake-induced forces. Such walls shall conform to the requirements of ACI 318 Section 21.13.

Reason: This Administrative amendment is to be consistent with the State of California Code. This is required due to local geologic, seismic and topographic conditions.

91.1908.1.14. ACI 318, Section 21.11.6. Modify ACI 318, Section 21.11.6, by adding the following:

Collector and boundary elements in topping slabs placed over precast floor and roof elements shall not be less than 3 inches (76 mm) or 6 d_b thick, where d_b is the diameter of the largest reinforcement in the topping slab.

Reason: This Administrative amendment is to be consistent with the State of California Code. This is required due to local geologic, seismic and topographic conditions.

91.1909.4 Design. Structural plain concrete walls, footings and pedestals shall be designed for adequate strength in accordance with ACI 318, Sections 22.4 through 22.8.

> **Exception:** For Group R-3 occupancies and buildings of other occupancies less than two *stories above grade plane* of light-frame construction, the required edge thickness of ACI 318 is permitted to be reduced to 6 inches (152 mm), provided that the footing does not extend more than 4 inches (102 mm) on either side of the supported wall. This exception shall not apply to structural elements designed to resist seismic lateral forces for structures assigned to Seismic Design Category D, E, or F.

Reason: This Administrative amendment is to be consistent with the State of California Code. This is required due to local geologic, seismic and topographic conditions.

Sec. 12. Division 21 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.2113. MASONRY CHIMNEYS.

Section 2113 of the CBC is adopted by reference, except Section 2113.3 of the CBC is not adopted and in lieu, Section 91.2113.3 is added.

91.2113.3. Seismic Reinforcing. Masonry or concrete chimneys shall be constructed, anchored, supported and reinforced as required in this division. In *Seismic Design Category* C or D, masonry and concrete chimneys shall be reinforced and anchored as detailed in CBC Sections 2113.3.1, 2113.3.2 and 2113.4. In *Seismic Design Category* A, or B ~~or C~~, reinforcement and seismic anchorage is not required. In *Seismic Design Category* E or F, masonry and concrete chimneys shall be reinforced in accordance with the requirements of CBC Sections 2101 through 2108.

Notwithstanding any other provisions of this Code, an existing masonry chimney which is altered or repaired more than ten percent of its replacement cost within a 12-month period shall have its entire chimney structure comply with the current requirements of this Code or other standards approved by the Superintendent of Building.

Reason: This Administrative amendment is to be consistent with the State of California Code

Sec. 13. Division 22 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.2200. BASIC PROVISIONS.

Chapter 22 of the CBC is adopted by reference, except that Section 2204 of the CBC is not adopted and in lieu, Sections 91.2204, 91.2204.1, 91.2204.1.1, ~~91.2204.2, 91.2204.2.1~~ and 91.2205.4 are added.

91.2204.1.1 Consumables for welding.

91.2204.1.1.1 Seismic Force Resisting System (SFRS) welds. All welds used in members and connections in the SFRS shall be made with filler metals meeting the requirements specified in AWS D1.8 Clause 6.3. AWS D1.8 Clauses 6.3.5, 6.3.6, 6.3.7 and 6.3.8 shall apply only to demand critical welds.

91.2204.1.1.2 Demand critical welds. Where welds are designated as demand critical, they shall be made with filler metals meeting the requirements specified in AWS D1.8 Clause 6.3.

Reason: This geological amendment is to be consistent with the State of California Code. A number of significant technical modifications have been made since the adoption of AISC 341-05. One such change incorporates AWS D1.8/D1.8M by reference for welding related issues. This change will be included in AISC 341-10 which is to be incorporated by reference into the 2012 Edition of the International Building Code. This proposed amendment is consistent with actions taken by both DSA-SS and OSHPD to incorporate such language in the 2010 Edition of the California Building Code.

~~**91.2204.2. Bolting.** Section 2204.2 of the CBC is adopted by reference.~~

Reason: This Administrative amendment is to be consistent with the State of California Code

~~**91.2204.2.1. Anchor Rods.** Section 2204.2.1 of the CBC is adopted by reference.~~

Reason: This Administrative amendment is to be consistent with the State of California Code

Sec. 14. Division 23 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.2304. GENERAL CONSTRUCTION REQUIREMENTS.

Section 2304 of the CBC is adopted by reference, except Section 2304.9.1, Table 2304.9.1, and 2304.11.7 of the CBC ~~is~~ are not adopted and in lieu, Sections 91.2304.9.1, Table 2304.9.1 and 91.2304.11.7 ~~is~~ are added.

91.2304.9.1. Fastener Requirements. Connections for wood members shall be designed in accordance with the appropriate methodology in CBC Section 2301.2. The number and size of fasteners connecting wood members shall not be less than that set forth in CBC Table 2304.9.1. Staple fasteners in CBC Table 2304.9.1 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E or F.

Exception: Staples may be used to resist ot transfer seismic forces when the allowable shear values are substantiated by cyclic testing and approved by the building official.

Reason: This is amendment is due to geological. Due to the poor performance (strength and drift control) in the cyclic testing of using staple fasteners in resisting or transferring seismic forces, and due to the geological reason. The amendment is also a continuation of a similar amendment adopted during previous code adoption cycles.

Table 2304.9.1 Add new footnote q to Table 2304.9.1 as follow:

q. Staples shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E or F.

Reason: This is amendment is due to geological. Footnote added to be consistent with Section 91.2304.9.1.

91.2304.11.7. ~~Wood Used in Retaining Walls.~~ ~~No retaining wall shall be constructed of wood.~~ **Wood used in retaining walls and cribs.** Wood installed in retaining or crib walls shall be preservative treated in accordance with AWPA U1 (Commodity Specifications A or F) for soil and fresh water use. Wood shall not be used in retaining walls or cribs for structures assigned to Seismic Design Category D, E or F.

Reason: This is amendment is due to geological. Due to the insufficient data to show the wood retaining or crib walls is effective in supporting structures and buildings during a seismic event, and due to the climate zone in the Southern California area to have major winds, fire and rain related disasters. The amendment is also a continuation of a similar amendment adopted during previous code adoption cycles.

SEC. 91.2305. GENERAL DESIGN REQUIREMENTS FOR LATERAL FORCE-RESISTING SYSTEM.

Section 2305 of the CBC is adopted by reference, ~~except that Sections 2305.2.5, 2305.3.3 and 2305.3.11 of the CBC are not adopted and in lieu, Sections 91.2305.2.5, 91.2305.3.3, 91.2305.3.11and Table 2305.11~~ Sections 91.2305.4 and 91.2305.5 ~~is~~ are added.

~~**91.2305.2.5. Rigid Diaphragms.** Design of structures with rigid diaphragms shall conform to the structure configuration requirements of Section 12.3.2 of ASCE 7 and the horizontal shear distribution requirements of Section 12.8.4 of ASCE 7.~~

~~Wood structural panel diaphragms shall not be considered as transmitting lateral forces by rotation.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**91.2305.3.3. Construction.** Wood shear walls shall be constructed of wood structural panels manufactured with exterior glue and not less than four feet by eight feet (1219 mm by 2438 mm) except at boundaries and at changes in framing. All edges of all panels shall be supported by and fastened to framing members or blocking. Wood structural panel thickness for shear walls shall not be less than that set forth in CBC Table 2304.6 for corresponding framing spacing and loads and shall be at least 3/8 inch (9.5 mm) thick with studs spaced no more than 16 inches (406 mm) on center.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**91.2305.3.11. Sill Plate Size and Anchorage in Seismic Design Categories D, E or F.**~~

~~Anchorage in Seismic Design Categories D, E or F shall comply with the following:~~

~~1. Anchor bolts for shear walls shall include steel plate washers a minimum of 0.229 inch by three inches by three inches (5.82 mm by 76 mm by 76 mm) in size, between the sill plate and nut. The hole in the plate washer is permitted to be diagonally slotted with a width of up to 3/16 of an inch (4.76 mm) larger than the bolt diameter and a slot length not to exceed 1 3/4 inches (44 mm), provided a standard cut washer is placed between the plate washer and the nut.~~

~~or~~

~~2. Steel plate washers of minimum size and thickness, as specified in Table 2305.3.11.~~

~~Sill plates resisting a design load greater than 490 plf (7154 N/m) using load and resistance factor design or 350 plf (5110 N/m) using allowable stress design shall not be less than a three-inch (76mm) nominal member. Where a single three inch (76 mm) nominal sill plate is used, 2-20d box end nails shall be substituted for 2-16d common end nails found in line 8 of CBC Table 2304.9.1.~~

~~**EXCEPTION:** In shear walls where the design load is greater than 490 plf (7151 N/m) but less than 840 plf (12 264 N/m) using load and resistance factor design or greater than 350 plf (5110 N/m) but less than 600 plf (8760 N/m) using allowable stress design, the sill plate is permitted to be a two-inch (51 mm) nominal member if the sill plate is anchored by two times the number of bolts required by design and 0.229 inch by three inch by three inch (5.82 mm by 76 mm by 76 mm) plate washers are used.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**TABLE 2305.3.11**~~
~~**MINIMUM SIZE FOR STEEL PLATE WASHERS.**~~

~~**BOLT SIZE** (inches)~~	~~**PLATE WASHER SIZE** (inches by inches by inches)~~
~~1/2~~	~~3/16 × 2 × 2~~

~~5/8~~	~~1/4 × 2-1/2 × 2-1/2~~
~~3/4~~	~~5/16 × 2-3/4 × 2-3/4~~
~~7/8~~	~~5/16 × 3 × 3~~
~~1~~	~~3/8 × 3-1/2 × 3-1/2~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.2305.4. Quality of Nails.. In Seismic Design Category D, E or F, mechanically driven nails used in wood structural panel shear walls shall meet the same dimensions as that required for hand-driven nails, including diameter, minimum length and minimum head diameter. Clipped head or box nails are not permitted in new construction. The allowable design value for clipped head nails in existing construction may be taken at no more than the nail-head-area ratio of that of the same size hand-driven nails.

Reason: This is amendment is due to geological. Failure and poor performance were observed in 1994 Northridge earthquake. The panel construction using pneumatic nail guns reaches ultimate load capacity and fails at substantially less lateral deflection than those using same size hand-driven nails. The amendment is also a continuation of a similar amendment adopted during previous code adoption cycles.

91.2305.5 Hold-down connectors. In Seismic Design Category D, E or F, hold-down connectors shall be designed to resist shear wall overturning moments using approved cyclic load values or 75 percent of the allowable seismic load values that do not consider cyclic loading of the product. Connector bolts into wood framing shall require steel plate washers on the post on the opposite side of the anchorage device. Plate size shall be a minimum of 0.229 inch by 3 inches by 3 inches (5.82 mm by 76 mm by 76 mm) in size. Hold-down connectors shall be finger tight and ½ turn just prior to covering the wall framing.

Reason: This is amendment is due to geological. Using a safety factor of 75% is due to the insufficient of acceptance report on dynamic testing protocol, and adding steel plate washer is due to the poor performance observed in 1994 Northridge earthquake. The amendment is also a continuation of a similar amendment adopted during previous code adoption cycles.

SEC. 91.2306. ALLOWABLE STRESS DESIGN.

Section 2306 of the CBC is adopted by reference, except that Sections ~~2306.3.1, 2306.4.1, 2306.4.5, 2306.5, 2306.6, and 2306.7, and Tables 2306.3.1, 2306.3.2, 2306.4.1 and 2306.4.5~~ 2306.2.1, 2306.3 and 2306.7 of the CBC are not adopted and in lieu, Sections ~~91.2306.3.1, 91.2306.4.1, 91.2306.4.5, 91.2306.5, 91.2306.6, 91.2306.7 and Tables 2306.3.1, 2306.3.2,~~

~~2306.4.1 and 2306.4.5~~ 91.2306.2.1, 91.2306.3, 91.2306.7, and Tables 2306.2.1(3), 2306.2.1(4), 2306.3(2) are added.

~~**91.2306.3.1. Wood Structural Panel Diaphragms.** Wood structural panel diaphragms are permitted to resist horizontal forces using the allowable shear capacities set forth in CBC Tables 2306.3.1 or 2306.3.2, provided staples as fasteners are not used.~~

~~**EXCEPTION:** Staples designated in CBC Tables 2306.3.1 and 2306.3.2 may be used for wood structural panel diaphragms to resist seismic loading when the allowable shear values of CBC Tables 2306.3.1 and 2306.3.2 are substantiated by cyclic testing and approved by the Department.~~

~~All wood structural panel shear wall capacities shall be established by an approved test report considering cyclic loading.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**91.2306.4.1. Wood Structural Panel Shear Walls.** The allowable shear capacities for wood structural panel shear walls shall be in accordance with Table 2306.4.1 of this Code. These capacities are permitted to be increased 40 percent for wind design. The maximum allowable shear value for three ply plywood resisting seismic forces is 200 pounds per foot (2.92 kn/m). Nails shall be placed not less than 1/2 inch (12.7 mm) in from the panel edges and not less than 3/8 of an inch (9.5mm) from the edge of the connecting members for shear greater than 350 pounds per foot (5.11kN/m). Nails shall be placed not less than 3/8 of an inch (9.5 mm) from panel edges and not less than 1/4 of an inch (6.4 mm) from the edge of the connecting members for shears of 350 pounds per foot (5.11kN/m) or less.~~

~~Wood structural panel shear walls that use staples as fasteners shall not be permitted.~~

~~All wood structural panel shear wall capacities shall be established by an approved test report considering cyclic loading.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**91.2306.4.5. Shear Walls Sheathed with Other Materials.** Shear wall capacities for walls sheathed with lath, plaster or gypsum board shall be in accordance with CBC Table 2306.4.5. Shear walls sheathed with lath, plaster or gypsum board shall be constructed in accordance with Division 25 of this Code and CBC Section 2306.4.5.1. Walls resisting seismic loads shall be subject to the limitations in Section 12.2.1 of ASCE 7. The allowable shear values shown in CBC Table 2306.4.5 for materials in Category 1 is limited to 90 pound per foot (1.31 kN/m); and materials in Category 2 thru 4 are limited to 30 pound per foot (438 N/m). Shear walls sheathed with lath, plaster or gypsum board shall not be used below the top level in a multi-level building.~~

~~**91.2306.5. Hold-Down Connectors.** Hold-down connectors shall be designed to resist shear wall overturning moments using approved cyclic load values or 75 percent of the allowable earthquake load values that do not consider cyclic loading of the product. Connector bolts into wood framing require steel plate washers in accordance with Table 2306.5 of this Code. Hold-downs shall be re-tightened just prior to covering the wall framing.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**91.2306.6. Shear Wall Displacement Analysis.** Wood structural panel shear walls shall meet the story drift limitation of Section 12.12.1 of ASCE 7. Conformance to the story drift limitation shall be determined by approved testing or calculation or analogies drawn from the approved testing and not the use of an aspect ratio. Calculated deflection shall be determined according to CBC Section 2305.3.2 and shall be increased 25 percent to account for inelastic action and repetitive loading. Contribution to the deflection from the anchor or tie down slippage shall also be included. The slippage contribution shall include the vertical elongation of the metal, the vertical slippage of the fasteners and compression or shrinkage of the wood elements. The total vertical slippage shall be multiplied by the aspect ratio and added to the total horizontal deflection.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

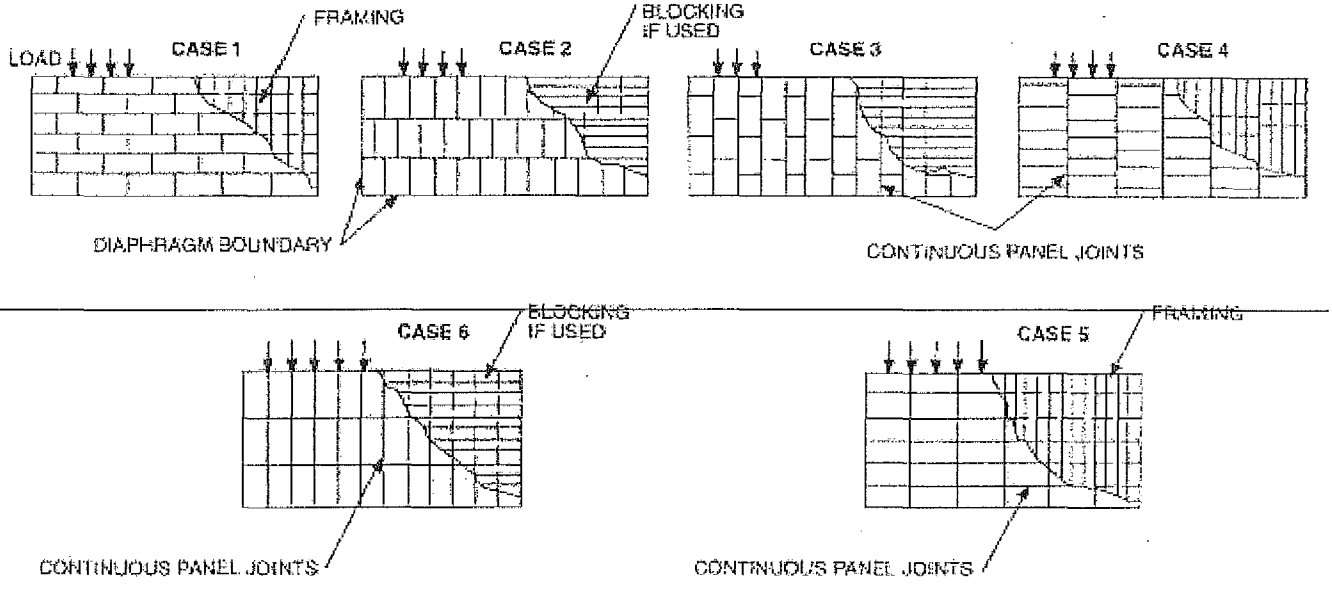
~~**91.2306.7. Quality of Nails.** Mechanically driven nails used in shear wall panel construction shall meet the same tolerances as that required for hand driven nails. The allowable design value for clipped nails in existing construction may be taken at no more than the nail head area ratio of that of the same size hand driven nails.~~

~~**TABLE 2306.3.1**~~
~~**ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL DIAPHRAGMS WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE [a] FOR WIND OR SEISMIC LOADING [b]**

PANEL GRADE	COMMON NAIL SIZE	MINIMUM FASTENER PENETRATION IN FRAMING (inches)	MINIMUM NOMINAL PANEL THICKNESS (inch)	MINIMUM NOMINAL WIDTH OF FRAMING MEMBERS AT ADJOINING PANEL EDGES AND BOUNDARIES [c] (inches)	BLOCKED DIAPHRAGMS				UNBLOCKED DIAPHRAGMS	
					Fastener spacing (inches) at diaphragm boundaries (all cases) at continuous panel edges parallel to load (Cases 3, 4), and at all panel edges (Cases 5, 6) [b]				Fasteners spaced 6" max. at supported edges [b]	
					6	4	2 1/2 [e]	2 [e]	Case 1 (No unblocked edges or	All other configurations (Cases 2, 3, 4, 5 and 6)
					Fastener spacing					

					(inches) at other panel edges (Cases 1, 2, 3 and 4)[b]				continuous joints parallel to load)	
					6	6	4	3		
Structural I Grades	6d[a] (2" x 0.113")	1 1/4	5/16	2	185	250	375	420	165	125
				3	210	280	420	475	185	140
	8d (2 1/2" x 0.131)	1 3/8	3/8	2	270	360	530	600	240	180
				3	300	400	600	675	265	200
	10d[a] (3" x 0.148 [a])	1 1/2	15/32	2	320	425	640	730	285	215
				3	360	480	720	820	320	240
Sheathing, single floor and other grades covered in DOC PS 1 and PS 2	6d[a] (2" x 0.113)	1 1/4	5/16	2	170	225	335	380	150	110
				3	190	250	380	430	170	125
	6d[a] (2" x 0.113)	1 1/4	3/8	2	185	250	375	420	165	125
				3	210	280	420	475	185	140
	8d (2 1/2" x 0.131)	1 3/8		2	240	320	480	545	215	160
				3	270	360	540	610	240	180
	8d (2 1/2" x 0.131")	1 3/8	7/16	2	255	340	505	575	230	170
				3	285	380	570	645	255	190
	8d (2 1/2" x 0.131")	1 3/8	15/32	2	270	360	530	600	240	180
				3	300	400	600	675	265	200

	10d[4] (3" x 0.148")	1 1/2		2	290	385	575	655	255	190
				3	325	430	650	735	290	215
	10d[4] (3" x 0.148")	1 1/2	19/32	2	320	425	640	730	285	215
				3	360	480	720	820	320	240



For SI: 1 inch = 25.4 mm, 1 pound per foot = 14.5939 N/m.

a. For framing of other species: (1) Find specific gravity for species of lumber in AF&PA NDS. (2) For nails find shear value from table above for nail size for actual grade and multiply value by the following adjustment factor: Specific Gravity Adjustment Factor = [1 (0.5 SG)], where SG = Specific Gravity of the framing lumber. This adjustment factor shall not be greater than 1.

b. Space fasteners maximum 12 inches o.c. along intermediate framing members (6 inches o.c. where supports are spaced 48 inches o.c.).

c. Framing at adjoining panel edges shall be 3 inches nominal or thicker, and nails shall be staggered where nails are spaced 2 inches o.c. or 2 1/2 inches o.c.

d. Framing at adjoining panel edges shall be 3 inches nominal or thicker, and nails shall be staggered where both of the following conditions are met: (1) 10d nails having penetration into framing of more than 1 1/2 inches and (2) nails are spaced 3 inches o.c. or less.

e. 8d is recommended minimum for roofs due to negative pressures of high winds.

f. Not adopted.

~~g. The minimum nominal width of framing members not located at boundaries or adjoining panel edges shall be 2 inches.~~

~~h. For shear loads of normal or permanent load duration as defined by the AF&PA NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~TABLE 2306.3.2~~
~~ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL BLOCKED DIAPHRAGMS~~
~~UTILIZING MULTIPLE ROWS OF FASTENERS (HIGH LOAD DIAPHRAGMS)~~
~~WITH FRAMING OF~~
~~DOUGLAS FIR-LARCH OR SOUTHERN PINE[e] FOR WIND OR SEISMIC LOADING[b, g, h]~~

~~PANEL GRADE[c]~~	~~COMMON NAIL SIZE~~	~~MINIMUM FASTENER PENETRATION IN FRAMING (inches)~~	~~MINIMUM NOMINAL PANEL THICKNESS (inch)~~	~~MINIMUM NOMINAL WIDTH OF FRAMING MEMBERS AT ADJOINING PANEL EDGES AND BOUNDARIES[g]~~	~~LINES OF FASTENERS~~	~~BLOCKED DIAPHRAGMS~~					
						~~Cases 1 and 2[d]~~					
						~~Fastener Spacing Per Line at Boundaries (inches)~~					
						4		~~2 1/2~~		~~2~~	
						~~Fastener Spacing Per Line at Other Panel Edges (inches)~~					
						~~6~~	4	4	~~3~~	~~3~~	~~2~~
~~Structural I Grades~~	~~10d common nails~~	~~1 1/2~~	~~15/32~~	~~3~~	~~2~~	~~605~~	~~815~~	~~875~~	~~1,150~~	—	—
				4	~~2~~	~~700~~	~~915~~	~~1,005~~	~~1,290~~	—	—
				4	~~3~~	~~875~~	~~1,220~~	~~1,285~~	~~1,395~~	—	—
			~~19/32~~	~~3~~	~~2~~	~~670~~	~~880~~	~~965~~	~~1,255~~	—	—
				4	~~2~~	~~780~~	~~990~~	~~1,110~~	~~1,440~~	—	—
				4	~~3~~	~~965~~	~~1,320~~	~~1,405~~	~~1,790~~	—	—
			~~23/32~~	~~3~~	~~2~~	~~730~~	~~955~~	~~1,050~~	~~1,365~~	—	—
				4	~~2~~	~~855~~	~~1,070~~	~~1,210~~	~~1,565~~	—	—

				4	3	1,050	1,430	1,525	1,800	—	—
Sheathing, single floor and other grades covered in DOC PS 1 and PS 2	10d common nails	1 1/2	15/32	3	2	525	725	765	1,010	—	—
				4	2	605	815	875	1,105	—	—
				4	3	765	1,085	1,130	1,195	—	—
			19/32	3	2	650	860	935	1,225	—	—
				4	2	755	965	1,080	1,370	—	—
				4	3	935	1,290	1,365	1,485	—	—
			23/32	3	2	710	935	1,020	1,335	—	—
				4	2	825	1,050	1,175	1,445	—	—
				4	3	1,020	1,400	1,480	1,565	—	—

For SI: 1 inch = 25.4 mm, 1 pound per foot = 14.5939 N/m.

a. For framing of other species: (1) Find specific gravity for species of framing lumber in AF&PA NDS. (2) For nails, find shear value from table above for nail size of actual grade and multiply value by the following adjustment factor: Specific Gravity Adjustment Factor = [1 – (0.5 – SG)], where SG = Specific gravity of the framing lumber. This adjustment factor shall not be greater than 1.

b. Fastening along intermediate framing members: Space fasteners a maximum of 12 inches on center, except 6 inches on center for spans greater than 32 inches.

c. Panels conforming to PS 1 or PS 2.

d. This table gives shear values for Cases 1 and 2 as shown in Table 2306.3.1. The values shown are applicable to Cases 3, 4, 5 and 6 as shown in Table 2306.3.1, providing fasteners at all continuous panel edges are spaced in accordance with the boundary fastener spacing.

e. The minimum nominal depth of framing members shall be 3 inches nominal. The minimum nominal width of framing members not located at boundaries or adjoining panel edges shall be 2 inches.

f. Not adopted.

g. High load diaphragms shall be subject to special inspection in accordance with Section 1704.6.1.

h. For shear loads of normal or permanent load duration as defined by the AF&PA NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.

Reason: This Administrative amendment is to be consistent with the State of California Code.

TABLE 2306.4.1
ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL SHEAR WALLS WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE [a] FOR WIND OR SEISMIC LOADING [b, h, i, j, k, l, m]

PANEL GRADE	MINIMUM NOMINAL PANEL THICKNESS (inch)	MINIMUM FASTENER PENETRATION IN FRAMING (inches)	ALLOWABLE SHEAR VALUE FOR SEISMIC FORCES PANELS APPLIED DIRECTLY TO FRAMING					ALLOWABLE SHEAR VALUE FOR WIND FORCES PANELS APPLIED DIRECTLY TO FRAMING				
			NAIL (common or galvanized box)	Fastener spacing at panel edges (inches)				NAIL (common or galvanized box)	Fastener spacing at panel edges (inches)			
				6	4	3	2 [e]		6	4	3	2 [e]
	3/8	1 3/8	8d (2 1/2" x 0.131" common, 2 1/2" x 0.113" galvanized box)	200	200	200	200	8d (2 1/2" x 0.131" common, 2 1/2" x 0.113" galvanized box)	230 [d]	360 [d]	460 [d]	610 [d]
	7/16	1 3/8	8d (2 1/2" x 0.131" common, 2 1/2" x 0.113" galvanized box)	255 [d]	395 [d]	505 [d]	670 [d]	8d (2 1/2" x 0.131" common, 2 1/2" x 0.113" galvanized box)	255 [d]	395 [d]	505 [d]	670 [d]
	15/32	1 3/8	8d (2 1/2" x 0.131" common, 2 1/2" x 0.113" galvanized box)	280	430	550	730	8d (2 1/2" x 0.131" common, 2 1/2" x 0.113" galvanized box)	280	430	550	730
		1 1/2	10d (3" x	340	510	665	870	10d (3" x	340	510	665	870

			0.148" common, 3" x 0.128" galvanized box)			[f]		0.148" common, 3" x 0.128" galvanized box)			[f]	
Sheathing, plywood siding [g] except Group 5 Species	5/16 or 1/4 [e]	1 1/4	6d (2" x 0.113" common, 2" x 0.099" galvanized box)	180	200	200	200	6d (2" x 0.113" common, 2" x 0.099" galvanized box)	180	270	350	450
	3/8	1 1/4	6d (2" x 0.113" common, 2" x 0.099" galvanized box)	200	200	200	200	6d (2" x 0.113" common, 2" x 0.099" galvanized box)	200	300	390	510
		1 3/8	8d (2 1/2" x 0.131" common, 2 1/2" x 0.113" galvanized box)	200	200	200	200	8d (2 1/2" x 0.131" common, 2 1/2" x 0.113" galvanized box)	220 [d]	320 [d]	410 [d]	530 [d]
	7/16	1 3/8	8d (2 1/2" x 0.131" common, 2 1/2" x 0.113" galvanized box)	240 [d]	350 [d]	450 [d]	585 [d]	8d (2 1/2" x 0.131" common, 2 1/2" x 0.113" galvanized box)	240 [d]	350 [d]	450 [d]	585 [d]
	15/32	1 3/8	8d (2 1/2" x 0.131" common, 2 1/2" x 0.113" galvanized box)	260	380	490	640	8d (2 1/2" x 0.131" common, 2 1/2" x 0.113" galvanized box)	260	380	490	640

		1-1/2	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	310	460	600 f	770	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	310	460	600 f	770
	19/32	1-1/2	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	340	510	665 f	870	10d (3" x 0.148" common, 3" x 0.128" galvanized box)	340	510	665 f	870
	-	-	Nail Size (galvanized casing)	-				Nail Size (galvanized casing)	-			
	5/16 e	1-1/4	6d (2" x 0.099")	140	200	200	200	6d (2" x 0.099")	140	210	275	360
	3/8	1-3/8	8d (2-1/2" x 0.113")	160	200	200	200	8d (2-1/2" x 0.113")	160	240	310	410

For SI: 1 inch = 25.4 mm, 1 pound per foot = 14.5939 N/m.

a. For framing of other species: (1) Find specific gravity for species of lumber in AF&PA NDS. (2) For nails find shear value from table above for nail size for actual grade and multiply value by the following adjustment factor: Specific Gravity Adjustment Factor = [1-(0.5-SG)], where SG = Specific Gravity of the framing lumber. This adjustment factor shall not be greater than one.

b. Panel edges backed with two inch nominal or thicker framing. Install panels either horizontally or vertically. Space fasteners maximum six inches on center along intermediate framing members for 3/8 inch and 7/16 inch panels installed on studs spaced 24 inches on center. For other conditions and panel thickness, space fasteners maximum 12 inches on center on intermediate supports.

c. 3/8 inch panel thickness or siding with a span rating of 16 inches on center is the minimum recommended where applied direct to framing as exterior siding.

d. Except for wood structural panel sheathing used for shear walls that are part of the seismic force resisting system, allowable shear values are permitted to be increased to values shown for 15/32 inch sheathing with same nailing provided (a) studs are spaced a maximum of 16 inches on center, or (b) panels are applied with long dimension across studs.

e. Framing at adjoining panel edges shall be three inches nominal or wider, and nails shall be staggered where nails are spaced two inches on center.

~~f. Framing at adjoining panel edges shall be three inches nominal or wider, and nails shall be staggered where both of the following conditions are met: (1) 10d (3" x 0.148") nails having penetration into framing of more than 1-1/2 inches and (2) nails are spaced three inches on center.~~

~~g. Values apply to all veneer plywood. Thickness at point of fastening on panel edges governs shear values.~~

~~h. Where panels applied on both faces of a wall and nail spacing is less than six inches on center on either side, panel joints shall be offset to fall on different framing members, or framing shall be three inch nominal or thicker at adjoining panel edges and nails on each side shall be staggered.~~

~~i. In Seismic Design Category D, E or F, where shear design values exceed 350 pounds per linear foot, all framing members receiving edge nailing from abutting panels shall not be less than a single three inch nominal member, or two two inch nominal members fastened together in accordance with Section 2306.1 to transfer the design shear value between framing members. Wood structural panel joint and sill plate nailing shall be staggered in all cases. See Section 2305.3.11 for sill plate size and anchorage requirements.~~

~~j. Galvanized nails shall be hot dipped or tumbled.~~

~~k. The maximum allowable shear value for three ply plywood resisting seismic forces is 200 pounds per foot (2.92 kn/m).~~

~~l. For shear loads of normal or permanent load duration as defined by the AF&PA NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.~~

~~m. *[DSA-SS & OSHPD 1, 2 and 4]* Refer to Section 2305.2.4.2, which requires any wood structural panel sheathing used for diaphragms and shear walls that are part of the seismic force resisting system to be applied directly to framing members.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**TABLE 2306.4.5**~~
~~**ALLOWABLE SHEAR FOR WIND OR SEISMIC FORCES FOR SHEAR WALLS OF LATH**~~
~~**AND PLASTER OR GYPSUM BOARD WOOD FRAMED WALL ASSEMBLIES**~~

~~TYPE OF MATERIAL~~	~~THICKNESS OF MATERIAL~~	~~WALL CONSTRUCTION~~	~~FASTENER SPACING[b] MAXIMUM (inches)~~	~~SHEAR VALUE[a,c] (plf)~~		~~MINIMUM FASTENER SIZE[c,d,j,k]~~
				~~Seismic~~	~~Wind~~	
~~1. Expanded metal or woven wire lath and portland cement plaster~~	~~7/8"~~	~~Unblocked~~	~~6~~	~~90~~	~~180~~	~~No. 11 gage 1 1/2" long, 7/16" head~~
~~2. Gypsum lath, plain or perforated~~	~~3/8" lath and 1/2" plaster~~	~~Unblocked~~	~~5~~	~~30~~	~~100~~	~~No. 13 gage, 1 1/8" long, 19/64" head, plasterboard nail 0.120" nail, min. 3/8" head, 1 1/4" long~~

3. Gypsum sheathing	1/2" x 2" x 8"	Unblocked	4	30	75	No. 11 gage, 1 3/4" long, 7/16" head, diamond-point, galvanized
	1/2" x 4"	Blocked [f] Unblocked	4 7	30 30	175 100	
	5/8" x 4"	Blocked	4" edge / 7" field	30	200	6d galvanized 0.120" nail, min. 3/8" head, 1 3/4" long
4. Gypsum board, gypsum veneer base or water-resistant gypsum backing board	1/2"	Unblocked [f]	7	30	75	5d cooler (1 5/8" x .086") or wallboard 0.120" nail, min. 3/8" head, 1 1/2" long
		Unblocked [f]	4	30	110	
		Unblocked	7	30	100	
		Unblocked	4	30	125	
		Blocked [g]	7	30	125	
		Blocked [g]	4	30	150	
		Unblocked	8/12 [h]	30	60	No. 6 – 1 1/4" screws [i]
		Blocked [g]	4/16 [h]	30	160	
		Blocked [g]	4/12 [h]	30	155	
		Blocked [g]	8/12 [h]	30	70	
		Blocked [g]	6/12 [h]	30	90	
	5/8"	Unblocked [f]	7	30	115	6d cooler (1 7/8" x 0.092") or wallboard 0.120" nail, min. 3/8" head, 1 3/4" long
			4	30	145	
		Blocked [g]	7	30	145	
			4	30	175	

		Blocked [g] Two-ply	Base ply: 9 Face ply: 7	30	250	Base ply – 6d cooler (1 7/8" x 0.092") or wallboard 1 3/4" x 0.120" nail, min. 3/8" head Face ply – 8d cooler (2 3/8" x 0.113") or wallboard 0.120" nail, min. 3/8" head, 2 3/8" long
		Unblocked	8/12 [h]	30	70	No. 6 – 1 1/4" screw [i]
		Blocked [g]	8/12 [h]	30	90	

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per foot = 14.5939 N/m.

a. These shear walls shall not be used to resist loads imposed by masonry or concrete construction (see Section 2305.1.5). Values shown are for short-term loading due to wind or seismic loading. Walls resisting seismic loads shall be subject to the limitations in Section 12.2.1 of ASCE 7. Values shown shall be reduced 25 percent for normal loading.

b. Applies to fastening at studs, top and bottom plates and blocking.

c. Alternate fasteners are permitted to be used if their dimensions are not less than the specified dimensions. Drywall screws are permitted to substitute for the 5d (1 5/8" x 0.086"), and 6d (1 7/8" x 0.092") (cooler) nails listed above, and No. 6-1-1/4 inch Type S or W screws for 6d (1 7/8" x 0.092") (cooler) nails.

d. For properties of cooler nails, see ASTM C 5-14.

e. Except as noted, shear values are based on a maximum framing spacing of 16 inches on center.

f. Maximum framing spacing of 24 inches on center.

g. All edges are blocked, and edge fastening is provided at all supports and all panel edges.

h. First number denotes fastener spacing at the edges; second number denotes fastener spacing at intermediate framing members.

i. Screws are Type W or S.

Reason: This Administrative amendment is to be consistent with the State of California Code.

TABLE 2306.5
MINIMUM SIZE FOR STEEL PLATE WASHERS

~~BOLT SIZE~~ ~~(inches)~~	~~PLATE WASHER SIZE~~ ~~(inches by inches by inches)~~
~~1/2~~	~~3/16 x 2 x 2~~
~~5/8~~	~~1/4 x 2 1/2 x 2 1/2~~
~~3/4~~	~~5/16 x 2 3/4 x 2 3/4~~
~~7/8~~	~~5/16 x 3 x 3~~
~~1~~	~~3/8 x 3 1/2 x 3 1/2~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.2306.2.1 Wood Structural Panel Diaphragms. Wood structural panel diaphragms shall be designed and constructed in accordance with AF&PA SDPWS. Wood structural panel diaphragms are permitted to resist horizontal forces using the allowable shear capacities set forth in CBC Table 2306.2.1(1) or CBC Table 2306.2.1(2). For structures assigned to Seismic Design Category D, E or F, the allowable shear capacities shall be set forth in Table 2306.2.1(3) or 2306.2.1(4). The allowable shear capacities in CBC Table 2306.2.1(1) or CBC 2306.2.1(2) are permitted to be increased 40 percent for wind design.

Wood structural panel diaphragms fastened with staples shall not be used to resist seismic forces in structures assigned to Seismic Design Category D, E or F.

Exception: Staples may be used for wood structural panel diaphragms when the allowable shear values are substantiated by cyclic testing and approved by the building official.

Wood structural panel diaphragms used to resist seismic forces in structures assigned to Seismic Design Category D, E or F shall be applied directly to the framing members.

Exception: Wood structural panel diaphragm is permitted to be fastened over solid lumber planking or laminated decking, provided the panel joints and lumber planking or laminated decking joints do not coincide.

Reason: This is amendment is due to geological. The structural panels fastened with staples do not exhibit the same behavior as the wood panels fastened with common nails in the cyclic testing. In lieu of strike-out all capacities on the Tables that utilized by staples, new Tables are introduced particularly for the seismic design loads in the SDC D, E, or F. The revision will leave the door open to use staples per CBC Tables for those areas where the seismic activity is not significant (SDC A or B) within the Southern California area. The amendment also prohibits

the use of panels placed over gypsum sheathing to prevent the undesirable performance of nails under cyclic earthquake displacements.

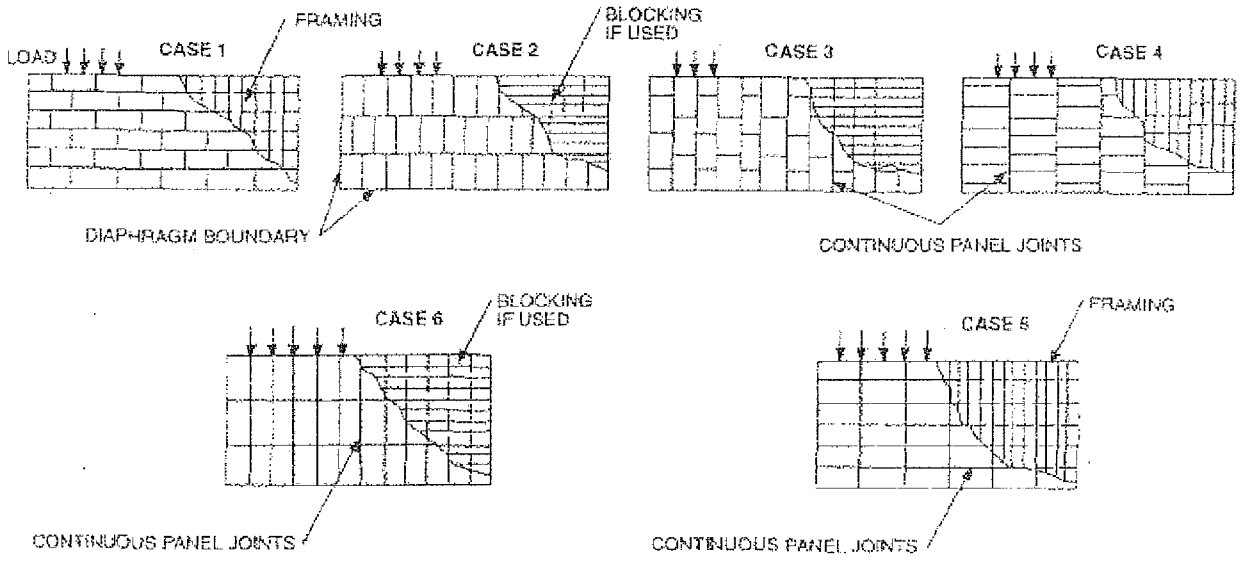
TABLE 2306.2.1(3)

ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL DIAPHRAGMS WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE[a] FOR SEISMIC LOADING[g] FOR STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E OR F

PANEL GRADE	COMMON NAIL	MINIMUM FASTENER	MINIMUM NOMINAL	MINIMUM	BLOCKED DIAPHRAGMS	UNBLOCKED DIAPHRAGMS

	SIZE	PENETRATION IN FRAMING (inches)	PANEL THICKNESS (inch)	NOMINAL WIDTH OF FRAMING MEMBERS AT ADJOINING PANEL EDGES AND BOUNDARIES[f] (inches)	Fastener spacing (inches) at diaphragm boundaries (all cases) at continuous panel edges parallel to load (Cases 3,4), and at all panel edges (Cases 5, 6)[b]				Fastener spaced 6" max. at supported edges[b]	
					6	4	2 ½ c	2[c]	Case 1 (No unblocked edges or continuous joints parallel to load)	All other configurations (Cases 2, 3, 4, 5 and 6)
					Fastener spacing (inches) at other panel edges (Cases 1,2,3 and 4)[b]					
					6	6	4	3		
Structural I Grades	8d (2 ½" x 0.131")	1 3/8	3/8	2	270	360	530	600	240	180
				3	300	400	600	675	265	200
	10d[d] (3" x 0.148")	1 1/2	15/32	2	320	425	640	730	285	215
				3	360	480	720	820	320	240
Sheathing, single floor and other grades covered in DOC PS1 and PS2	6d[e] (2" x 0.113")	1 1/4	3/8	2	185	250	375	420	165	125
				3	210	280	420	475	185	140
	8d (2 ½" x 0.131")	1 3/8		2	240	320	480	545	215	160
				3	270	360	540	610	240	180
	8d (2 ½" x 0.131")	1 3/8	7/16	2	255	340	505	575	230	170
				3	285	380	570	645	255	190
	8d (2 ½" x 0.131")	1 3/8	15/32	2	270	360	530	600	240	180
				3	300	400	600	675	265	200
	10d[d] (3" x 0.148")	1 1/2		2	290	385	575	655	255	190
				3	324	430	650	735	290	215
	10d[d] (3" x 0.148")	1 1/2	19/32	2	320	425	640	730	285	215
				3	360	480	720	820	320	240

TABLE 2306.2.1(3)–continued
ALLOWABLE SHEAR (PUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL DIAPHRAGMS WITH FRAMING OF DOUGLAS FIR-LARCH, OR SOUTHERN PINE[a] FOR SEISMIC LOADING[h]
FOR STRUCTURES ASSIGNED TO SEISMIC DESIGN CATERGORY D, E OR F



For SI: 1 inch = 25.4 mm, 1 pound per foot = 14.5939 N/m.

a. For framing of other species: (1) Find specific gravity for species of lumber in AF&PA NDS. (2) For nails find shear value from table above for nail size for actual grade and multiply value by the following adjustment factor: Specific Gravity Adjustment Factor = [1-(0.5-SG)], where SG = Specific Gravity of the framing lumber. This adjustment factor shall not be greater than 1.
b. Space fasteners maximum 12 inches o.c. along intermediate framing members (6 inches o.c. where supports are spaced 48 inches o.c.).
c. Framing at adjoining panel edges shall be 3 inches nominal or thicker, and nails at all panel edges shall be staggered where panel edge nailing is specified at 2 ½ inches o.c. or less.
d. Framing at adjoining panel edges shall be 3 inches nominal or thicker, and nails at all panel edges shall be staggered where both of the following conditions are met: (1) 10d nails having penetration into framing of more than 1 ½ inches and (2) panel edge nailing is specified at 3 inches o.c. or less.
e. 8d is recommended minimum for roofs due to negative pressures of high winds.
f. The minimum nominal width of framing members not located at boundaries or adjoining panel edges shall be 2 inches.
g. For shear loads of normal or permanent load duration as defined by the AF&PA NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.

Reason: This is amendment is due to geological. In lieu of strike-out all capacities on the Tables that utilized by staples, new Tables are introduced particularly for the seismic design loads in the SDC D, E, or F.

TABLE 2306.2.1(4)
ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL BLOCKED DIAPHRAGMS UTILIZING MULTIPLE ROWS OF FASTENERS (HIGH LOAD DIAPHRAGMS) WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE[a] FOR SEISMIC LOADING[b,f,g]
FOR STRUCTURES ASSIGNED TO SEISMIC DESIGN CATERGORY D, E OR F

PANEL GRADE[c]	COMMON NAIL SIZE	MINIMUM FASTENER PENETRATION IN FRAMING (inches)	MINIMUM NOMINAL PANEL THICKNESS (inch)	MINIMUM NOMINAL WIDTH OF FRAMING MEMBERS AT ADJOINING PANEL EDGES AND BOUNDARIES[e] (inches)	LINES OF FASTENERS	BLOCKED DIAPHRAGMS			
						Cases 1 and 2[d]			
						Fastener Spacing Per Line at Boundaries (inches)			
						4		2 1/2	
						Fastener Spacing Per Line at Other Panel Edges (inches)			
						6	4	4	3
Structural I grades	10d common nails	1 1/2	15/32	3	2	605	815	875	1,150
				4	2	700	915	1,005	1,290
				4	3	875	1,220	1,285	1,395
			19/32	3	2	670	880	965	1,255
				4	2	780	990	1,110	1,440
				4	3	965	1,320	1,405	1,790
			23/32	3	2	730	955	1,050	1,365
				4	2	855	1,070	1,210	1,565
				4	3	1,050	1,430	1,525	1,800
Sheathing, single floor and other grades covered in DOC PS1 and PS2	10d common nails	1 1/2	15/32	3	2	525	725	765	1,010
				4	2	605	815	875	1,105
				4	3	765	1,085	1,130	1,195
			19/32	3	2	650	860	935	1,225
				4	2	755	965	1,080	1,370
				4	3	935	1,290	1,365	1,485
			23/32	3	2	710	935	1,020	1,335
				4	2	825	1,050	1,175	1,445
				4	3	1,020	1,400	1,480	1,565

For SI: 1 inch = 25.4 mm, 1 pound per foot = 14.5939 N/m.

a. For framing of other species: (1) Find specific gravity for species of lumber in AF&PA NDS. (2) For nails find shear value from table above for nail size for actual grade and multiply value by the following adjustment factor: Specific Gravity Adjustment Factor = [1-(0.5-SG)], where SG = Specific Gravity of the framing lumber. This adjustment factor shall not be greater than 1.

b. Fastening along intermediate framing members: Space fasteners a maximum of 12 inches on center, except 6 inches on center for spans greater than 32 inches.

c. Panels conforming to PS1 or PS 2.

d. This table gives shear values for Cases 1 and 2 as shown in Table 2306.2.1(3). The values shown are applicable to Cases 3, 4, 5 and 6 as shown in Table 2306.2.1(3), providing fasteners at all continuous panels edges are spaced in accordance with the boundary fastener spacing.

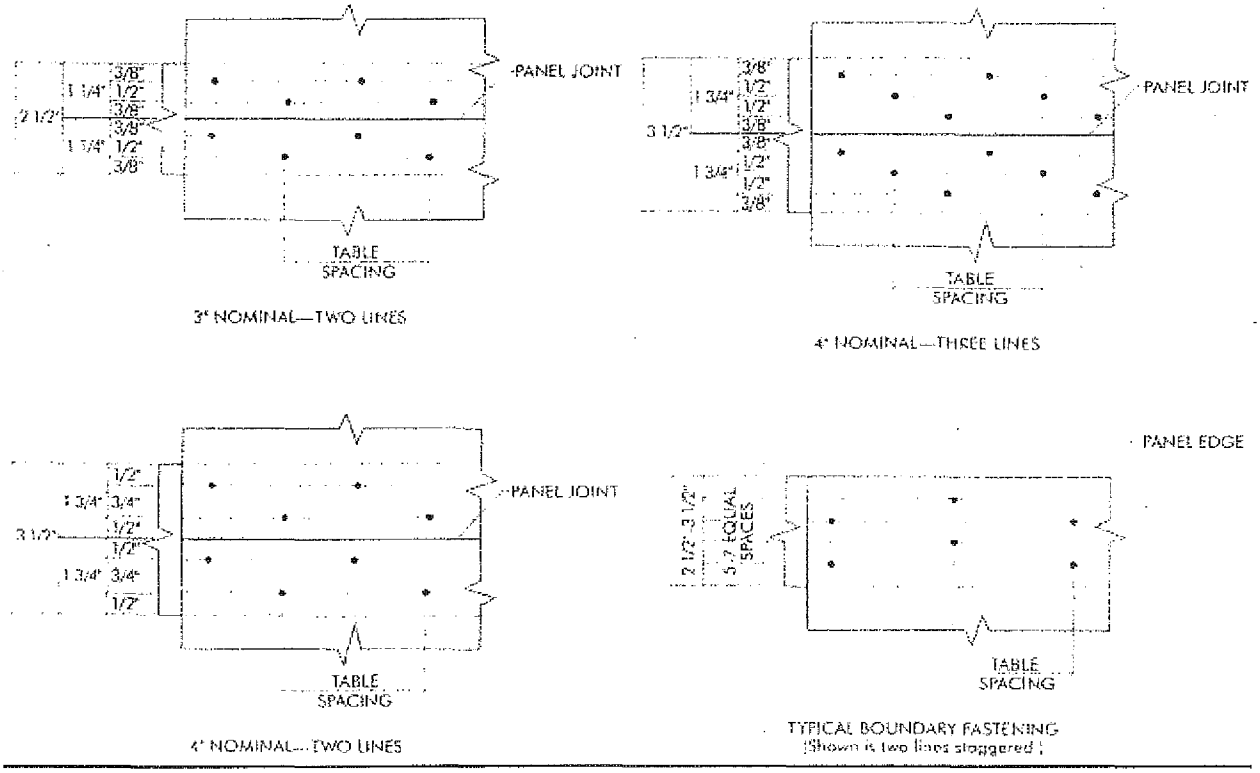
e. The minimum nominal depth of framing members shall be 3 inches nominal. The minimum nominal width of framing members not located at boundaries or adjoining panel edges shall be 2 inches.

f. High load diaphragms shall be subject to special inspection in accordance with CBC Section 1704.6.1.

g. For shear loads of normal or permanent load duration as defined by the AF&PA NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.

TABLE 2306.2.1(4)–continued

ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL BLOCKED DIAPHRAGMS UTILIZING MULTIPLE ROWS OF FASTENERS (HIGH LOAD DIAPHRAGMS) WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE[a] FOR SEISMIC LOADING[b,f,g] FOR STRUCTURES ASSIGNED TO SEISMIC DESIGN CATERGORY D, E OR F



NOTE: SPACE PANEL END AND EDGE JOINT 1/8-INCH. REDUCE SPACING BETWEEN LINES OF NAILS AS NECESSARY TO MAINTAIN MINIMUM 3/8-INCH FASTENER EDGE MARGINS. MINIMUM SPACING BETWEEN LINES IS 3/8-INCH

Reason: This is amendment is due to geological. In lieu of strike-out all capacities on the Tables that utilized by staples, new Tables are introduced particularly for the seismic design loads in the SDC D, E, or F.

91.2306.3 Wood Structural Panel Shear Walls. Wood structural panel shear walls shall be designed and constructed in accordance with AF&PA SDPWS. Wood structural panel shear walls are permitted to resist horizontal forces using the allowable shear capacities set forth in Table 2306.3(1). For structures assigned to Seismic Design Category D, E or F, the allowable shear capacities shall be set forth in Table 2306.3(2). The allowable shear capacities in Table 2306.3(1) are permitted to be increased 40 percent for wind design.

Wood structural panel shear walls used to resist seismic forces in structures assigned to Seismic Design Category D, E or F shall not be less than 4 feet by 8 feet (1219 mm by 2438 mm), except at boundaries and at changes in framing. Wood structural panel thickness for shear walls shall not be less than 3/8 inch thick and studs shall not be spaced at more than 16 inches on center.

The maximum allowable shear value for three-ply plywood resisting seismic forces in structures assigned to Seismic Design Category D, E or F is 200 pounds per foot (2.92 kn/m). Nails shall be placed not less than 1/2 inch (12.7 mm) in from the panel edges and not less than 3/8 inch (9.5mm) from the edge of the connecting members for shear greater than 350 pounds per foot (5.11kN/m). Nails shall be placed not less than 3/8 inch (9.5 mm) from panel edges and not less than 1/4 inch (6.4 mm) from the edge of the connecting members for shears of 350 pounds per foot (5.11kN/m) or less.

Wood structural panel shear walls fastened with staples shall not used to resist seismic forces in structures assigned to Seismic Design Category D, E or F.

Exception: Staples may be used for wood structural panel shear walls when the allowable shear values are substantiated by cyclic testing and approved by the building official.

Wood structural panel shear walls used to resist seismic forces in structures assigned to Seismic Design Category D, E or F shall be applied directly to the framing members.

Reason: This is amendment is due to geological. The structural panels fastened with staples do not exhibit the same behavior as the wood panels fastened with common nails in the cyclic testing. In lieu of strike-out all capacities on the Tables that utilized by staples, new Tables are introduced particularly for the seismic design loads in the SDC D, E, or F. The revision will leave the door open to use staples per CBC Tables for those areas where the seismic activity is not significant (SDC A or B) within the Southern California area. The amendment also prohibits the use of panels placed over gypsum sheathing to prevent the undesirable performance of nails under cyclic earthquake displacements.

TABLE 2306.3(1)
ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL SHEAR WALLS WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE[a] FOR WIND OR SEISMIC LOADING[b, h, i, j, l, m, n]

Reason: This is amendment is due to geological. In lieu of strike-out all capacities on the Tables that utilized by staples, new Tables are introduced particularly for the seismic design loads in the SDC D, E, or F.

TABLE 2306.3(2)
ALLOWABLE SHEAR (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL SHEAR WALLS WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE[a] FOR SEISMIC LOADING[b, h, j, k, l] FOR STRUCTURES ASSIGNED TO SEISMIC DESIGN CATEGORY D, E OR F

PANEL GRADE	MINIMUM NOMINAL PANEL THICKNESS (inch)	MINIMUM FASTENER PENETRATION IN FRAMING (inches)	ALLOWABLE SHEAR VALUE FOR SEISMIC FORCES PANELS APPLIED DIRECTLY TO FRAMING				
			COMMON NAIL SIZE	Fastener spacing at panel edges (inches)			
				6	4	3	2[e]
Structural I sheathing	3/8	1 3/8	8d (2½"x0.131" common)	200	200	200	200
	7/16	1 3/8	8d (2½"x0.131" common)	255	395	505	670
	15/32	1 3/8	8d (2½"x0.131" common)	280	430	550	730
		1 1/2	10d (3"x0.148" common)	340	510	665[f]	870
Sheathing, plywood siding[g] except Group 5 Species	3/8[c]	1 3/8	8d (2½"x0.113")	160	200	200	200

For SI: 1 inch = 25.4 mm, 1 foot = 25.4 mm, 1 pound per foot = 14.5939 N/m.

a. For framing of other species: (1) Find specific gravity for species of lumber in AF&PA NDS. (2) For nails find shear value from table above for nail size for actual grade and multiply value by the following adjustment factor: Specific Gravity Adjustment Factor = [1-(0.5-SG)], where SG = Specific Gravity of the framing lumber. This adjustment factor shall not be greater than 1.

b. Panel edges backed with 2-inch nominal or thicker framing. Install panels either horizontally or vertically. Space fasteners maximum 6 inches on center along intermediate framing members for 3/8-inch and 7/16-inch panels installed on studs spaced 24 inches on center. For other conditions and panel thickness, space fasteners maximum 12 inches on center on intermediate supports.

c. 3/8-inch panel thickness or siding with a span rating of 16 inches on center is the minimum recommended where applied direct to framing as exterior siding. For grooved panel siding, the nominal panel thickness is the thickness of the panel measured at the point of nailing.

d. Allowable shear values are permitted to be increased to values shown for 15/32-inch sheathing with same nailing provided (a) studs are spaced a maximum of 16 inches on center, or (b) panels are applied with long dimension across studs.

e. Framing at adjoining panel edges shall be 3 inches nominal or thicker, and nails shall be staggered where nails are spaced 2 inches on center or less.

f. Framing at adjoining panel edges shall be 3 inches nominal or thicker, and nails shall be staggered where both of the following conditions are met: (1) 10d (3"x0.148") nails having penetration into framing of more than 1-1/2 inches and (2) nails are spaced 3 inches on center or less.

g. Values apply to all-veneer plywood. Thickness at point of fastening on panel edges governs shear values.

h. Where panels applied on both faces of a wall and nail spacing is less than 6 inches o.c. on either side, panel joints shall be offset to fall on different framing members. Or framing shall be 3-inch nominal or thicker at adjoining panel edges and nails at all panel edges shall be staggered.

i. Where shear design values exceed 350 pounds per linear foot, all framing members receiving edge nailing from abutting panels shall not be less than a single 3-inch nominal member, or two 2-inch nominal members fastened together in accordance with CBC Section 2306.1 to transfer the design shear value between framing members. Wood structural panel joint and sill plate nailing shall be staggered at all panel edges. See Section 4.3.6.1 and 4.3.6.4.3 of AF&PA SDPWS for sill plate size and anchorage requirements.

j. Galvanized nails shall be hot dipped or tumbled.

k. For shear loads of normal or permanent load duration as defined by the AF&PA NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.

l. The maximum allowable shear value for three-ply plywood resisting seismic forces is 200 pounds per foot (2.92 kn/m).

91.2306.7 Shear Walls Sheathed with Other Materials. Shear walls sheathed with portland cement plaster, gypsum lath, gypsum sheathing or gypsum board shall be designed and constructed in accordance with AF&PA SDPWS. Shear walls sheathed with these materials are permitted to resist horizontal forces using the allowable shear capacities set forth in Table

2306.7(1). Shear walls sheathed with portland cement plaster, gypsum lath, gypsum sheathing or gypsum board shall not be used to resist seismic forces in structures assigned to Seismic Design Category E or F.

Shear walls sheathed with lath, plaster or gypsum board shall not be used below the top level in a multi-level building for structures assigned to Seismic Design Category D.

Reason: This is amendment is due to geological. Code committee tries not to encourage engineer to use shear walls sheathed with other materials since the shear walls sheathed with other materials shows poor performance in the 1994 Northridge earthquake. The committee also allow to maintain all capacities that shown on Table without reduction since all the shear walls sheathed with other material shall be designed under R=2.0, not R=6.5. To penalize the use of shear walls with other materials by R=2 and a capacity reduction is not the intent.

SEC. 91.2308. CONVENTIONAL LIGHT-FRAME CONSTRUCTION.

Section 2308 of the CBC is adopted by reference, except that Sections ~~2308.2~~, 2308.3.4, ~~2308.6, 2308.9.2.3~~, 2308.12.1, 2308.12.2, 2308.12.4 and 2308.12.5 of the CBC are not adopted and in lieu, Sections ~~91.2308.2,~~ 91.2308.3.4, ~~91.2308.6, 91.2308.9.2.3,~~ 91.2308.12.1, 91.2308.12.2, 91.2308.12.4, 91.2308.12.5 and Table 2308.12.4 are added.

~~**91.2308.2. Limitations.** Buildings are permitted to be constructed in accordance with the provisions of conventional light-frame construction, subject to the following limitations and the further limitations of CBC Sections 2308.11 and 2308.12.~~

~~1. Buildings shall be limited to a maximum of three stories above grade plane. For the purposes of this section, for buildings in Seismic Design Category D or E as determined in CBC Section 1613, cripple stud walls shall not be considered to be a story, provided the cripple stud walls are solid blocked and do not exceed 14 inches (356 mm) in height measured from the top of the footing to the bottom of the floor joist.~~

~~2. Bearing wall stud height shall not exceed ten feet (3048 mm). The height of floor framing shall not exceed 16 inches (406 mm).~~

~~3. Loads as determined in Division 16 of this Code shall not exceed the following:~~

~~3.1. Average dead loads shall not exceed 15 psf (718 N/m^2) for the combined roof and ceiling, exterior walls, floors and partitions.~~

~~**EXCEPTIONS:**~~

~~1. Subject to the limitations of CBC Sections 2308.11.2 and 91.2308.12.2, stone or masonry veneer up to the lesser of five inches (127 mm) thick or 50 psf (2395 N/m^2) and installed in accordance with Division 14 of this Code is permitted to a height of 30 feet (9144 mm) above a noncombustible foundation, with an additional eight feet (2438 mm) permitted for gable ends.~~

~~2. Concrete or masonry fireplaces, heaters and chimneys shall be permitted in accordance with the provisions of this Code.~~

~~3.2. Live loads shall not exceed 40 psf (1916 N/m^2) for floors.~~

~~3.3. Ground snow loads shall not exceed 50 psf (2395 N/m^2).~~

~~4. Wind speeds shall not exceed 100 miles per hour (mph) (44 m/s) (3-second gust).~~

~~**EXCEPTION:** Wind speeds shall not exceed 110 mph (48.4 m/s) (3-second gust) for buildings in Exposure Category B.~~

~~5. Roof trusses and rafters shall not span more than 40 feet (12192 mm) between points of vertical support.~~

~~6. The provisions of this section shall not apply to Occupancy Category IV buildings assigned to Seismic Design Category B, C, D, E or F, as determined in CBC Section 1613.~~

~~7. Conventional light-frame construction is limited in irregular structures in Seismic Design Category D or E, as specified in CBC Section 2308.12.6.~~

~~8. For all occupancies, interior nonload-bearing partitions eight feet (2348 mm) or higher shall be laterally braced at the top at eight feet (2348 mm) maximum on center.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.2308.3.4. Braced Wall Line Support. Braced wall lines shall be supported by continuous foundations.

Exception: For structures with a maximum plan dimension not over 50 feet (15240 mm), continuous foundations are required at exterior walls only for structures not assigned to Seismic Design Category D, E or F.

Reason: Interior walls may take over half of the seismic loading imposed on simple buildings. Without a continuous footing, the loads may be transferred through other non-structural elements which are not designed to take the combined seismic and gravity loads. The amendment is also a continuation of a similar amendment adopted during previous code adoption cycles.

~~**91.2308.6. Foundation Plates or Sills.** Foundations and footings shall be as specified in Division 18 of this Code. Foundation plates or sills resting on concrete or masonry foundations shall comply with CBC Section 2304.3.1. Foundation plates or sills shall be bolted or anchored to the foundation with not less than 1/2-inch diameter (12.7 mm) steel bolts or approved anchors. Bolts shall be embedded at least seven inches (178 mm) into concrete or masonry and spaced not more than six feet (1829 mm) apart. There shall be a minimum of two bolts or anchor straps per piece with one bolt or anchor strap located not more than 12 inches (305 mm) or less than four inches (102 mm) from each end of each piece. A properly sized nut and washer shall be tightened on each bolt to the plate as per Table 2305.3.11 in this division.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

~~**91.2308.9.2.3. Nonbearing Walls and Partitions.** In nonbearing walls and partitions, studs shall be spaced not more than 28 inches (711 mm) on center and are permitted to be set with the long dimension parallel to the wall. Interior nonbearing partitions shall be capped with no less than a single top plate installed to provide overlapping at corners and at intersections with other walls and partitions. The plate shall be continuously tied at the joints by solid blocking at least 16 inches (406 mm) in length and equal in size to the plate or by 1/2 inch by 1 1/2 inch (12.7 mm by 38 mm) metal ties with spliced sections fastened with two 16d common nails on each side of the joint. Nonbearing partitions 8 feet (2348 mm) or higher shall be laterally braced at the top at 8 feet (2348 mm) maximum on center.~~

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.2308.12.2. Concrete or Masonry. Concrete or masonry walls and stone or masonry veneer shall not extend above the basement.

Exception: Stone and masonry veneer is permitted to be used in the first story above grade plane in Seismic Design Category D provided the following criteria are met:

1. The type of <u>brace</u> ~~bracing used~~ in accordance with CBC Section 2308.9.3 shall be Method 3 and the allowable shear capacity in accordance with CBC Table 2306.4.1 of this division shall be a minimum of 350 plf (5108 N/m).

2. The bracing of the first story shall be located at each end and at least every 25 feet (7620 mm) on center but not less than 45 percent of the braced wall line.

3. ~~Hold-down connectors with an allowable design capacity of 2,100 pounds (9341 N) shall be provided at the ends of braced walls at the first floor to the foundation.~~ Hold-down connectors shall be provided at the ends of braced walls for the first floor to foundation with an allowable design of 2,100 pounds (9341 N).

4. Cripple walls shall not be permitted.

5. Anchored masonry and stone wall veneer not exceeding five inches (127 mm) in thickness shall conform to the requirements of Division 14 of this Code and shall not extend more than five feet (1524 mm) above the first story finished floor.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.2308.12.4. Braced Wall Line Sheathing. Braced wall lines shall be braced by one of the types of sheathing prescribed by CBC Table 2308.12.4 as shown in CBC Figure 2308.9.3. The sum of lengths of braced wall panels at each braced wall line shall conform to CBC Table 2308.12.4. Braced wall panels shall be distributed along the length of the braced wall line and start at not more than 8 feet (2438 mm) from each end of the braced wall line. Panel sheathing joints shall occur over studs or blocking. Sheathing shall be fastened to studs, top and bottom plates and at panel edges occurring over blocking. Wall framing to which sheathing used for bracing is applied shall be nominal 2 inch wide [actual 1 1/2 inch (38 mm)] or larger members, spaced a maximum of 16 inches on center. Nailing shall be minimum 8d common placed 3/8

inches from panel edges and spaced not more than 6 inches on center, and 12 inches on center along intermediate framing members.

Braced wall panel construction types shall not be mixed within a braced wall line. Braced wall panels required by CBC Section 2308.12.4 may be eliminated when all of the following requirements are met:

1. One story detached Group U occupancies not more than 25 feet in depth or length.

2. The roof and three enclosing walls are solid sheathed with 1/2-inch nominal thickness wood structural panels with 8d common nails placed 3/8 inches from panel edges and spaced not more than 6 inches on center along all panel edges and 12 inches on center along intermediate framing members. Wall openings for doors or windows are permitted provided a minimum 4 foot wide wood structural braced panel with minimum height to length ratio of 2 to 1 is provided at each end of the wall line and that the wall line be sheathed for 50% of its length.

Wood structural panel sheathing shall be minimum of 15/32 inch thick nailed with a 8d common placed 3/8 inches from panel edges and spaced not more than 6 inches on center and 12 inches on center along intermediate framing members.

Reason: This Administrative amendment is to be consistent with the State of California Code.

TABLE 2308.12.4
WALL BRACING IN SEISMIC DESIGN CATEGORIES D AND E
(Minimum Length of Wall Bracing per each 25 Linear Feet of Braced Wall Line[a])

CONDITION	SHEATHING TYPE[b]	$S_{DS} < 0.50$	$0.50 \leq S_{DS} < 0.75$	$0.75 \leq S_{DS} < 1.00$	$S_{DS} > 1.00$
One Story	G-P[c]	10 feet 8 inches	14 feet 8 inches	18 feet 8 inches	25 feet 0 inches
	S-W[d]	5 feet 4 inches	8 feet 0 inches	9 feet 4 inches	12 feet 0 inches

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. Minimum length of panel bracing of one face of the wall for S-W sheathing shall be at least 4'-0" long or both faces of the wall for G-P sheathing shall be at least 8'-0" long; h/w ratio shall not exceed 2:1. For S-W panel bracing of the same material on two faces of the wall, the minimum length is permitted to be one-half the tabulated value but the h/w ratio shall not exceed 2:1 and design for uplift is required.

b. G-P = gypsum board, lath and portland cement plaster or gypsum sheathing boards; S-W = wood structural panels.

c. Nailing as specified below shall occur at all panel edges at studs, at top and bottom plates and, where occurring, at blocking:
For 1/2-inch gypsum board, 5d (0.113 inch diameter) cooler nails at 7 inches on center;
For 5/8-inch gypsum board, No. 11 gage (0.120 inch diameter) at 7 inches on center;
For gypsum sheathing board, 1 3/4 inches long by 7/16-inch head, diamond point galvanized nails at 4 inches on center;
For gypsum lath, No. 13 gage (0.092 inch) by 1 1/8 inches long, 19/64-inch head, plasterboard at 5 inches on center;
For Portland cement plaster, No. 11 gage (0.120 inch) by 1 1/2 inches long, 7/16- inch head at 6 inches on center;

d. ~~S-W sheathing shall be nailed with 8d common nails, at 6:6:12.~~ S-W sheathing shall be a minimum of 15/32" thick nailed with 8d common placed 3/8 inches from panel edges and spaced not more than 6 inches on center and 12 inches on center along intermediate framing members.

Reason: This is intended to improve the performance level of buildings and structures that are subject to the higher seismic demands placed on buildings. The amendment is also a continuation of a similar amendment adopted during previous code adoption cycles.

91.2308.12.5. Attachment of Sheathing. Fastening of braced wall panel sheathing shall not be less than that prescribed in Table 2308.12.4 of this division or CBC ~~Table~~ Section 2304.9.1. Wall sheathing shall not be attached to framing members by adhesives. Staple fasteners in Table 2304.9.1 shall not be used to resist or transfer seismic forces in structures assigned to Seismic Design Category D, E or F.

Exception: Staples may be used to resist or transfer seismic forces when the allowable shear values are substantiated by cyclic testing and approved by the building official.

All braced wall panels shall extend to the roof sheathing and shall be attached to parallel roof rafters or blocking above with framing clips (18 ~~guage~~ gage minimum) spaced at maximum 24 inches (6096 mm) on center four 8d nails per leg (total 8d nails per clip). Braced wall panels shall be laterally braced at each top corner and at maximum 24 inch (6096 mm) intervals along the top plate of discontinuous vertical framing.

Reason: The structural panels fastened with staples not exhibits the same behavior as the wood panels fastened with common nails in the cyclic testing. The amendment is also a continuation of a similar amendment adopted during previous code adoption cycles.

Sec. 13. Division 30 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.3002 HOISTWAY ENCLOSURES.

Section 3002 of the CBC is adopted by reference, except that Sections 3002.1.1, 3002.1.2, 3002.3 exceptions 1 and 2 only, ~~3002.4a.4~~ 3002.4.4a, 3002.5, 3002.8, 3002.9 and 3002.9.1 through 3002.9.5 of the CBC are not adopted and in lieu Sections 91.3002.1.1 and 91.3002.3 are ~~is~~ added.

91.3002.3 Emergency signs. An *approved* pictorial sign of a standardized design shall be posted adjacent to each elevator call station on all floors instructing occupants to use the *exit stairways* and not to use the elevators in case of fire. The sign shall read: IN FIRE EMERGENCY, DO NOT USE ELEVATOR.
USE EXIT STAIRS.

~~**Exceptions:**~~

~~1. The emergency sign shall not be required for elevators that are part of an *accessible means of egress* complying with Section 1007.4.~~

~~2. The emergency sign shall not be required for elevators that are used for occupant self-evacuation in accordance with Section 3008.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator

Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

SEC. 91.3007 FIRE SERVICE ACCESS ELEVATOR

Section 3007 of the CBC is not adopted by reference.

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**SECTION 3007**~~
~~**FIRE SERVICE ACCESS ELEVATOR**~~

~~**3007.1 General.** Where required by Section 403.6.1, every floor of the building shall be served by a fire service access elevator. Except as modified in this section, the fire service access elevator shall be installed in accordance with this chapter and ASME A17.1/CSA B44.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3007.2 Hoistway enclosures protection.** The fire service access elevator shall be located in a shaft enclosure complying with Section 708.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3007.3 Hoistway lighting.** When firefighters' emergency operation is active, the entire height of the hoistway shall be illuminated at not less than 1 foot candle (11 lux) as measured from the top of the car of each fire service access elevator.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3007.4 Fire service access elevator lobby.** The fire service access elevator shall open into a fire service access elevator lobby in accordance with Sections 3007.4.1 through 3007.4.4.~~
~~**Exception:** Where a fire service access elevator has two entrances onto a floor, the second entrance shall be permitted to open into an elevator lobby in accordance with Section 708.14.1.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3007.4.1 Access.** The fire service access elevator lobby shall have direct access to an *exit enclosure*.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3007.4.2 Lobby enclosure.** The fire service access elevator lobby shall be enclosed with a *smoke barrier* having a minimum~~
~~1 hour *fire-resistance rating*, except that lobby doorways shall comply with Section 3007.4.3.~~
~~**Exception:** Enclosed fire service access elevator lobbies are not required at the street floor.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3007.4.3 Lobby doorways.** Each fire service access elevator lobby shall be provided with a doorway that is protected with a 3/4-hour *fire door assembly* complying with Section 715.4. The *fire door assembly* shall also comply with the smoke and draft control door assembly requirements of Section 715.4.3.1 with the UL 1784 test conducted without the artificial bottom seat.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3007.4.4 Lobby size.** Each enclosed fire service access elevator lobby shall be a minimum of 150 square feet (14m2) in an area with a minimum dimension of 8 feet (2440 mm).~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3007.5 Standpipe hose connection.** A Class I standpipe hose connection in accordance with Section 905 shall be provided in the *exit enclosure* having direct access from the fire service access elevator lobby.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3007.6 Elevator system monitoring.** The fire service access elevator shall be continuously monitored at the fire command center by a standard emergency service interface system meeting the requirements of NFPA 72.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3007.7 Electrical power.** The following features serving each fire service access elevator shall be supplied by both normal power and Type 60/Class 2/Level 1 standby power:~~
~~1. Elevator equipment.~~
~~2. Elevator hoistway lighting.~~
~~3. Elevator machine room ventilation and cooling equipment.~~
~~4. Elevator controller cooling equipment.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3007.7.1 Protection of wiring or cables.** Wires or cables that provide normal and standby power, control signals, communication with the car, lighting, heating, air conditioning,~~

~~ventilation and fire detecting systems to fire service access elevators shall be protected by construction having a minimum 1-hour *fire resistance rating* or shall be circuit integrity cable having a minimum 1-hour *fire resistance rating*.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

SEC. 91.3008 OCCUPANT EVACUATION ELEVATORS

Section 3008 of the CBC is not adopted by reference.

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**SECTION 3008**~~
~~**OCCUPANT EVACUATION ELEVATORS**~~

~~**3008.1 General.** Where elevators are to be used for occupant self evacuation during fires, all passenger elevators for general public use shall comply with this section. Where other elevators are used for occupant self evacuation, they shall also comply with this section.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.2 Fire safety and evacuation plan.** The building shall have an *approved* fire safety and evacuation plan in accordance with the applicable requirements of Section 404 of the *International Fire Code*. The fire safety and evacuation plan shall incorporate specific procedures for the occupants using evacuation elevators.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.3 Operation.** The occupant evacuation elevators shall be used for occupant self-evacuation only in the normal elevator operating mode prior to Phase I Emergency Recall Operation in accordance with the requirements in ASME A17.1/CSA B44 and the building's fire safety and evacuation plan.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.4 Additional exit stairway.** Where an additional *means of egress* is required in accordance with Section 403.5.2, an additional *exit stairway* shall not be required to be installed in buildings having elevators used for occupant self-evacuation in accordance with this section.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.5 Emergency voice/alarm communication system.** The building shall be provided with an emergency voice/alarm communication system. The emergency voice/alarm communication system shall be accessible to the fire department. The system shall be provided in accordance with Section 907.5.2.2.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.5.1 Notification appliances.** A minimum of one audible and one visible notification appliance shall be installed within each occupant evacuation elevator lobby.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.6 Automatic sprinkler system.** The building shall be protected throughout by an *approved*, electrically supervised automatic sprinkler system in accordance with Section 903.3.1.1, except as otherwise permitted by Section 903.3.1.1.1 and as prohibited by Section 3008.6.1.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.6.1 Prohibited locations.** Automatic sprinklers shall not be installed in elevator machine rooms and elevator machine spaces for occupant evacuation elevators.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.6.2 Sprinkler system monitoring.** The sprinkler system shall have a sprinkler control valve supervisory switch and water flow initiating device provided for each floor that is monitored by the building's fire alarm system.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.7 High-hazard content areas.** No building areas shall contain high-hazard contents exceeding the maximum allowable quantities per *control area* as addressed in Section 414.2.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.8 Shunt trip.** Means for elevator shutdown in accordance with Section 3006.5 shall not be installed on elevator systems used for occupant evacuation elevators.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.9 Hoistway enclosure protection.** The occupant evacuation elevators shall be located in hoistway enclosure(s) complying with Section 708.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.10 Water protection.** The occupant evacuation elevator hoistway shall be designed utilizing an *approved* method to prevent water from the operation of the *automatic sprinkler system* from infiltrating into the hoistway enclosure.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.11 Occupant evacuation elevator lobby.** The occupant evacuation elevators shall open into an elevator lobby in accordance with Sections 3008.11.1 through 3008.11.4.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.11.1 Access.** The occupant evacuation elevator lobby shall have direct access to an *exit enclosure*.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.11.2 Lobby enclosure.** The occupant evacuation elevator lobby shall be enclosed with a *smoke barrier* having a minimum 1 hour *fire resistance rating*, except that lobby doorways shall comply with Section 3008.11.5.~~

~~**Exception:** Enclosed occupant evacuation elevator lobbies are not required at the level(s) of *exit discharge*.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection,

construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.11.3 Lobby doorways.** Each occupant evacuation~~
~~Elevator lobby shall be provided with a doorway that is protected with a 3/4 hour *fire door assembly* complying with Section 715.4.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.11.3.1 Vision panel.** A vision panel shall be installed in each *fire door assembly* protecting the lobby doorway. The vision panel shall consist of fire protection rated glazing and shall be located to furnish clear vision of the occupant evacuation elevator lobby.~~
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~~**ELEVATORS AND CONVEYING SYSTEMS**~~

~~**3008.11.3.2 Door closing.** Each *fire door assembly* protecting the lobby doorway shall be automatic closing upon receipt of any fire alarm signal from the emergency voice/alarm communication system serving the building.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.11.4 Lobby size.** Each occupant evacuation elevator lobby shall have minimum floor area as follows:~~
~~1. The occupant evacuation elevator lobby floor area shall accommodate, at 3 square feet (0.28m2) per person, a minimum of 25 percent of the *occupant load* of the floor area served by the lobby.~~
~~2. The occupant evacuation elevator lobby floor area also shall accommodate one *wheelchair space* of 30 inches by 48 inches (760 mm by 1220 mm) for each~~
~~50 persons, or portion thereof, of the *occupant load* of the floor area served by the lobby.~~
~~**Exception:** The size of lobbies serving multiple banks of elevators shall have the minimum floor area *approved* on an individual basis and shall be consistent with the building's fire safety and evacuation plan.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection,

construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.11.5 Signage.** An *approved* sign indicating elevators are suitable for occupant self evacuation shall be posted on all floors adjacent to each elevator call station serving occupant evacuation elevators.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.12 Lobby status indicator.** Each occupant evacuation elevator lobby shall be equipped with a status indicator arranged to display all of the following information:~~
~~1. An illuminated green light and the message, "Elevators available for occupant evacuation" when the elevators are operating in normal service and the fire alarm system is indicating an alarm in the building.~~
~~2. An illuminated red light and the message, "Elevators out of service, use exit stairs" *when the elevators are in Phase I emergency recall operation in accordance with the requirements in ASME A17.1/CSA B44.*~~
~~3. No illuminated light or message when the elevators are operating in normal service.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.13 Two-way communication system.** A two-way communication system shall be provided in each occupant evacuation elevator lobby for the purpose of initiating communication with the fire command center or an alternative location *approved* by the fire department.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.13.1 Design and installation.** The two-way communication system shall include audible and visible signals and shall be designed and installed in accordance with the requirements of ICC A117.1.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection,

construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.13.2 Instructions.** Instructions for the use of the two-way communication system along with the location of the station shall be permanently located adjacent to each station. Signage shall comply with the ICC A117.1 requirements for visual characters.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.14 Elevator system monitoring.** The occupant evacuation elevators shall be continuously monitored at the fire command center or a central control point *approved* by the fire department and arranged to display all of the following information:~~

~~1. Floor location of each elevator car.~~

~~2. Direction of travel of each elevator car.~~

~~3. Status of each elevator car with respect to whether it is occupied.~~

~~4. Status of normal power to the elevator equipment, elevator controller cooling equipment, and elevator machine room ventilation and cooling equipment.~~

~~5. Status of standby or emergency power system that provides backup power to the elevator equipment, elevator controller cooling equipment, and elevator machine room ventilation and cooling equipment.~~

~~6. Activation of any fire alarm initiating device in any elevator lobby, elevator machine room or machine space, or elevator hoistway.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.14.1 Elevator recall.** The fire command center or an alternative location *approved* by the fire department shall be provided with the means to manually initiate a Phase I Emergency Recall of the occupant evacuation elevators in accordance with ASME A17.1/CSA B44.~~

Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.15 Electrical power.** The following features serving each occupant evacuation elevator shall be supplied by both normal power and Type 60/Class 2/Level 1 standby power:~~
~~1. Elevator equipment.~~
~~2. Elevator machine room ventilation and cooling equipment.~~
~~3. Elevator controller cooling equipment.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

~~**3008.15.1 Protection of wiring or cables.** Wires or cables that provide normal and standby power, control signals, communication with the car, lighting, heating, air conditioning, ventilation and fire detecting systems to occupant evacuation elevators shall be protected by construction having a minimum 1 hour *fire resistance rating* or shall be circuit integrity cable having a minimum 1 hour *fire resistance rating*.~~
Reason: The Elevator Code adopts the State of California Code of Regulations Title 8, Division 1, Subchapter 6, Group IV Elevator Safety Orders, which governs the design, erection, construction, installation, service and operation of conveyances as defined in the California Labor Code 7300.1 and is more restrictive. These are examples of a conflict with the Elevator Safety Orders for Phase I Emergency Recall Operation and Phase II Emergency In-Car Operation.

Sec. 14. Division 31 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. ~~91.3110~~ 91.3111. PATIO COVERS.

~~**91.3110.1**~~ **91.3111.1. General.** Section I101.1 of Appendix I of the CBC is adopted by reference.

~~**91.3110.2**~~ **91.3111.2. Definitions.** Section I101.2 of Appendix I of the CBC is adopted by reference.

~~**91.3110.3**~~ **91.3111.3. Exterior Openings.** Section I101.3 of Appendix I of the CBC is adopted by reference.

~~**91.3110.4**~~ **91.3111.4. Structural Provisions.** Section I101.4 of Appendix I of the CBC is adopted by reference.

Sec. 15. Division 32 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.3201. GENERAL.

Section 3201 of the CBC is adopted by reference, except Sections 3201.1~~,~~ and 3201.3 ~~and 3202.3.1~~ of the CBC are not adopted and in lieu, Sections 91.3201.1~~,~~ and 91.3201.3 ~~and 91.3201.3.1~~ are added.

SEC. 91.3202. GENERAL.

Section 3202 of the CBC is adopted by reference, except Sections 3202.3.1 and 3202.3.3of the CBC is not adopted and in lieu, Section 91.3202.3.1 is added.

~~**3202.3.3 Encroachments 15 feet or more above grade.** Encroachments 15 feet (4572 mm) or more above grade shall not be limited.~~

Reason: This Administrative amendment is to be consistent with local departmental ordinance in regards to allowance of any encroachment over public right of way.

Sec. 16. Division 33 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.3304. SITE WORK.

Section 3304 of the CBC is adopted by reference, except Sections ~~3304.1.2 and~~ 3304.1.4 of the CBC are not adopted and in lieu, Sections ~~91.3304.1.2 and~~ 91.3304.1.4 ~~are~~ is added.

~~**91.3304.1.2. Surcharge.** No fill or other surcharge loads shall be placed adjacent to any building or structure unless the building or structure is capable of withstanding the additional loads caused by the fill or surcharge. Existing footings or foundations, which can be affected by any excavation, shall be underpinned adequately or otherwise protected against settlement and shall be protected against lateral movement.~~

91.3304.1.4. Fill Supporting Foundations. Fill to be used to support the foundations of any building or structure shall comply with CBC Section ~~1803.5~~ 1804.5 and Division 70 of this Code. Special inspections of compacted fill shall be in accordance with CBC Section 1704.7.

Reason: This Administrative amendment is to be consistent with the State of California Code.

Sec 17. Division 34 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.3400. BASIC PROVISIONS.

Chapter 34 of the CBC is adopted by reference, except Sections 3401, ~~3407~~ 3409, ~~3408~~ 3410, ~~3409~~ 3411 and ~~3410~~ 3412 of the CBC are not adopted and in lieu, Sections 91.3401, 91.3401.1, 91.3401.2, 91.3401.3, 91.3401.4, ~~91.3407~~ 91.3409 and ~~91.3408~~ 91.3410 are added.

Reason: Match the Code Section number referenced in 2010 CBC, and adopt Sec 3401.4 of the CBC by reference.

91.3401.4. Building Materials Section 3401.4 including 3401.4.1, 3401.4.2 and 3401.4.3 of the CBC is adopted by reference.

Reason: This Administrative amendment is to be consistent with the State of California Code. Adopt new provision 3401.4 in CBC regarding the use of existing, new and replacement materials.

SEC. ~~91.3407~~ 91.3409. HISTORIC BUILDINGS.

Historic buildings or structures shall comply with Section 91.8119 of this Code.

Reason: This Administrative amendment is to be consistent with the State of California Code.

SEC. ~~91.3408~~ 91.3410. MOVED STRUCTURES.

Buildings or structures that are relocated in whole or in part into or within the City of Los Angeles shall comply with the provisions of Division 83 of this Code.

Reason: This Administrative amendment is to be consistent with the State of California Code.

Sec. 18. Division 61 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.6105. SEPARATION FROM OIL WELLS.

~~No building more than 400 square feet in area and less than 36 feet in height shall be erected within 50 feet from the center of an oil well casing and no building 36 feet in height shall be erected closer to the center of an oil well casing than a horizontal distance equal to one and one-half times the height of the building, provided however, that that distance need not exceed 200 feet. The building shall be measured vertically from the adjacent ground elevation adjoining the building to the ceiling of the top story.~~

~~**EXCEPTIONS:** The distance separation between a building and an oil well may be reduced to:~~

~~1. 35 feet if a solid masonry wall not less than six feet high and six inches thick is constructed between the oil well and all portions of the buildings, which are less than 50 feet from the wall;~~

~~2. 25 feet if all walls of the building, which are located less than 50 feet from the oil well, are of one- hour fire-resistive construction, have no openings, and are surmounted by a three-foot high parapet;~~

~~3. 15 feet if all walls of the building, which are located less than 50 feet from the oil well, are of two- hour fire-resistive construction, have no openings, and are surmounted by a three-foot high parapet.~~

~~No building used for the housing of human beings located on any premises where there is a school, hospital, sanitarium, or assembly occupancy shall be within 200 feet from the center of an oil well casing, nor shall any public utility fuel manufacturing plant, or public utility electrical generating, receiving or distribution plant be located closer than 200 feet from the center of the oil well casing.~~

No school, hospital, sanitarium or assembly occupancy shall be within 200 feet from the center of the oil well casing.

No public utility fuel manufacturing plant or public utility electrical generating, receiving or distribution plant shall be located within 200 feet from the center of the oil well casing.

No building more than 400 square feet (37m2) in area and taller than 36 feet in height shall be erected within 50 feet from the center of an oil well casing.

A distance separation between the exterior wall of the building and the center of an oil well casing shall be maintained with a horizontal distance equal to 1 ½ times the building's height provided that the distance is no further than 200 feet. The building height for this provision shall be measured vertically from the adjacent lowest ground elevation to the ceiling of the top story.

Exceptions: The distance separation may be reduced to the following:

1. 35 feet separation if a solid 6 inches thick masonry wall and no shorter than 6 feet tall to be constructed within 50 feet from the building in between the oil well and all portions of the building.
2. 26 feet if any portion of the building exterior walls within 50 feet from the center of an oil well casing shall be constructed with no openings and one hour fire resistive construction with a 3 foot high fire rated parapet.
3. 15 feet if any portion of the building exterior walls within 50 feet from the center of an oil well casing shall be constructed with no openings and two- hour fire resistive construction with a 3 foot high fire rated parapet.

Reason: This Administrative amendment is to clarify code section.

Sec. 19. Section 91.16215 of the Los Angeles Municipal Code is amended to read.:

SEC. 91.6215. REFERENCED STANDARDS.

ASTM D 635-03	Test Method for Rate of Burning and/or Extent and Time of Burning of Self-Supporting Plastics in a Horizontal Position	Section 91.6207.1.1
~~CEC 7~~ NFPA 70-08	~~ICC~~ National Electrical Code	Sections 91.6206.1, 91.6206.2
NFPA 701-99	Methods of Fire Test for Flame Propagation of Textiles and Films	Section 91.6206.1.1

Reason: This Administrative amendment is to be consistent with the State of California Code.

Sec. 20. Division 63 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

91.6302.3. Special Ventilation. A mechanical exhaust ventilation system capable of effectively removing cooking odors, smoke, steam, grease and vapors shall be provided at or above cooking equipment such as ranges, griddles, ovens, deep fat fryers, barbecues and rotisseries.

All hoods, ducts, fans and other devices provided to ventilate the cooking areas of commercial food preparation equipment in commercial food establishments shall be installed as required by and in compliance with the provisions of the Los Angeles Mechanical Code. Rooms in which exhaust systems are installed shall be provided with acceptable air inlets to admit at least as much air as is exhausted by these systems.

Ducts penetrating a ceiling or floor shall be enclosed in a shaft enclosure conforming to the requirements of CBC Section ~~707~~ 708. Where a shaft enclosure is not required by CBC Section ~~707~~ 708, ducts that convey grease vapors shall be enclosed in a one-hour fire-resistive shaft. The shaft shall be separated from the duct by a minimum three-inch air space vented to the outside air.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.6302.5. Dressing Rooms.

A room enclosure or designated area, separated from toilets, food storage, food preparation areas, and utensil washing areas, shall be provided where employees may change and store clothes. No employee shall store clothing or personal effects in any other area on the premises.

Where there are five or more operators, a room shall be provided where operators may change and store their outer garments. Such room shall be provided with self-closing doors and shall be separated from toilet rooms, food storage rooms or food preparation areas. No Person shall dress

or undress or store his/her clothing in any room other than as provided herein. Clothes changing rooms shall be maintained in a clean and sanitary conditions.

~~Dressing rooms for employees to store their clothes shall be provided for all restaurants and food establishments. Separate dressing rooms shall be provided for each sex where the number of employees is four or more.~~

~~Dressing rooms shall be separated from food storage rooms and food preparation areas and shall be provided with self-closing doors.~~

EXCEPTION: Individual lockers to store clothes will be accepted in lieu of dressing facilities where there are fewer than five ~~four~~ employees on any shift and provided the plan layout is approved by Los Angeles County Health Department.

91.6304.3. Additional Requirements for Installation of Bars, Grills, Grates or Similar Devices. In addition to the requirements of Section ~~1026~~ 1029, all bars, grills, grates or similar devices shall comply with the following:

1. A permit is obtained from the Department of Building and Safety and a fee is paid as required in Section 91.107.4.5 of this Code. Any permit so issued shall be valid for a period of 90 days from its issuance. The Department may allow a "certified installer" to be used, in lieu of obtaining a permit, in accordance with Section ~~91.1716~~ 91.1709.2.

2. Any person who willfully or knowingly, with the intent to deceive, makes a false statement or representation, or knowingly fails to disclose a material fact in any documentation required by the Department to ascertain facts relative to this section, Section 91.107.4.5 or to Section ~~91.1716~~ 91.1709.2 of this Code, including any oral or written evidence presented, shall be guilty of a misdemeanor.

Reasons: This Administrative amendment is to be consistent with the State of California Code. The proposed changes are consistent with Section 114135 of California Health and Safety Code and Section 11.12.070(D) of Health and Safety of the Los Angeles County Code.

Sec. 21. Section 91.16703 of the Los Angeles Municipal Code is amended to read.:

SEC. 91.6703. LIMITATIONS.

The provisions of this division shall not be applicable to latching or locking devices on exit doors to the extent that the provisions of this division are contrary to the provisions of Division 10 of this article, nor shall the regulations of this division be construed to waive any other provision of this Code.

No person shall sell, offer for sale, advertise, display for sale or install any metal bars, grilles, grates, security roll-down shutters or similar devices manufactured or installed to preclude human entry through windows and exterior doors without a label attached to each product, printed in at least ten-point type and that reads as follows: "A building permit is required in most cases for the installation of this product. If this product is installed in a sleeping room, unless excepted by the provisions of CBC Section ~~1026~~ 1029, the device must be equipped with a quick-release latch ~~openable~~ operable from inside and the dwelling unit provided with an approved smoke detector."

Reason: This Administrative amendment is to be consistent with the State of California Code. Emergency egress section is now CBC section 1029. "Openable" is not a word revise to operable.

Sec. 22. Division 70 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.7003. DEFINITIONS.

SOILS ENGINEER (GEOTECHNICAL ENGINEER) shall mean a civil engineer duly licensed by the State of California who is experienced in the application of the principles of soil mechanics in the investigation, evaluation and design of civil works involving the use of earth materials ~~and who is approved by the Department, or a geotechnical engineer licensed by the State of California~~.

Reason: Administrative amendment to conform to the State License Act definition.

91.7005.2. Building Foundations. Building foundations and temporary shoring shall be designed and constructed as specified in Division 18 and Division 33 of this Code.

Reason: Administrative amendment for clarity.

91.7005.3. Removal of Ground Cover. The existing vegetative ground cover of any watershed in any hillside area shall not be destroyed, removed or damaged except pursuant to lawful grading, use or occupancy of the property. Except for California native oak, bay, black walnut and sycamore trees regulated by the provisions of Article 7 of Chapter I or Article 6 of Chapter IV of the Los Angeles Municipal Code, removal of trees and shrubbery will be allowed where such work will not disturb the turf, sod or other existing vegetative ground cover. Whenever such ground cover is removed or damaged pursuant to a grading permit, the permittee shall restore and maintain approved ground cover, or shall accomplish such other erosion control

protection as is required. Such erosion control shall be completed within 30 days after cessation of the grading work where no valid building permit is in effect for the site.

Reason: Administrative amendment to conform to protected tree definition in the Municipal Code .

91.7006.2. Report Requirement. Reports shall be submitted to the Department for review and approval in, but not limited to, the following circumstances:

1. Soils and/or geological reports are required when they are stipulated in a Grading Preinspection Report prepared in accordance with Section 91.107.3.2 of this Code.

2. Soils and geological reports are required for all grading work in excess of 5,000 cubic yards (3825 m^3) of cut or fill, or a combination thereof.

3. Soils ~~Foundation~~ reports are required when the design of the foundations does not conform to the requirements of Division 18 of this article.

4. ~~Foundation, s~~Soils and/or geological reports may be required when previously unknown adverse soils or geologic conditions are revealed during construction.

5. Soils and/or geological reports may be required to evaluate liquefaction, slope instability and surface ground rupture resulting from earthquake motions in accordance with CBC Section 1802. ~~Seismic Report as required by CBC Section 1613 or for projects located on site designated as Alquist-Priolo (Fault) Studies Zone.~~

Reason: Administrative amendment for clarity and conformance with CBC.

91.7012.1. General. All fill and cut slopes in designated hillside areas shall be planted and irrigated ~~with a sprinkler system~~ to promote the growth of ground cover plants to protect the slopes against erosion, as required in this section.

The owner shall be responsible for planting and maintaining all slopes where such is required in this section.

Planting and irrigation shall comply with the provisions of sections 12.40, 12.41 and 12.42 of Article 2 of Chapter 1 of the Los Angeles Municipal Code.

Reason: Administrative amendment to conform to the requirements in Chapter 1 of Municipal Code.

91.7012.2.1. Low Slopes to 15 Feet (4572 mm) in Vertical Height. Slopes with vertical height of less than 15 feet (4572 mm) shall comply with the following:

1. Plant with grass or ground cover plants ~~as recommended on the planting schedule approved by the Department. Other plants recommended by a registered landscape architect will be considered for approval by the Department.~~

2. ~~A~~ An ~~sprinkler~~ irrigation system shall be installed to irrigate these slopes.

3. The owner shall water the slopes which have been planted with grasses and/or ground cover plants at sufficient time intervals to promote growth.

EXCEPTION: Where the Department finds the slope is located in such an area as to make hand watering possible, conveniently located hose bibs will be accepted in lieu of the required ~~sprinkler~~ irrigation system when a hose no longer than 50 feet (15 240 mm) would be necessary.

Reason: Administrative amendment to update and to conform to the requirements in Chapter 1 of Municipal Code. LADBS no longer reviews or approves plant types for landscaping.

91.7012.2.2. ~~Medium~~ Slopes over [15 ~~to 38~~ Feet (4572 ~~to 11 582~~ mm) in Vertical Height]. Slopes with vertical height ~~from~~ over 15 feet (4572 mm) ~~up to 38 feet (11 582 mm)~~ shall comply with the following:

1. Plant with grass or ground cover plants ~~as recommended on the planting schedule approved by the Department. Other plants may be recommended by a landscape architect for approval by the Department~~.

2. In addition to grass or ground cover plants, approved shrubs having a one gallon minimum size shall be planted on the slope at 10 feet (3048mm) on center in both directions or trees at 20 feet (6096 mm) on center in both directions. A combination of shrubs and trees may be utilized. The plants and planting pattern may be varied ~~to include trees~~ on the recommendation of the landscape architect ~~and approved by the Department~~.

3. Install an adequate ~~sprinkler~~ irrigation system during grading prior to planting of the shrubs and trees and before grading is approved.

Reason: Administrative amendment to update and to conform to the requirements in Chapter 1 of Municipal Code. LADBS no longer reviews or approves plant types for landscaping.

~~**91.7012.2.3. High Slopes [38 Feet (11 582 mm) or Over in Vertical Height]. (Amended by Ord. No. 171,939, Eff. 4/15/98.)** Slopes with vertical height of 38 feet (11 582 mm) and higher shall comply with the following:~~

~~1. Plant with grass or ground cover plants as recommended on the planting schedule approved by the Department. Other plants recommended by landscape architects may be submitted to the Department for approval.~~

~~2. In addition to grass or ground cover plants, approved shrubs having a minimum one gallon (3.8 L) size shall be planted at 10 feet (3048 mm) on center in both directions on the slope, or trees at 20 feet (6096 mm) on center both ways may be used. A combination of shrubs and trees may be utilized. This plant and planting pattern may be varied on the recommendation of a landscape architect and approved by the Department.~~

~~3. Install an adequately designed sprinkler system prior to planting shrubs and trees and before grading is approved.~~

Reason: Administrative amendment for clarity. These requirements were merged with requirements in code section 91.7012.2.2

91.7012.3.2. ~~Sprinkler~~ Irrigation systems shall be designed to provide a uniform water coverage at a rate of precipitation of not ~~less than 1/10 inch (2.5 mm) per hour nor~~ more than 3/10 inch (7.6 mm) per hour on the planted slope. In no event shall the duration of sprinkling be permitted such as to create a saturated condition and cause an erosion problem, or allow the discharge of excess water into any public or private street.

Reason: Administrative amendment to update and to conform to the requirements in Chapter 1 of Municipal Code

91.7012.3.4. Adequate backflow protection shall be installed in each ~~sprinkler~~ irrigation system as required by the Plumbing Code.

Reason: Administrative amendment to update and to conform with requirements in Chapter 1 of Municipal Code

91.7012.3.5. A functional test of the ~~sprinkler~~ irrigation system shall be performed by the installer for every sprinkler system prior to approval.

Reason: Administrative amendment to update and to conform to the requirements in Chapter 1 of Municipal Code

91.7012.4. Plants. All plants required by this section shall be selected ~~from a list approved by the Department~~ with consideration given to deep-rooted plants needing limited watering, low maintenance and having fire-retardant characteristics.

Reason: Administrative amendment to update and to conform to the requirements in Chapter 1 of Municipal Code. LADBS no longer reviews or approves plant types for landscaping.

Sec. 23. Division 81 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

91.8103.2. Group I Occupancy. Buildings classed in Group I Occupancy because of the use or character of the occupancy that are not more than three stories in height, that were established prior to March 4, 1972, and that have been continuously operated as that use or character since that time shall comply with CBC Section ~~3413~~. 3415.

Reasons: This Administrative amendment is to be consistent with the State of California Code.

91.8106.2. Additions. An addition may be made to any existing building within any fire district if the added portion conforms to this Code and if the entire building, including the addition, is

within the limit of area and height specified in CBC Section ~~504~~ 503 for a building of like type and occupancy.

Reasons: This Administrative amendment is to be consistent with the State of California Code.

Sec. 24. Section 91.8308.2 of the Los Angeles Municipal Code is amended to read.:

91.8308.2. In the case of a building located outside the City limits of the City of Los Angeles, an additional fee of $525.00 shall be paid for each application. In addition to the fee, a mileage charge of 65 cents per mile (1609 m) shall be paid for any inspection which is made 10 miles (16090 m) or more beyond City limits. Mileage shall be measured in a straight line from the point 10 miles (16090 m) beyond the City limits which is nearest to the location of the building to be inspected, to the location of the building, and return to said point of departure.

Reasons: This Administrative amendment is to be consistent with the State of California Code. Added and revised the metric units.

Sec. 25. Division 85 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

91.8502.1.2. 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 1026.

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 ~~704.3~~ 705.3 or be provided with an approved water curtain.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.8502.2. 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 ~~704.8~~ 705.8 provided the openings are protected with an approved water curtain. Openings in the exterior walls that are not allowed by CBC Section ~~704.8~~ 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.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.8502.3.2. 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 C.B.C. Section ~~713.10.2~~. 716.3.3. 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 C.B.C. Section ~~905.13.2~~ 909.16, except that an alternate actuation method may be allowed when approved by both the Fire Department and the Department.

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

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.8502.5. Fire Alarm System. If a fire alarm system is required by CBC Section 907.2.8 or 907.2.12.2 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 907.2.8. 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 403.11. 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 control room) that complies with all the requirements of CBC Section ~~403.8~~ 403.4.5 and Section 57.118.02 of the Fire Code including the minimum room dimensions of ten feet. ~~by ten feet~~.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.8502.7.1. Corridors. All public corridors serving the occupants of the Joint Living and Work Quarters shall comply with all the requirements of CBC Section ~~1017~~ 1018, except as follows:

A. 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.

B. 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 ~~1017.1~~ 1018.1.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.8502.7.4. Exit Stairway. All exit stairways shall be enclosed and shall comply with all the requirements of CBC Section ~~1020~~ 1022. 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.

Reason: This Administrative amendment is to be consistent with the State of California Code.

Sec. 26. Division 86 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

91.8602.8.1. All requirements of this Code with respect to exits shall be complied with.

EXCEPTIONS:

1. The provisions of CBC Section ~~707~~ 708 which require shaft enclosures need not be complied with, provided the provisions of this section are met.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.8603.1.1. Existing Residential Building. Except as otherwise provided in LAMC Section 91.8603.1.2, the provisions of CBC Section ~~907.2.10~~ 907.2.11 shall apply to every dwelling unit, efficiency dwelling unit, guest room and suite in any building where the original building permit was issued prior to May 18, 1980. The smoke detectors may be battery operated until August 1, 1983, at which time the smoke detectors shall be located and permanently wired as required in CBC Section ~~907.2.10~~ 907.2.11.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.8603.1.2. Existing Apartment Hotels and Hotels Over 75 Feet in Height. Every existing apartment hotel more than 75 feet in height and containing no more than nine dwelling units and every existing hotel more than 75 feet in height, where the original building permit for the

building was issued prior to May 18, 1980, shall comply with the provisions of CBC Section ~~907.2.10~~ 907.2.11 not later than August 1, 1981.

EXCEPTION: The operative date for compliance may be delayed until August 1, 1982, if the Department determines that the building complies with either the provisions of CBC Sections ~~419~~ 420 and 602.2 or CBC Section 3412.

Notwithstanding any other provision here to the contrary, every guest room in any apartment hotel or hotel described in this section when used as a light-housekeeping room, as that term is described in Section 91.8116.1 of this Code, shall be provided with smoke detectors in compliance with the provisions of CBC Section ~~907.2.10~~ 907.2.11 and the provisions of Section 91.8603.2 of this Code pertaining to photoelectric type smoke detectors located in corridors or areas giving access to sleeping rooms. Smoke detectors may be battery operated until August 1, 1982, at which time the smoke detectors shall be located and permanently wired as required by CBC Section ~~907.2.10~~ 907.2.11.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.8603.2.1. Existing One-Family Dwellings. After July 31, 1980, existing one-family dwellings shall be provided with smoke detectors, which may be battery operated, located as specified in CBC Section ~~907.2.10~~ 907.2.11 for Group R, Division 3 Occupancies, if:

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.8603.2.2 Existing Two-Family Dwellings. Every building containing two dwelling units and not more than five guest rooms, where the original building permit was issued prior to May 18, 1980, shall comply with the provisions of CBC Section ~~907.2.10~~ 907.2.11 and the provisions of LAMC Section 91.8603.2.1 pertaining to photoelectric-type smoke detectors located in corridors or areas giving access to sleeping rooms. Smoke detectors may be battery operated until August 1, 1983, at which time the smoke detectors shall be located and permanently wired as required by CBC Section ~~907.2.10~~ 907.2.11.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.8604.2.3. Shaft Enclosures. Every opening in a floor shall be enclosed as required by CBC Section ~~707~~ 708 for shaft enclosures, provided, however, that existing enclosure walls constructed of wood lath and plaster or equivalent fire-resistive materials and which are in good condition may be accepted in lieu of enclosure wall construction.

Reason: This Administrative amendment is to be consistent with the State of California Code.

91.8605.2. General. Notwithstanding any provisions of this Code to the contrary, the following requirements shall apply to emergency homeless shelters operated during a shelter crisis, as provided for in Government Code Section 8698, et seq. Other than the requirements set forth below, the facilities need not comply with the requirements of this Code for Group R occupancies unless otherwise specified in this Code:

1. The maximum occupant load allowed in these facilities shall be the number determined appropriate by the professional service provider operating the facility and/or the Community Development Department of the City of Los Angeles, but in no event resulting in less than 50 square feet of usable area per occupant.

2. **Fire Safety Requirements.**

A. All exits shall comply with Division 33 of Article 7 of Chapter V of the LAMC and Division 10 of this Code.

B. Smoke detection devices shall be provided in all sleeping areas and shall be installed in accordance with Division 112 of Article 7 of Chapter V of the LAMC and CBC Section ~~907.2.10~~ 907.2.11.

Reason: This Administrative amendment is to be consistent with the State of California Code.

Sec. 27. Division 88 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

91.8808.2. Lateral Forces on Elements of Structures. Parts or portions of structures shall be analyzed and designed for lateral loads in accordance with Sections 91.8808.1 ~~and 91.1630~~ of this Code and ASCE 7, but not less than the value from the following formula:

$F_p = IC_pSW_p$ (8-2)

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1630, "minimum design lateral force and related effects", was removed and replaced by ASCE 7.

91.8808.6.3. Unreinforced Masonry Walls. Except as modified here, unreinforced masonry walls shall be analyzed as specified in the applicable parts of CBC Sections 2106 and 2107 to withstand all vertical loads as specified in Division 16 of this Code in addition to the seismic forces required by this division.

Substantial changes in wall thickness or stiffness shall be considered in the analysis for out-of-plane and in-plane wall stability, and the wall shall be restrained against out-of- plane instability by anchorage and bracing to the roof or floor diaphragm in accordance with LAMC Section 91.8808.3.

EXCEPTION: Variations in wall stiffness caused by nominal openings such as windows and exit doors need not be considered. ~~The 50 percent increase in the seismic force factor for shear walls as specified in CBC Section 2106.5.1 may be omitted in the computation of seismic loads to existing shear walls.~~

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 2106.5.1 was removed from CBC 2010 and replaced by Masonry structures and components shall comply with the requirements in Section 1.17 of TMS 402/ACI 530/ASCE 5.

91.8809.2.2. Veneer. Veneer shall be anchored with approved anchor ties conforming to the required design capacity specified in ~~Section 91.1403.4.3~~ Section 91.1405 and placed at a maximum spacing of 24 inches (610 mm).

Reason: This Administrative amendment is to be consistent with the State of California Code. CBC Section 1403.4.3 does not existing and Section 1403.4.3 "Anchored Veneer" in CBC 2001 was replaced by Section 1405 "INSTALLATION OF WALL COVERINGS" in CBC 2007 and CBC 2010.

91.8809.5.3. In-Place Shear Tests. The bed joints of the outer wythe of the masonry shall be tested in shear by laterally displacing a single brick relative to the adjacent bricks in that wythe. The mortar in the opposite head joint of the brick to be tested shall be removed and cleaned prior to testing. The minimum quality mortar in 80 percent of the shear tests shall not be less than the total of 30 psi (206.9 kPa) plus the axial stress in the wall at the point of the test. The shear stress shall be based on the gross area of both bed joints and shall be that shear stress at which movement of the masonry is first measured or at which cracking first appears.

An internal caliper, graduated in 0.001 of an inch (0.025 mm) increments shall be used to measure movement of the masonry unit. A hydraulic jack equipped with a pressure gauge graduated in increments of 50 psi (345 kPa) or less shall be used. The jack load shall be applied at a rate not exceeding 5,000 pounds (22 240 N) per minute.

The test shall be conducted by a minimum of two technicians. Load and displacement readings shall be recorded at the following intervals:

1. At a caliper reading of 0.001 inch (0.025 mm);
2. At first visually observed sign of movement or cracking of the mortar or masonry unit;
3. At a caliper reading of 0.02 inch (0.51 mm); and
4. The ultimate load on the unit.

The masonry unit to be tested shall not be located adjacent to a bond course in a brick wall laid in common bond. Tests to evaluate the mortar quality of structural walls shall not be conducted in masonry veneer.

Walls with mortar values which are consistently low and do not meet the minimum quality values specified in this section shall be entirely pointed per ~~U.B.C. Standard 21-8~~ Chapter A1, Section A103 and A106.3.3.9 of 2007 California Existing Building Code except that the depth of joint penetration shall be 1-l/2 inch (38 mm) in lieu of the 3/4 inch (19 mm) specified.

Reason: This Administrative amendment is to be consistent with the State of California Code. Refer non-adopted code (U.B.C.). Revised to sections in 2007 California Existing Building Code

or 2010 California Existing Building Code (If it is available) which include U.B.C. Standard 21-8 as a referenced standards.

TABLE NO. 88-H
VALUES FOR EXISTING MATERIALS

EXISTING MATERIALS OR CONFIGURATION OF MATERIALS [1]	ALLOWABLE VALUES
1. HORIZONTAL DIAPHRAGMS	
(a) Roofs with straight sheathing and roofing applied directly to the sheathing.	100 lbs. per foot for seismic shear.
(b) Roofs with diagonal sheathing and roofing applied directly to the sheathing.	400 lbs. per foot for seismic shear.
(c) Floors with straight tongue-and-groove sheathing.	150 lbs. per foot for seismic shear.
(d) Floors with straight sheathing and finished wood flooring.	300 lbs. per foot for seismic shear.
(e) Floors with diagonal sheathing and finished wood flooring.	450 lbs. per foot for seismic shear.
(f) Floors or roofs with straight sheathing and plaster applied to the joist or values for items 1(a) and 1(c) rafters.[2]	Add 50 lbs. per foot to the allowable values for items 1(a) and 1(c).
2. SHEAR WALL Wood stud walls with lath and plaster	100 lbs. per foot each side for seismic shear.
3. PLAIN CONCRETE FOOTINGS	₤ f_c'= 1500 psi unless otherwise shown by tests
4. DOUGLAS FIR WOOD	Allowable stress same as No. 1 D.F. [3]
5. REINFORCING STEEL	₤ f_y= 18,000 lbs. per square

	inch maximum
6. STRUCTURAL STEEL	~~F~~ f_v= 20,000 lbs. per square inch maximum

For SI: 1 pound per foot = 0.0146 N/m, 1 pound per square inch (psi) = 6.895 kPa.

Notes:

1. Material must be sound and in good condition.
2. The wood lath and plaster must be reattached to existing joists or rafters in a manner approved by the Department.
3. Stresses given may be increased for combinations of loads as specified in Section 91.8808.7.2 of this Code.

Reason: This Administrative amendment is to be correct typo, incorrect symbols.

TABLE NO. 88-I
ALLOWABLE VALUES OF NEW MATERIALS USED IN CONJUNCTION WITH EXISTING CONSTRUCTION

NEW MATERIALS OR CONFIGURATION OF MATERIALS [1]	ALLOWABLE VALUES
1. HORIZONTAL DIAPHRAGMS	
Plywood sheathing applied directly over existing straight sheathing with ends of plywood sheets bearing on joists or rafters and edges of plywood located on center of individual sheathing boards.	Same as specified in CBC Table ~~2306.3.1~~ 2306.2.1.(1) and 2306.2.1.(2) for blocked diaphragms.
2. SHEAR WALLS	
a. Plywood sheathing applied directly over existing wood studs. No value shall be given to plywood applied over existing plaster or wood sheathing.	Same as values specified in CBC Table ~~2306.4.1~~ 2306.3 for shear walls.

b. Dry wall or plaster applied directly over existing wood studs.	75 percent of the values specified in CBC Table ~~2306.4.5~~ 2306.7.
c. Dry wall or plaster applied to plywood sheathing over existing wood studs.	33 1/3 percent of the values specified in CBC Table ~~2306.4.5~~ 2306.7.
3. SHEAR BOLTS	
Shear bolts and shear dowels embedded a minimum of eight inches into unreinforced masonry walls. Bolt centered in a 2-1/2 inch-diameter hole with drypack or an approved non-shrink grout around circumference of bolt or dowel. [1, 3]	133 percent of the values for plain solid masonry specified in Table No. 88-M. No values larger than those given for 3/4 inch bolts shall be used.
4. TENSION BOLTS	
Tension bolts and tension dowels extending entirely through unreinforced masonry secured with bearing plates on far side of wall with at least 30 square inches of area. [2, 3, 4]	1200 lbs. per bolt or dowel.
5. COMBINATION SHEAR AND TENSION WALL ANCHORS	
a. Bolts extending to the exterior face of the wall with a 2-1/2 inch round plate under the head. Install as specified for shear bolts. Spaced not closer than 12 inches on centers. [1, 2, 3]	600 lbs. per bolt for tension.[4] See Item 3 (SHEAR BOLTS) for shear values.
b. Bolts or dowels extending to the exterior face of the wall with a 2-1/2 inch round plate under the head and drill at an angle of 22-1/2 degrees to the horizontal. Installed as specified for shear bolts. [1, 2, 3]	1200 lbs per bolt or dowel for tension.[4] See Item 3 (SHEAR BOLTS) for shear values.
c. Through bolt with bearing plate for tension per Item 4. Combined with minimum eight-inch grouted section for	See Item 4 (TENSION BOLTS) for tension values.[4] See Item 3

shear per Item 3.	(SHEAR BOLTS) for shear values.
6. INFILLED WALLS	
Reinforced masonry infilled openings in existing unreinforced masonry walls with keys or dowels to match reinforcing.	Same as values specified for unreinforced masonry walls.
7. REINFORCED MASONRY	
Masonry piers and walls reinforced per CBC Section 2106 and Section 91.2107 of this Code.	Same as values determined per CBC Section 2106.
8. REINFORCED CONCRETE	
Concrete footings, walls and piers reinforced as specified in Division 19 of this Code and designed for tributary loads.	Same as values specified in Division 19 of this Code.
9. EXISTING FOUNDATION LOADS	
Foundation loads for structures exhibiting no evidence of settlement.	Calculated existing foundation loads due to maximum dead load plus live load may be increased 25 percent for deadload, and may be increased 50 percent for dead load plus seismic load required by this division.

For SI: 1 inch = 25.4 mm, 1 square inch = 645.16 mm^2, 1 pound = 4.45 N.

1. Bolts and dowels to be tested as specified in Section 91.8809.6 of this Code.
2. Bolts and dowels to be 1/2-inch minimum in diameter.
3. Drilling for bolts and dowels shall be done with an electric rotary drill. Impact tools shall not be used for drilling holes or tightening anchor and shear bolt nuts.
4. Allowable bolt and dowel values specified are for installations in minimum three wythe walls. For installations in two wythe walls, use 50 percent of the value specified, except that no value shall be given to tension bolts that do not extend entirely through the wall and are secured with bearing plates on the far side.

Reason: This Administrative amendment is to be consistent with the State of California Code.

TABLE NO. 88-L
ALLOWABLE VALUES OF NEW MATERIALS USED IN CONJUNCTION WITH EXISTING CONSTRUCTION

NEW MATERIALS OR CONFIGURATION OF ALLOWABLE VALUES	NEW AND EXISTING MATERIALS [1]
1. HORIZONTAL DIAPHRAGMS	
Plywood sheathing applied directly over existing straight sheathing with ends of plywood sheets bearing on joists or rafters and edges of plywood located on center of individual sheathing boards.	225 lbs. per foot for seismic shear.
2. CROSS WALLS [2, 3]	
a. Plywood sheathing applied directly over existing wood studs. No value shall be given to plywood applied over existing plaster or wood sheathing.	1.33 times the values specified in CBC Table ~~2306.4.1~~ 2306.3 for shear walls.
b. Drywall or plaster applied directly over existing wood studs.	100 percent of the values specified in CBC Table ~~2306.4.5~~ 2306.7.

1. Materials must be sound and in good condition.
2. For cross walls, values of all materials may be combined, except the total combined value shall not exceed 300 lbs. per foot for seismic shear.
3. The cross wall aspect ratio for drywall, plaster and gypsum wall board shall be a maximum height to width ratio of 1:1, and for plywood shall be a maximum height to width ratio of 2:1.

Reason: This Administrative amendment is to be consistent with the State of California Code.

Sec. 28. Division 89 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

91.8903.1.6. Removal of Utilities. Utility connections of electricity and gas shall be removed from buildings within the scope of Section 91.8903.1.4 by the appropriate utility agency and shall not be reconnected until clearance is obtained from the department.

Reason: This Administrative amendment consolidates authority granted by provisions of Article 3 of this chapter directly into this division. The following two subsections were renumbered to restore sequence.

~~91.8903.1.6.~~ 91.8903.1.7. **Recordation.** At the time that the Department serves the order described in Section 91.8903.1, the Department shall file with the Office of the County Recorder a certificate stating that the subject building has been determined to be either a hazardous building, a substandard residential building, or a nuisance, that it has been ordered repaired or demolished, and that the owner thereof has been so notified.

After the building has been repaired or demolished, the Department shall file with the Office of the County Recorder a certificate terminating the above recorded status of the subject building.

~~91.8903.1.7.~~ 91.8903.1.8. **Manner of Giving Notice.** The orders described in this section shall be given in writing and may be given either by personal delivery thereof to the person to be notified or by deposit in the United States mail in a sealed envelope, postage prepaid, addressed to such person to be notified at the address as shown on the last equalized assessment roll. Service by mail shall be deemed to have been completed at the time of deposit in the post office. The failure of any owner or other person to receive such notice shall not affect in any manner the validity of any of the proceedings taken thereunder. Proof of giving any notice may be made by an affidavit of any employee of the City which shows service in conformity with this section.

91.8903.2.4. No person shall enter, occupy or be present in a building which has been posted by the Department pursuant to this section. Any person who enters, occupies or is present in a building which has been posted by the Department pursuant to this section shall be guilty of a misdemeanor. This prohibition shall not apply to public officers or public employees acting within the course and scope of their employment or in the performance of their official duties; or owners, persons acting with the consent of the building owner, the owner's agent, or person in lawful possession acting in the course of complying with an order issued pursuant to the provisions of this chapter.

Notwithstanding any other provision of the Los Angeles Municipal Code to the contrary, a police officer with the Los Angeles Police Department shall have the authority to enter any building posted by the Department pursuant to this section, and arrest anyone present in violation of this section.

Reason: This Administrative amendment integrates "intent to the code" to facilitate interpretation for enforcement.

91.8906.2. Collection of Repair and Demolition Costs. Whenever the Department has caused the repair, securing, cleaning or demolition of any building, structure, or portion of a building, structure or any premises, all costs incurred under the provisions of this division of this Code shall be a personal obligation against the property owner or responsible interested parties in charge or control of the property, recoverable by the City in an action before any court of competent jurisdiction. These costs shall include an amount equal to 40 percent of the cost to perform the actual work, but not less than the sum of $100.00, to cover the City's costs for administering any contract and supervising the work required. In addition to this personal obligation and all other remedies provided by law, the City may collect any judgment, fee, cost, or charge, including any permit fees, fines, late charges, or interest, incurred in relation to the

provisions of this section as provided in Los Angeles Administrative Code Sections 7.35.1 through 7.35.8.

Reason: This Administrative amendment improves consistency with Section 8903 of this division.

Sec. 29. Division 91 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

91.9108.2. Special Requirements for Wall Anchors and Continuity Ties. The steel elements of the wall anchorage systems and continuity ties shall be designed by the allowable stress design method using a load factor of 1.7. The 1/3 stress increase permitted by CBC Section ~~12.4.3.3 of ASCE 7~~ 1605.3.1.1 shall not be permitted for materials using allowable stress design methods.

The strength design specified in CBC Section 1912, using a load factor of 2.0 in lieu of 1.4 for earthquake loading, shall be used for design of embedments in concrete.

Wall anchors shall be provided to resist out-of-plane forces, independent of existing shear anchors.

EXCEPTION: Existing cast-in-place shear anchors may be used as wall anchors if the tie element can be readily attached to the anchors and if the engineer or architect can establish tension values for the existing anchors through the use of approved as-built plans or testing, and through analysis showing that the bolts are capable of resisting the total shear load while being acted upon by the maximum tension force due to earthquake. Criteria for analysis and testing shall be determined by the Superintendent.

Expansion anchors are not allowed without special approval of the Superintendent. Attaching the edge of plywood sheathing to steel ledgers is not considered as complying with the positive anchoring requirements of the Code; and attaching the edge of steel decks to steel ledgers is not considered as providing the positive anchorage of this Code unless testing and/or analysis are performed, which establish shear values for the attachment perpendicular to the edge of the deck.
Reason: This Administrative amendment is to be consistent with the State of California Code.

91.9108.3. Development of Anchor Loads into the Diaphragm. Development of anchor loads into roof and floor diaphragms shall comply with Section 91.1615.4 and Section 12.11 of ASCE 7.

EXCEPTION: If continuously tied girders are present, then the maximum spacing of the continuity ties is the greater of the girder spacing or 24 feet (7315 mm).

In wood diaphragms, anchorage shall not be accomplished by use of toe nails or nails subject to withdrawal, nor shall wood ledgers, top plates or framing be used in cross-grain bending or

cross-grain tension. The continuous ties required by Section 91.1615.4 and Section 12.11 of ASCE 7 shall be in addition to the diaphragm sheathing.

Reason: This Administrative amendment is to be consistent with the State of California Code.

Sec. 30. Section 91.9408.3 of the Los Angeles Municipal Code is amended to read.:

91.9408.3. Structural Observation by the Engineer or Architect of Record. The owner shall employ the engineer or architect of record, or other engineer or architect designated by the engineer or architect of record, to perform structural observations as required by CBC Section ~~1709~~ 1710.

REASON: This Administrative amendment is to be consistent with the State of California Code.

Sec. 31. Section 91.9510.2 of the Los Angeles Municipal Code is amended to read.:

91.9510.2. Base Shear for Analysis. The base shear used to determine story drifts shall be determined using 75 percent of that currently required by Section 12.8.1 of the ASCE 7.

WHERE:

R = 1.4 for concrete frame buildings with masonry infill and all other reinforced concrete buildings.

EXCEPTION: $R = 1.0$ for single story buildings.

The R value in ~~Table 16-N 12.2-1~~ Table 12.2.1 of ASCE 7 of this Code for new building design shall not be used for story drift determination.

Reason: Administrative amendment is to be consistent with the State of California Code. Incorrect table number.

91.9510.4. Vertical Distribution of Forces. The base shear shall be distributed over the height of the structure in conformance with Formula (10-1).

$$C_{vx} = \frac{w_x h_x^k}{\sum_{i=n} w_i h_i^k} \qquad C_{vx} = \frac{w_x h_x^k}{\sum_{i=1}^{n} w_i h_i^k} \qquad (10\text{-}1)$$

WHERE:

C_{vx} = vertical distribution factor to be applied to V to obtain the story force at level x.

k = an exponent related to building period as follows:

For buildings having a period of 0.5 seconds or less, $k = 1.0$

For buildings having a period of 2.5 seconds or more, $k = 2.0$

For buildings having a period between 0.5 and 2.5 seconds, k may be taken as two or determined by linear interpolation between one and two.

Reason: Typo. Incorrect way to show mathematical symbol.

Sec. 32. Division 96 of Article 1 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 91.9603. DEFINITIONS.

REINFORCED MASONRY WALL is a masonry wall that has 50 percent or more of the reinforcing steel required by ~~Item~~ Section 2.3 or Section 3.3 of ~~CBC Section 2106.4~~ ACI 530-05/ASCE 5-05/TMS 402-05 (MSJC).

Reason: Revise the referenced section code from Chapter 21 to MSJC. Reference both section code of allowable stress design and strength design.

91.9604.1. Wall Panel Anchorage. Concrete and masonry walls shall be anchored to all floors and roofs which provide lateral support for the wall. The anchorage shall provide a positive direct connection between the wall and floor or roof construction capable of resisting a horizontal force equal to 30 percent of the tributary wall weight for all buildings, and 45 percent of the tributary wall weight for essential buildings, or a minimum force of 250 pounds per linear foot of wall, whichever is greater.

EXCEPTION: Using 75 percent of the design force as specified in Section 12.11 of ASCE 7 and completely in compliance with all the requirements as specified in that Section is considered equivalent to the requirements specified in this section and Section91. 9604.2.

Reason: Provide an option to allow engineers to use the latest seismic design criteria per ASCE 7. To use 75% of the design load under 2006 IBC will still be in the higher demand than the 1997 UBC for the steel design, and for the bolt design in concrete (discussed with David Chang).

The required anchorage shall be based on the tributary wall panel assuming simple supports at floors and roof.

EXCEPTION: An alternate design may be approved by the Superintendent of Building when justified by well established principles of mechanics.

91.9604.2. Special Requirements for Wall Anchors and Continuity Ties. The steel elements of the wall anchorage systems and continuity ties shall be designed by the allowable stress design method using a load factor of 1.7. The 1/3 stress increase permitted by CBC Section ~~1605.3.2~~ 1605.3.1.1 shall not be permitted for materials using allowable stress design methods.

The strength design specified in CBC Section ~~1912.1~~ 1912, using a load factor of 2.0 in lieu of 1.4 for earthquake loading, shall be used for the design of embedment in concrete.

Wall anchors shall be provided to resist out-of-plane forces, independent of existing shear anchors.

EXCEPTION: Existing cast-in-place shear anchors may be used as wall anchors if the tie element can be readily attached to the anchors and if the engineer or architect can establish tension values for the existing anchors through the use of approved as-built plans or testing, and through analysis showing that the bolts are capable of resisting the total shear load while being acted upon by the maximum tension force due to seismic loading. Criteria for analysis and testing shall be determined by the Superintendent of Building.

Expansion anchors are not allowed without special approval of the Superintendent of Building. Attaching the edge of plywood sheathing to steel ledgers is not considered as complying with the positive anchoring requirements of the Code; and attaching the edge of steel decks to steel ledgers is not considered as providing the positive anchorage of this Code unless testing and analysis are performed, which establish shear values for the attachment perpendicular to the edge of the deck.

Reason: Administrative amendment is to be consistent with the State of California Code.

91.9604.3. Development of Anchor Loads into the Diaphragm. Development of anchor loads into roof and floor diaphragms shall comply with Section 91.1615.4 and Section 12.11~~.2.2.3~~ of ASCE 7.

EXCEPTION: If continuously tied girders are present, then the maximum spacing of the continuity ties is the greater of the girder spacing or 24 feet (7315 mm).

In wood diaphragms, anchorage shall not be accomplished by use of toe nails or nails subject to withdrawal, nor shall wood ledgers, top plates or framing be used in cross-grain bending or cross-grain tension. The continuous ties required by Section 91.1615.4 and Section 12.11~~.2.2.3~~ of ASCE 7 shall be in addition to the diaphragm sheathing.

Lengths of development of anchor loads in wood diaphragms shall be based on existing field nailing of the sheathing unless existing edge nailing is positively identified on the original construction plans or at the site.

At reentrant corners, continuity collectors may be required for existing return walls not designed as shear walls, to develop into the diaphragm a force equal to the lesser of the rocking or shear capacity of the return wall, or the tributary shear but not exceeding the capacity of the diaphragm. Shear anchors for the return wall shall be commensurate with the collector force. If a truss or beam other than rafters or purlins is supported by the return wall or by a column

integral with the return wall, an independent secondary column is required to support the roof or floor members whenever rocking or shear capacity of the return wall is governing.

Reason: Administrative amendment is to be consistent with the State of California Code.

Sec. 33. The first and second unnumbered paragraphs of Subdivision 2 of Subsection (a) of Section 98.0403.2 of the Municipal Code are amended to read:

2. An appeal processing fee of $130.00 for the first item and $39.00 for each additional item shall be paid by the appellant prior to the Department processing the appeal and making a determination.

In addition to the appeal processing fee required by this subdivision, an inspection fee of $84.00 per inspection shall be paid by the appellant when, in the opinion of the Department, the appeal requires a field inspections to verify site conditions. Miscellaneous Fees as provided for in Section 98.0415 (f) may be collected to prepare a written report.

Sec. 34. Subdivision 5 of Subsection (b) of Section 98.0403.2 of the Municipal Code are amended to read:

5. In addition to any other appeal fees required by this subsection, each appeal shall be accompanied by an inspection fee of ~~$65.00~~ 84.00 per inspection when, in the opinion of the Department, the appeal requires a field inspections to verify site conditions. The Department may charge an additional inspection fee as specified in Section 98.0412(a) for each inspection necessary to verify compliance with the conditions established by the Board in any approval or conditional approval.

Sec. 35. Subdivision 6 of Subsection (b) of Section 98.0403of the Municipal Code is added to read:

6. Miscellaneous Fees as provided for in Section 98.0415 (f) may be collected to prepare a written report.

Sec. 36. Table 4-A immediately following Section 98.0403.2 of Division 4 of Article 8 of Chapter IX of the Los Angeles Municipal Code is amended to read:

TABLE NO. 4-A
FILING FEES* FOR APPEALS

Group Occupancy	FIRST ITEM FOR SINGLE BUILDING TYPE OF BUILDING**				Each Additional Item
	V	IV	III	I & II	
R-3 & U	$215.00	$215.00	$215.00	$215.00	$76.00
All Others	354.00	354.00	354.00	632.00	215.00
All other filing fees not covered in the above schedule including appeals pursuant to Los Angeles Municipal Code Section ~~12.26k~~ 12.26, shall be $500.00 for the first item and $150.00 for each additional item.					

* See Section 91.105.4 for fees for referral to the Sign Advisory Committee.

** Accessory building, structures or appendages will be considered the same as main building and occupancy.

TABLE NO 4-B
FILING FEES* FOR APPEALS GRADING AND SOIL REQUIREMENTS

Number of Lots	Construction Requirements	Unstable Soil of Geology	Each Additional Item
1-5 Lots	$280	$480	$115
6 or more lots	580	880	280

* See Section 91.105.3 for fees for referrals to the Engineering Geology Advisory Committee.

Sec. 37. 98.0415 of Division 4 of Article 8 of Chapter IX of the Los Angeles Municipal Code is amended to read:

SEC. 98.0415. CLERICAL, ISSUING OR RESEARCH FEES AND MISCELLANEOUS FEES.

The Department may collect a fee from the applicant or appellant for the following types of services:

(a) Correction of address for permit $34.00

(b) Transfer of name of permittee to any other person	48.00
(c) Permit issuing fee for:	
Electrical, plumbing, mechanical and elevator permits	23.00
Building permits	27.00
(d) Supplementary permit issuing fee	19.00
(e) Supplementary or preliminary plan check or study fee	$104.00 per staff hour or portion thereof
(f) Fee for report*	$104.00 per staff hour or portion thereof

* A minimum fee of $104.00 shall be payable when a request for a written report on a property or code item is made and any balance shall be due prior to the release of the report. Written reports for which this fee is applicable shall include, but not limited to, interpretation of the public records for the property (document research), termination of covenants and agreements, written interpretation or request for modification of the codes (municipal and/or other codes and regulations), and issuance of reports seeking the status of code violations, permitted use, etc. of a property or other similar purposes.

ORDINANCE NO. _____

An ordinance amending the Los Angeles Municipal Code and incorporating by reference the portions of the 2009 International Residential Code and the 2010 Edition of the California Residential Code (CRC)and further adopt all the current amendments of the Article 1 of Chapter IX of the Los Angeles Municipal Code except for the following changes.

THE PEOPLE OF THE CITY OF LOS ANGELES

DO ORDAIN AS FOLLOWS:

Section 1. Chapter 1 of the CRC is not adopted, in lieu thereof Division 1 of Article 1 of Chapter 1 is adopted by reference.

Sec. 2. Chapter 2 of the CRC is hereby adopted by reference with the following amendments.

SECTION 91.R201General.

91.R201.4 Terms not defined. ~~Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies~~ Webster's Third New California Dictionary of the English Language, Unabridged, shall be considered as providing ordinarily accepted meanings.

SECTION 91.R202 Definitions.

~~ATTIC, HABITABLE. A finished or unfinished area, not considered a story, complying with all of the following requirements:~~

~~1. The occupiable floor area is at least 70 square feet (17 m2), in accordance with Section R304,~~
~~2. The occupiable floor area has a ceiling height in accordance with Section R305, and~~
~~3. The occupiable space is enclosed by the roof assembly above, knee walls (if applicable) on the sides and the floor-ceiling assembly below.~~

BUILDING OFFICIAL. The ~~officer or other designated authority charged with the administration and enforcement of this code~~ Superintendent of Building.

~~FAMILY. An individual or two or more persons who are related by blood or marriage; or otherwise, live together in a dwelling unit.~~

LOT. ~~A portion or parcel of land considered as a unit.~~

Sec. 3. Chapter 3 of the C.R.C is hereby adopted by reference with the following exceptions: Section R301.1.3.2, R301.1.4, R301.2.2.2.5, R311.4, and R322.1.4.1 are not adopted and in lieu thereof Sections 91.R301.1.3.2, 91.R301.1.4, 91.R301.2.2.2.5, 91.R301.2.2.3.5.1, 91.R311.4, and 91.R322.1.4.1 are added as provided.

91.R301.1.3.2 Woodframe structures ~~greater than two-stories~~. The building official shall require construction documents to be approved and stamped by a California licensed architect or engineer for all dwellings of woodframe construction more than two stories and basement in height located in Seismic Design Category A, B, or C. Notwithstanding other sections of law, the law establishing these provisions is found in Business and Professions Code Section 5537 and 6737.1.

The building official shall require construction documents to be approved and stamped by a California licensed architect or engineer for all dwellings of woodframe construction more than one story in height located in Seismic Design Category D_0, D_1, D_2, or E.

Reasons:
After the 1994 Northridge Earthquake, the Wood Frame Construction Joint Task Force recommended that the quality of wood frame construction needed to be greatly improved. One such recommendation identified by the Task Force is to improve the quality and organization of structural plans prepared by the engineer or architect so that plan examiners, building inspectors, contractors and special inspectors may logically follow and construct the presentation of the seismic force-resisting systems in the construction documents. For buildings or structures located in Seismic Design Category D_0, D_1, D_2 or E that are subject to a greater level of seismic forces, the requirement to have a California licensed architect or engineer prepare the construction documents is intended to minimize or reduce structural deficiencies that may cause excessive damage or injuries in wood frame buildings. Structural deficiencies such as plan and vertical irregularities, improper shear transfer of the seismic force-resisting system, missed details or connections important to the structural system, and the improper application of the prescriptive requirements of the California Residential Code can be readily addressed by a registered design professional.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to require construction documents for wood frame construction greater than one story in height to be approved and stamped by a California licensed architect or engineer is intended to assure that both the structural design and prescriptive requirement of the code are properly utilized and presented and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

91.R301.1.4 Seismic Design Provisions for Buildings Constructed On Or Into Slopes Steeper Than One Unit Vertical In Three Units Horizontal (33.3 Percent Slope).

The design and construction of new buildings and additions to existing buildings when constructed on or into slopes steeper than one unit vertical in three units horizontal (33.3percent slope) shall comply with 91.1613.15 of the Los Angeles Municipal Code.

Reasons:
This technical amendment is for buildings constructed on hillsides. Due to the local topographical and geological conditions of the sites within the Los Angeles/Long Beach region and their probabilities for earthquakes, this amendment is required to address and clarify special needs for buildings constructed on the hillside locations. A joint Structural Engineers Association of Southern California (SEAOSC), Los Angeles County and Los Angeles City Task Force investigated the performance of hillside building failures after the Northridge earthquake. Numerous hillside failures resulted in loss of life and millions of dollars in damage. These criteria were developed to minimize the damage to these structures and have been in use by the City of LA for several years.

FINDINGS:
Local Topographical and Geological Conditions – The greater Los Angeles/Long Beach region is a densely populated area having buildings constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification addresses special design criteria for hillside buildings that are not addressed in the California Residential Code and therefore need to be incorporated into the code to assure that new buildings and additions to existing buildings are designed and constructed in accordance with the scope and objectives of the International Residential Code.

91.R301.2.2.2.5 Irregular buildings. Prescriptive construction as regulated by this code shall not be used for irregular structures located in Seismic Design Categories C, D_0, D_1 and D_2. Irregular portions of structures shall be designed in accordance with accepted engineering practice to the extent the irregular features affect the performance of the remaining structural system. When the forces associated with the irregularity are resisted by a structural system designed in accordance with accepted engineering practice, design of the remainder of the building shall be permitted using the provisions of this code. A building or portion of a building shall be considered to be irregular when one or more of the following conditions occur:

1. When exterior shear wall lines or *braced wall panels* are not in one plane vertically from the foundation to the uppermost *story* in which they are required.

~~**Exception:** For wood light-frame construction, floors with cantilevers or setbacks not exceeding four times the nominal depth of the wood floor joists are permitted to support *braced wall panels* below provided that:~~

~~1. Floor joists are nominal 2 inches by 10 inches (51 mm by 254 mm) or larger~~

and spaced not more than 16 inches (406 mm) on center.
2. The ratio of the back span to the cantilever is at least 2 to 1.
3. Floor joists at ends of *braced wall panels* are doubled.
4. For wood-frame construction, a continuous rim joist is connected to ends of all cantilever joists. When spliced, the rim joists shall be spliced using a galvanized metal tie not less than 0.058 inch (1.5 mm) (16 gage) and 1 1/2 inches (38 mm) wide fastened with six 16d nails on each side of the splice or a block of the same size as the rim joist of sufficient length to fit securely between the joist space at which the splice occurs fastened with eight 16d nails on each side of the splice; and
5. Gravity loads carried at the end of cantilevered joists are limited to uniform wall and roof loads and the reactions from headers having a span of 8 feet (2438 mm) or less.

2. When a section of floor or roof is not laterally supported by shear walls or *braced wall lines* on all edges.

Exception: Portions of floors that do not support shear walls or *braced wall panels* above, or roofs, shall be permitted to extend no more than 6 feet (1829 mm) beyond a shear wall or *braced wall line*.

3. When the end of a *braced wall panel* occurs over an opening in the wall below and ends at a horizontal distance greater than 1 foot (305 mm) from the edge of the opening. This provision is applicable to shear walls and *braced wall panels* offset in plane and to *braced wall panels* offset out of plane as permitted by the exception to Item 1 above.

Exception: For wood light-frame wall construction, one end of a *braced wall panel* shall be permitted to extend more than 1 foot (305 mm) over an opening not more than 8 feet (2438 mm) wide in the wall below provided that the opening includes a header in accordance with the following:

1. The building width, loading condition and framing member species limitations of Table R502.5(1) shall apply; and
2. Not less than one 2 - 12 or two 2 - 10 for an opening not more than 4 feet (1219 mm) wide; or
3. Not less than two 2 - 12 or three 2 - 10 for an opening not more than 6 feet (1829 mm) wide; or
4. Not less than three 2 - 12 or four 2 - 10 for an opening not more than 8 feet (2438 mm) wide; and
5. The entire length of the *braced wall panel* does not occur over an opening in the wall below.

4. When an opening in a floor or roof exceeds the lesser of 12 feet (3658 mm) or 50 percent of the least floor or roof dimension.

5. When portions of a floor level are vertically offset.

Exceptions:

1. Framing supported directly by continuous foundations at the perimeter of

~~the building.~~

~~2. For wood light-frame construction, floors shall be permitted to be vertically offset when the floor framing is lapped or tied together as required by Section R502.6.1.~~

6. When shear walls and *braced wall lines* do not occur in two perpendicular directions.

7. When stories above-*grade* partially or completely braced by wood wall framing in accordance with Section R602 or steel wall framing in accordance with Section R603 include masonry or concrete construction.

Exception: Fireplaces, chimneys and masonry veneer as permitted by this code. When this irregularity applies, the entire *story* shall be designed in accordance with accepted engineering practice.

REASON:
Due to the high geologic activities in the Southern California Area and the expected higher level of performance on buildings and structures, this local amendment limits the type of irregular conditions as specified by in the 2009 International Residential Code. Such limitations are recommended to reduce structural damages in the event of an earthquake. The cities and counties of the Los Angeles region has taken extra measures to maintain the structural integrity of the framing of the shear walls and all associated elements when designed for high levels of seismic loads.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge earthquake. The proposed amendments needed to be incorporated into the Code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Building Code and consistent with the recent requirements in ASCE 7-05.

91.R301.2.2.3.5.1 AISI S230, Section B1. Modify AISI S230, Section B1 to read as follows:

Where No. 8 screws are specified, the required number of screws in a steel-to-steel connection shall be permitted to be reduced in accordance with the reduction factors in Table B1-1, when larger screws are used or when sheets of steel are being connected and are thicker than 33 mils (0.84mm). When applying the reduction factor, the resulting number of screws shall be rounded up.

REASON:
The term "one" conflicts with Table B1-1, whereas in the table it states the "thinnest connected steel sheet". The term "one" in the code language can be misleadingly interpreted as though one of the sheets can be 33 mils and the other sheet thicker, but that you still qualify for a reduction factor; this is not the intent of the tables.

FINDINGS
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake, or soils conditions that may cause liquefaction conditions. The proposed modification to clarify that the steel sheets need to be thicker than 33 mils to qualify for the reduction factors, need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Code.

91.R311.4 Vertical egress. Egress from habitable levels including habitable attics and *basements* not provided with an egress door in accordance with Section R311.2 shall be by ~~a~~ one or more ramps in accordance with Section R311.8 or ~~a~~ one or more stairways in accordance with Section R311.7~~,~~ or both. Habitable levels more than 500 square feet (46.45 m^2) located more than one story above or below an egress door shall be provided with not less than two means of egress.

RATIONALE:
This amendment ensures safety for occupants during an emergency. Without this amendment, a structure with a third level that is not restricted in area would only be required to have one exit and as such, will pose a great hazard to its occupant in case the fire is in the area where the exit is located. This amendment was initially proposed by State Fire Marshal and is line with language in previous code editions.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake, or soils conditions that may cause liquefaction. The proposed modification to limit the area of levels located more than story above or below an egress door to 500 square feet when provided with only one exit will ensure safety of occupants during an emergency and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

91.R322.1.4.1 Determination of Design Flood Elevations.

If design flood elevations are not specified, the *building official* is authorized to require the applicant to:

1. Obtain and reasonably use data available from a federal, state or other source; or
2. Determine the design flood elevation in accordance with accepted hydrologic and hydraulic engineering practices used to define special flood hazard areas. Determinations shall be undertaken by a registered ~~*design professional*~~ civil engineer who shall document that the technical methods used reflect currently accepted engineering practice. Studies, analyses and computations shall be submitted in sufficient detail to allow thorough review and approval.

REASON:
This amendment is intended to clarify who should perform studies and analyses for design flood elevations. Based on our vast experience with drainage and grading sites, we have concluded that registered civil engineers are highly equipped to perform such design and analyses.

FINDINGS:
Local Topographical and Geologic Conditions – The greater Los Angeles region affected by both natural and man-made topographic conditions, such as, steep hillsides conditions where dry brush may cause brush fires and are fanned by strong concentrated winds caused by steep ravines and valley areas of the hillsides, or when it rains, mudflow or landslides caused by steep bare (no vegetation) slopes. Man-made topography may include very densly populated area or areas of many high rise buildings (like Century City, Wilshire corridor, Westwood, or Downtown LA) specifically require a civil engineer to perform design and analyses needs to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

Sec. 4. Chapter 4 of the C.R.C is hereby adopted by reference with the following exceptions: Section R401.1, R403.1.2, R403.1.3, R403.1.5, and R404.2 are not adopted and in

lieu thereof Sections 91.R401.1, 91.R403.1.2, 91.R403.1.3, 91.R403.1.5, 91.R404.2 and Figure 91.403.1.5 and are added as provided.

91.R401.1 Application. The provisions of this chapter shall control the design and construction of the foundation and foundation spaces for all buildings. In addition to the provisions of this chapter, the design and construction of foundations in areas prone to flooding as established by Table R301.2(1) shall meet the provisions of Section R322. Wood foundations shall be designed and installed in accordance with AF&PA PWF.

> **Exception: T**he provisions of this chapter shall be permitted to be used for wood foundations only in the following situations:
>
> 1. In buildings that have no more than two floors and a roof.
>
> 2. When interior *basement* and foundation walls are constructed at intervals not exceeding 50 feet (15 240 mm).
>
> Wood foundations in Seismic Design Category D_0, $D_{1,}$ or D_2 shall ~~be designed in accordance with accepted engineering practice~~ not be permitted.
>
> Exception: In non-occupied, single-story, detached storage sheds and similar uses other than carport or garage, provided the gross floor area does not exceed 200 square feet, the plate height does not exceed 12 feet in height above the grade at any point, and the maximum roof projection does not exceed 24 inches.

Reasons:

RATIONALE:
Wood foundations, even those that are preservative-treated, encounter a higher risk of deterioration when contacting the adjacent ground. The required seismic anchorage and transfer of lateral forces into the foundation system for 2-story structures and foundation walls could become compromised at varying states of wood decay. In addition, global structure overturning moment and sliding resistance is reduced when utilizing wood foundations as opposed to conventional concrete or masonry systems.

However, non-occupied, single story storage structures pose significantly less risk to human safety and should be able to utilize wood foundation guidelines specified in this chapter.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated are having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake, The proposed amendment is consistent with past local code limitations in the use of wood foundations in habitable structures.

91.R403.1.2 Continuous footing in Seismic Design Categories D_0, $D_{1,}$ and D_2. The *braced wall panels* at exterior walls of buildings located in Seismic Design Categories D_0, $D_{1,}$ and D_2

shall be supported by continuous footings. All required interior *braced wall panels* in buildings ~~with plan dimensions greater than 50 feet (15 240 mm)~~ shall also be supported by continuous footings.

91.R403.1.3 Seismic reinforcing. Concrete footings located in Seismic Design Categories D_0, D_1, and D_2, as established in Table R301.2(1), shall have minimum reinforcement. Bottom reinforcement shall be located a minimum of 3 inches (76 mm) clear from the bottom of the footing.

In Seismic Design Categories D_0, D_1, and D_2 where a construction joint is created between a concrete footing and a stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing, have a standard hook and extend a minimum of 14 inches (357 mm) into the stem wall.

In Seismic Design Categories D_0, D_1, and D_2 where a grouted masonry stem wall is supported on a concrete footing and stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing and have a standard hook.

In Seismic Design Categories D_0, D_1, and D_2 masonry stem walls without solid grout and vertical reinforcing are not permitted.

> **Exception:** In detached one- and two-family *dwellings* <u>located in Seismic Design Category A, B, or C</u> which are three stories or less in height and constructed with stud bearing walls, plain concrete footings without longitudinal reinforcement supporting walls and isolated plain concrete footings supporting columns or pedestals are permitted.

91.R403.1.5 Slope. The top surface of footings shall be level. The bottom surface of footings shall not have a slope exceeding one unit vertical in 10 units horizontal (10-percent slope). Footings shall be stepped where it is necessary to change the elevation of the top surface of the footings or where the slope of the bottom surface of the footings will exceed one unit vertical in ten units horizontal (10-percent slope).

> <u>For structures located in Seismic Design Categories D_0, D_1, and D_2, or E, stepped footings shall be reinforced with four ½-inch diameter (12.7 mm) deformed reinforcing bars. Two bars shall be placed at the top and bottom of the footing as shown in figure 91.R403.1.5.</u>

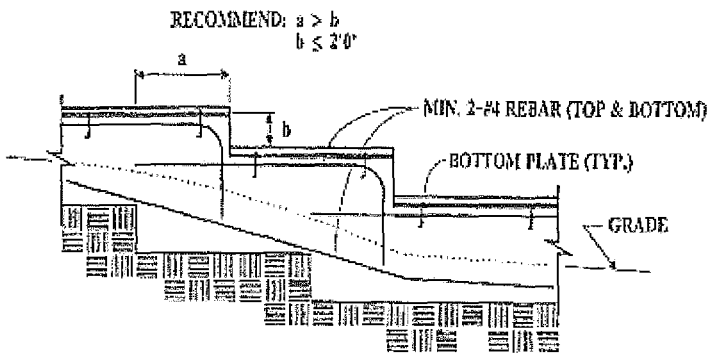


FIGURE 91.R403.1.5
STEPPED FOOTING

REASON:
This proposed amendment requires minimum reinforcement in continuous footings and stepped footings to address the problem of poor performance of plain or under-reinforced footings during a seismic event. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance observed in 1994 Northridge Earthquake. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.

Interior walls can easily be called upon to resist over half of the seismic loading imposed on simple buildings or structures. Without a continuous foundation to support the braced wall line, seismic loads would be transferred through other elements such as non-structural concrete slab floors, wood floors, etc. Requiring interior braced walls be supported by continuous foundations is intended to reduce or eliminate the poor performance of buildings or structures.

FINDINGS:
Local Climatic and Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. In addition, the region is within a climate system capable of producing major winds, fire and rain related disasters, including but not limited to those caused by the Santa Ana winds and El Nino (or La Nina) subtropical-like weather. The proposed modification to prohibit the use of wood foundations and crushed stone footings, requiring minimum reinforcement in the footings, and providing continuous footing under braced wall line will improve the performance of the structures and minimize potential problems or deficiencies and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

91.R404.2 Wood foundation walls. Wood foundation walls shall be constructed in accordance with the provisions of Sections R404.2.1 through R404.2.6 and with the details shown in Figures R403.1(2) and R403.2(3). Wood foundation walls shall not be used for structures located in Seismic Design Category D_0, D_1, or D_2.

REASON:
No substantiating data has been provided to show that wood foundations is effective in supporting structures and buildings during a seismic event while being subject to deterioration caused by presence of water in the soil as well as other materials detrimental to wood foundations. Wood foundations, when they are not properly treated and protected against deterioration, have performed very poorly and have led to slope failures. Most contractors are typically accustomed to construction in dry weather in the Southern California region and are not generally familiar with the necessary precautions and treatment of wood that makes it suitable for both seismic event and wet applications. With the higher seismic demand placed on buildings and structures in this region, coupled with the dryer weather conditions here as oppose to the northern and eastern part of the country, it is the intent of this proposal to take the necessary precautionary steps to reduce or eliminate potential problems that may result from the use of wood footings and foundations that does not take into consideration the conditions of this surrounding environment.

FINDINGS:
Local Climatic and Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. In addition, the region is within a climate system capable of producing major winds, fire and rain related disasters, including but not limited to those caused by the Santa Ana winds and El Nino (or La Nina) subtropical-like weather. This region is especially susceptible to more active termite and wood attacking insects and microorganisms. The proposed modification to prohibit the use of wood for foundation support or retaining earth lateral pressure as well as limit prescriptive design provisions in an effort to mitigate potential problems or deficiencies due to the surrounding environment and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

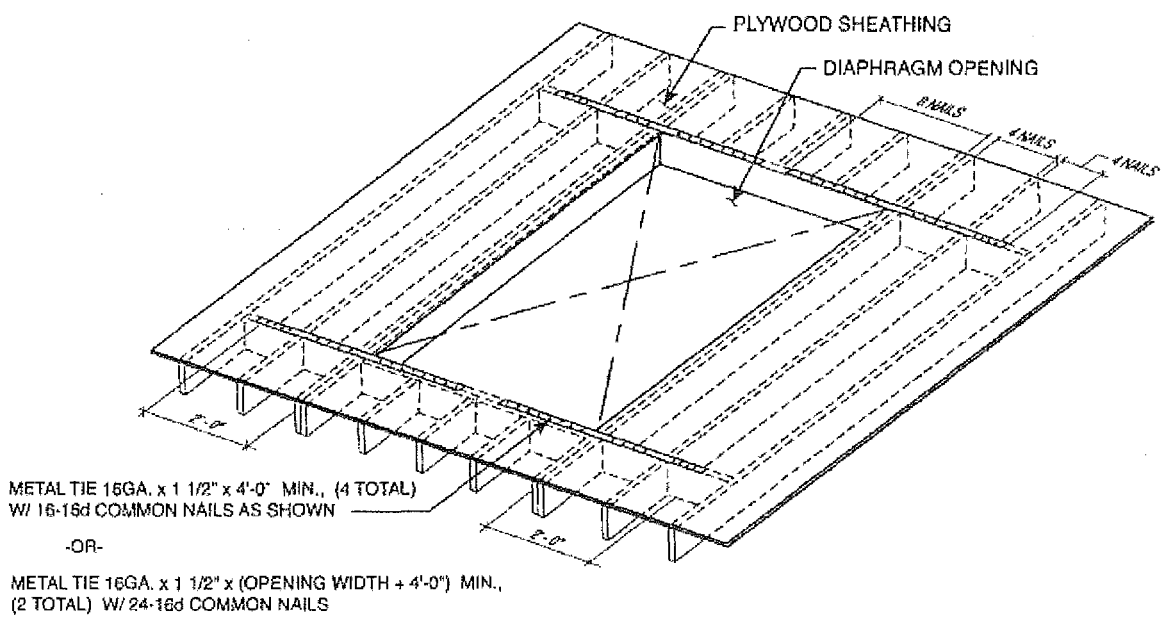
Sec. 5. Chapter 5 of the C.R.C is hereby adopted by reference with the following exception: Section R501.1 is not adopted, in lieu Section 91.R501.1, 91.503.2.4, and Figure 91.R503.2.4 are added as provided.

91.R501.1 Application. The provision of this chapter shall control the design and construction of the floors for all buildings including the floors of attic spaces used to house mechanical or plumbing fixtures and equipment weighing less than 400 lbs and maximum height of 4 feet above the floor or attic level.

REASON:
There is no limitation for weight of mechanical and plumbing fixtures and equipments in the CRC Code. Requirements of ASCE 7-05 and CBC are necessary that limits equipment weight up to 400lb, mounted at 4 feet or less above the floor or attic level without engineering design.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

91.R503.2.4 Openings in horizontal diaphragms. Openings in horizontal diaphragms with a dimension perpendicular to the joist that is greater than 4 feet (1.2 m) shall be constructed in accordance with Figure 91.R503.2.4.



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. Blockings shall be provided beyond headers.
b. Metal ties not less than 0.058 inch [1.47 mm (16 galvanized gage)] by 1.5 inches (38 mm) wide with eight 16d common nails on each side of the header-joist intersection. The metal ties shall have a minimum yield of 33,000 psi (227 MPa).
c. Openings in diaphragms shall be further limited in accordance with Section R301.2.2.2.5.

Figure 91.R503.2.4

REASON:
Limited cyclic testing of wood structural panels connected to wood stud walls using staples resulted in poor performance of the lateral force resisting system. Section R804.1 is proposed to limit the use of staples unless substantiated by cycle testing and approved by the building official. Section R804.2 is proposed to provide steel straps at corners of openings in the roof diaphragm. The steel straps help distribute the concentrated loads at the corners into the diaphragm.

FINDINGS:

Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed amendment needed to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Code.

Sec. 5. Chapter 6 of the C.R.C is hereby adopted by reference with the following exceptions: Table R602.3(1), Table R602.3(2), Table R602.10.1.2(2), Table R602.10.2, Figure R602.10.3.2, Figure R602.10.3.3, Section R602.10.3.3, Table R602.10.4.1, Figure R602.10.4.4.1, and Sections R602.10.7.1, R603.2.4, R606.2.4, and R606.12.2.2.3 are not adopted and is in lieu thereof Table 91.R602.3(1), Table 91.R602.3(2), Table 91.R602.10.1.2(2), Table 91.R602.10.2, Figure 91.R602.10.3.2, Figure 91.R602.10.3.3, Section 91.R602.10.3.3, Table 91.R602.10.4.1, Figure 91.R602.10.4.4.1, and Sections 91.R603.2.4, 91.R606.2.4, and 91.606.12.2.2.3 and are added as provided.

TABLE 91.R602.3(1)
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING ELEMENTS	NUMBER AND TYPE OF FASTENER [a, b, c]	SPACING OF FASTENERS
	Roof		
1	Blocking between joists or rafters to top plate, toe nail	3-8d (2 1/2" x 0.113")	—
2	Ceiling joists to plate, toe nail	3-8d (2 1/2" x 0.113")	—
3	Ceiling joists not attached to parallel rafter, laps over partitions, face nail	3-10d	—
4	Collar tie rafter, face nail or 1 ¼" 20 gage ridge strap	3-10d (3" x 0.128")	—
5	Rafter to plate, toe nail	2-16d (3 1/2" x 0.135")	—
6	Roof rafters to ridge, valley or hip rafters: toe nail face nail	4-16d (3 1/2" x 0.135") 3-16d (3 1/2" x 0.135")	— —
	Wall		
7	Built-up corner studs	10d (3" x 0.128")	24" o.c.
8	Built-up header, two pieces with 1/2" spacer	16d (3 1/2" x 0.135")	16" o.c. along each edge
9	Continued header, two pieces	16d (3 1/2" x 0.135")	16" o.c. along each edge
10	Continuous header to stud, toe nail	4-8d (2 1/2" x 0.113")	—
11	Double studs, face nail	10d (3" x 0.128")	24" o.c.
12	Double top plates, face nail	10d (3" x 0.128")	24" o.c.
13	Double top plates, minimum 48-inch offset of end joints, face nail in lapped area	8-16d (3 1/2" x 0.135")	—
14	Sole plate to joist or blocking, face nail	16d (3 1/2" x 0.135")	16" o.c.
15	Sole plate to joist or blocking at braced wall panels	3-16d (3 1/2" x 0.135")	16" o.c.
16	Stud to sole plate, toe nail	3-8d (2 1/2" x 0.113") or 2-16d (3 1/2" x 0.135")	— —
17	Top or sole plate to stud, end nail	2-16d (3 1/2" x 0.135")	—
18	Top plates, laps at corners and intersections, face nail	2-10d (3" x 0.128")	—
19	1" brace to each stud and plate, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 ¾"	— —
20	1" x 6" sheathing to each bearing, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 ¾"	— —
21	1" x 8" sheathing to each bearing, face nail	2-8d (2 1/2" x 0.113") 3 staples 1 ¾"	— —
22	Wider than 1" x 8" sheathing to each bearing, face nail	3-8d (2 1/2" x 0.113") 4 staples 1 ¾"	— —
	Floor		
23	Joist to sill or girder, toe nail	3-8d (2 1/2" x 0.113")	—
24	1" x 6" subfloor or less to each joist, face nail	2-8d (2 1/2" x 0.113") 2 staples 1 ¾"	— —
25	2" subfloor to joist or girder, blind and face nail	2-16d (3 1/2" x 0.135")	—
26	Rim joist to top plate, toe nail (roof applications also)	8d (2 1/2" x 0.113")	6" o.c.
27	2" planks (plank & beam – floor & roof)	2-16d (3 1/2" x 0.135")	at each bearing
28	Built-up girders and beams, 2-inch lumber layers	10d (3" x 0.128")	Nail each layer as follows: 32" o.c. at top and bottom and staggered. Two nails at ends and at each splice.
29	Ledger strip supporting joists or rafters	3-16d (3 1/2" x 0.135")	At each joist or rafter

(continued)

TABLE 91.R602.3(1)—continued
FASTENER SCHEDULE FOR STRUCTURAL MEMBERS

ITEM	DESCRIPTION OF BUILDING MATERIALS	DESCRIPTION OF FASTENER [b, c, e]	SPACING OF FASTENERS	
			Edges (inches)[f]	Intermediate Supports [c, e] (inches)
Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall sheathing to framing				
30	3/8" – ½"	6d common (2" x 0.113") nail (subfloor wall) [f] 8d common (2 ½" x 0.131") nail (roof)	6	12 [g]
31	5/16" – ½"	6d common (2" x 0.113") nail (subfloor wall) 8d common (2 ½" x 0.131") nail (roof) [f]	6	12 [g]
32	9/16" – 1"	8d common (2 ½" x 0.131")	6	12 [g]
33	1 1/8" – 1 ¼"	10d common (3" x 0.148") or 8d common (2 ½" x 0.131") deformed nail	6	12
Other wall sheathing [h]				
34	1/2_ structural cellulosic fiberboard sheathing	½" galvanized roofing nail, ~~7/16" crown or 1" crown staple 16 ga., 1 1/4" long~~	3	6
35	25/32_ structural cellulosic fiberboard sheathing	1 ¾" galvanized roofing nail, ~~7/16" crown or 1" crown staple 16 ga., 1 ½" long~~	3	6
36	1/2" gypsum sheathing [d]	1 ½" galvanized roofing nail; ~~staple galvanized, 1 ½" long;~~ 1 ¼" screws, Type W or S	7	7
37	5/8" gypsum sheathing [d]	1 ¾" glavanized roofing nail; ~~staple galvanized, 1 5/8" long;~~ 1 5/8" screws, Type W or S	7	7
Wood structural panels, combination subfloor underlayment to framing				
38	¾" and less	6d deformed (2" x 0.120") nail or 8d common (2 ½" x 0.131") nail	6	12
39	7/8" – 1"	8d common (2 ½" x 0.131") nail or 8d deformed (2 ½" x 0.120") nail	6	12
40	1 1/8" – 1 1/4"	10d common (3" x 0.148") nail or 8d deformed (2 ½" x 0.120") nail	6	12

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447 m/s; 1ksi = 6.895 MPa.

a. All nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.

b. Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.

c. Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches orgreater.

d. Four-foot-by-8-foot or 4-foot-by-9-foot panels shall be applied vertically.

e. Spacing of fasteners not included in this table shall be based on Table R602.3(2).

f. For regions having basic wind speed of 110 mph or greater, 8d deformed (2 ½" x 0.120") nails shall be used for attaching plywood and wood structural panel roof sheathing to framing within minimum 48-inch distance from gable end walls, if mean roof height is more than 25 feet, up to 35 feet maximum.

g. For regions having basic wind speed of 100 mph or less, nails for attachingwood structural panel roof sheathing to gable endwall framing shall be spaced 6 inches on center. When basic wind speed is greater than 100 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to gable end wall framing.

h. Gypsum sheathing shall conform to ASTM C 1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C 208.

i. Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at all floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking.

REASON:

In September 2007, limited cyclic testing data was provided to the ICC Los Angeles Chapter Structural Code Committee showing that stapled wood structural shear panels do not exhibit the same behavior as the nailed wood structural shear panels. As a matter of fact, the test results of the stapled wood structural shear panels appeared much lower in strength and drift than the nailed wood structural shear panel test results. Therefore, the use of staples as fasteners for shear walls sheathed with other materials shall not be permitted without being substantiated by cyclic

testing. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles for the California Building Code.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to place certain design and construction limits on structural wood panel shear walls thus resulting in improved quality of construction and performance of structures and therefore need to be incorporated into the code to assure that new buildings and additions to existing buildings are designed and constructed in accordance with the scope and objectives of the International Residential Code.

TABLE 91.R602.3(2)
ALTERNATE ATTACHMENTS

NOMINAL MATERIAL THICKNESS (inches)	DESCRIPTION[a, b] OF FASTENER AND LENGTH (inches)	SPACING[c] OF FASTENERS	
		Edges (inches)	Intermediate supports (inches)
Wood structural panels subfloor, roof and wall sheathing to framing and particleboard wall sheathing to framing[f]			
Up to ½	~~Staple 15 ga. 1 3/4~~	~~4~~	~~8~~
	0.097 – 0.099 Nail 2 ¼	3	6
	~~Staple 16 ga. 1 ¾~~	~~3~~	~~6~~
19/32 and 5/8	0.113 Nail 2	3	6
	~~Staple 15 and 16 ga. 2~~	~~4~~	~~8~~
	0.097 – 0.099 Nail 2 ¼	4	8
23/32 and ¾	~~Staple 14 ga. 2~~	~~4~~	~~8~~
	~~Staple 15 ga. 1 ¾~~	~~3~~	~~6~~
	0.097 – 0.099 Nail 2 ¼	4	8
	~~Staple 16 ga. 2~~	~~4~~	~~8~~
1	~~Staple 14 ga. 2 ¼~~	~~4~~	~~8~~
	0.113 Nail 2 ¼	3	6
	~~Staple 15 ga. 2 ¼~~	~~4~~	~~8~~
	0.097 - 0.099 Nail 2 1/2	4	8
NOMINAL MATERIAL THICKNESS (inches)	**DESCRIPTION [a,b] OF FASTENER AND LENGTH (inches)**	**SPACING[c] OF FASTENERS**	
		Edges (inches)	**Body of paneld (inches)**
Floor underlayment; plywood-hardboard-particleboard[f]			
Plywood			
¼ and 5/16	1 1/4 ring or screw shank nail—minimum 12 1/2 ga. (0.099□) shank diameter	3	6
	~~Staple 18 ga., 7/8, 3/16 crown width~~	~~2~~	~~5~~
11/32, 3/8, 15/32, and 1/2	1 1/4 ring or screw shank nail—minimum 12 1/2 ga. (0.099□) shank diameter	6	8[e]
19/32, 5/8, 23/32, 3/4	1 1/2 ring or screw shank nail—minimum 12 1/2 ga. (0.099□) shank diameter	6	8
	~~Staple 16 ga. 1 1/2~~	~~6~~	~~8~~
Hardboard[f]			
0.200	1½ long ring-grooved underlayment nail	6	6
	4d cement-coated sinker nail	6	6
	Staple 18 ga., 7/8 long (plastic coated)	3	6
Particleboard			
1/4	4d ring-grooved underlayment nail	3	6
	Staple 18 ga., 7/8 long, 3/16 crown	3	6
3/8	6d ring-grooved underlayment nail	6	10
	Staple 16 ga., 1⅛ long, 3/8 crown	3	6
½, 5/8	6d ring-grooved underlayment nail	6	10
	Staple 16 ga., 1⅝ long, 3/8 crown	3	6

For SI: 1 inch = 25.4 mm.

a. Nail is a general description and may be T-head, modified round head or round head.

b. Staples shall have a minimum crown width of 7/16-inch on diameter except as noted.

c. Nails or staples shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater. Nails or staples shall be spaced at not more than 12 inches on center at intermediate supports for floors.

d. Fasteners shall be placed in a grid pattern throughout the body of the panel.

e. For 5-ply panels, intermediate nails shall be spaced not more than 12 inches on center each way.
f. Hardboard underlayment shall conform to ANSI/AHA A135.4.

REASON:
In September 2007, limited cyclic testing data was provided to the ICC Los Angeles Chapter Structural Code Committee showing that stapled wood structural shear panels do not exhibit the same behavior as the nailed wood structural shear panels. As a matter of fact, the test results of the stapled wood structural shear panels appeared much lower in strength and drift than the nailed wood structural shear panel test
results. Therefore, the use of staples as fasteners for shear walls sheathed with other materials shall not be permitted without being substantiated by cyclic testing. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles for the California Building Code.

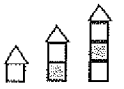
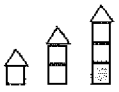
FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to place certain design and construction limits on structural wood panel shear walls thus resulting in improved quality of construction and performance of structures and therefore need to be incorporated into the code to assure that new buildings and additions to existing buildings are designed and constructed in accordance with the scope and objectives of the International Residential Code.

TABLE 91.R602.10.1.2(2)[a, b, c]
BRACING REQUIREMENTS BASED ON SEISMIC DESIGN CATEGORY
(AS A FUNCTION OF BRACED WALL LINE LENGTH)

SOIL CLASS D [a] WALL HEIGHT = 10 FT 10 PSF FLOOR DEAD LOAD 15 PSF ROOF/CEILING DEAD LOAD BRACED WALL LINE SPACING ≤ 25 FT			MINIMUM TOTAL LENGTH (feet) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINE			
Seismic Design Category (SDC)	Story Location	Braced Wall Line Length	Method LIB	Methods [d] DWB, SFB, GB, PBS, PCP, HPS	Method WSP	Continuous Sheathing
SDC A and B and Detached Dwellings in C						
SDC C		10	2.5	2.5	1.6	1.4
		20	5.0	5.0	3.2	2.7
		30	7.5	7.5	4.8	4.1
		40	10.0	10.0	6.4	5.4
		50	12.5	12.5	8.0	6.8
		10	NP	4.5	3.0	2.6
		20	NP	9.0	6.0	5.1
		30	NP	13.5	9.0	7.7
		40	NP	18.0	12.0	10.2
		50	NP	22.5	15.0	12.8
		10	NP	6.0	4.5	3.8
		20	NP	12.0	9.0	7.7
		30	NP	18.0	13.5	11.5
		40	NP	24.0	18.0	15.3
		50	NP	30.0	22.5	19.1
SDC D_0, D_1		10	NP	~~3.0~~ 6.0	2.0	1.7
		20	NP	~~6.0~~ 12.0	4.0	3.4
		30	NP	~~9.0~~ 18.0	6.0	5.1
		40	NP	~~12.0~~ 24.0	8.0	6.8
		50	NP	~~15.0~~ 30.0	10.0	8.5
		10	NP	~~6.0~~ NP	4.5	3.8
		20	NP	~~12.0~~ NP	9.0	7.7
		30	NP	~~18.0~~ NP	13.5	11.5
		40	NP	~~24.0~~ NP	18.0	15.3
		50	NP	~~30.0~~ NP	22.5	19.1
		10	NP	~~8.5~~ NP	6.0	5.1
		20	NP	~~17.0~~ NP	12.0	10.2
		30	NP	~~25.5~~ NP	18.0	15.3
		40	NP	~~34.0~~ NP	24.0	20.4
		50	NP	~~42.5~~ NP	30.0	25.5

(continued)

TABLE 91.R602.10.1.2(2)[a, b, c]—continued
BRACING REQUIREMENTS BASED ON SEISMIC DESIGN CATEGORY
(AS A FUNCTION OF BRACED WALL LINE LENGTH)

SOIL CLASS D [a] WALL HEIGHT = 10 FT 10 PSF FLOOR DEAD LOAD 15 PSF ROOF/CEILING DEAD LOAD BRACED WALL LINE SPACING ≤ 25 FT			MINIMUM TOTAL LENGTH (feet) OF BRACED WALL PANELS REQUIRED ALONG EACH BRACED WALL LINE			
Seismic Design Category (SDC)	Story Location	Braced Wall Line Length	Method LIB	Methods [d] DWB, SFB, GB, PBS, PCP, HPS	Method WSP	Continuous Sheathing
SDC D_2		10	NP	~~4.0~~ 8.0	2.5	2.1
		20	NP	~~8.0~~ 16.0	5.0	4.3
		30	NP	~~12.0~~ 24.0	7.5	6.4
		40	NP	~~16.0~~ 32.0	10.0	8.5
		50	NP	~~20.0~~ 40.0	12.5	10.6
		10	NP	~~7.5~~ NP	5.5	4.7
		20	NP	~~15.0~~ NP	11.0	9.4
		30	NP	~~22.5~~ NP	16.5	14.0
		40	NP	~~30.0~~ NP	22.0	18.7
		50	NP	~~37.5~~ NP	27.5	23.4
		10	NP	NP	NP	NP
		20	NP	NP	NP	NP
		30	NP	NP	NP	NP
		40	NP	NP	NP	NP
		50	NP	NP	NP	NP

For SI: 1 foot = 304.8 mm, 1 pound per square foot = 47.89 Pa.

a. Wall bracing lengths are based on a soil site class "D." Interpolation of bracing length between the S_{ds} values associated with the seismic design categories shall be permitted when a site-specific S_{ds} value is determined in accordance with Section 1613.5 of the *International Building Code*.

b. Foundation cripple wall panels shall be braced in accordance with Section R602.10.9.

c. Methods of bracing shall be as described in Sections R602.10.2, R602.10.4 and R602.10.5.

d. Methods GB and PCP braced wall panel h/w ratio shall not exceed 1:1 in SDC D_0, D_1, and D_2. Methods DWB, SFB, PBS, and HPS are not permitted in SDC D_0, D_1, and D_2.

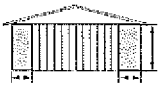
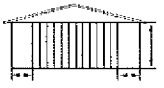
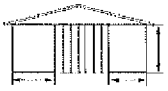
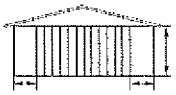
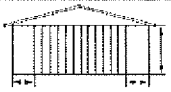
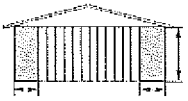
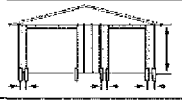
REASON:

Due to the high geologic activities in the Southern California area and the expected higher level of performance on buildings and structures, this local amendment continues to reduce / eliminate the allowable shear values for shear walls sheathed with lath, plaster or gypsum board. The poor performance of such shear walls sheathed with other materials in the 1994 Northridge Earthquake was investigated by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Task Force. The cities and county of the Los Angeles region has taken extra measures to maintain the structural integrity of the framing of the shear walls when designed for high levels of seismic loads. In addition, this proposed amendment is consistent with the conventional framing provisions of the 2009 International Building Code.

FINDINGS:

Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification need to be incorporated into the code to assure that new buildings and additions to existing buildings are designed and constructed in accordance with the scope and objectives of the International Residential Code.

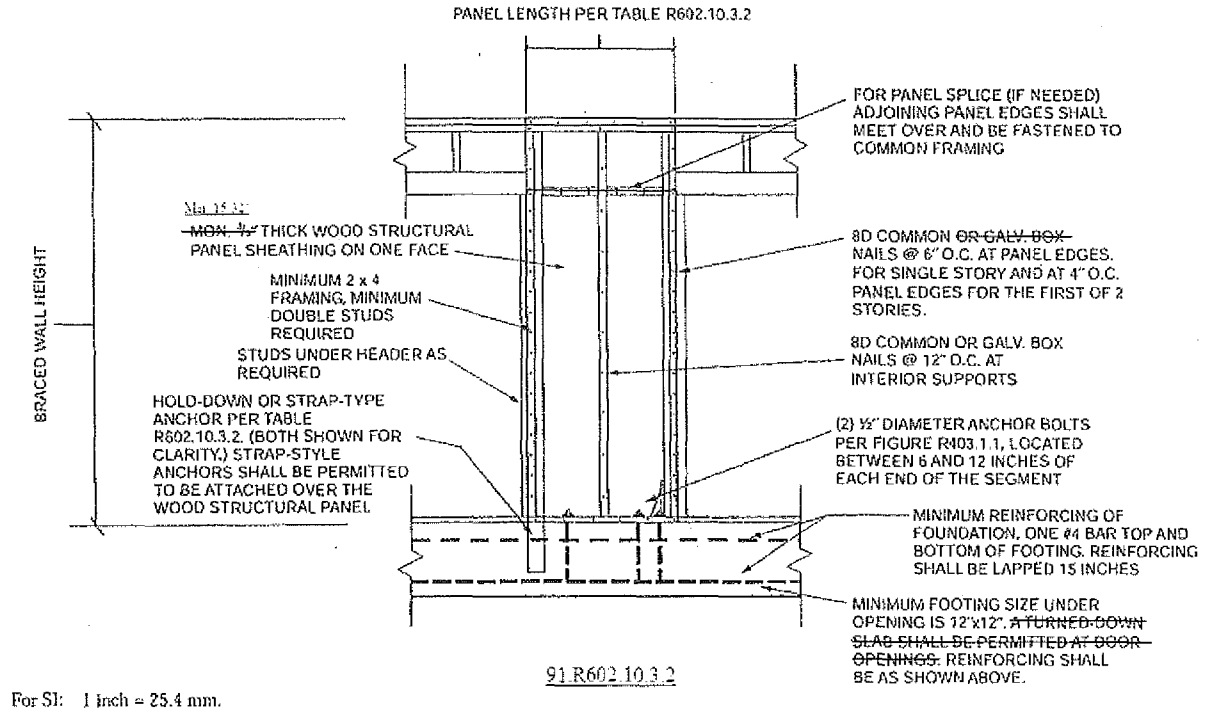
TABLE 91.R602.10.2
INTERMITTENT BRACING METHODS [a]

METHOD	MATERIAL	MINIMUM THICKNESS	FIGURE	CONNECTION CRITERIA
LIB	Let-in-bracing	1 x 4 wood or approved metal straps at 45° to 60° angles for maximum 16" stud spacing		Wood: 2-8d nails per stud including top and bottom plate metal: per manufacturer
DWB	Diagonal wood boards	¾ " (1" nominal) for maximum 24" stud spacing		2-8d (2 ½" · 0.113") nails or 2 staples, 1 ¾∀ per stud
WSP	Wood structural panel (see Section R604)	~~3/8"~~ 15/32"		~~For exterior sheathing see Table R602.3(3) For interior sheathing~~ see Table R602.3(1) 8d common (2 ½" x 0.131) nails at 6" spacing (panel edge) at 12" spacing (intermediate supports), 3/8" edge distance to panel edge
SFB	Structural fiberboard sheathing	½" or 25/32" for maximum 16" stud spacing		1 ½" galvanized roofing nails or 8d common (2 ½" x 0.131) nails at 3" spacing (panel edges) at 6" spacing (intermediate supports)
GB	Gypsum board	½"		Nails or screws at 7" spacing at panel edges including top and bottom plates; for all braced wall panel locations for exterior sheathing nail or screw size, see Table R602.3(1); for interior gypsum board nail or screw size, see Table R702.3.5
PBS	Particleboard sheathing (see Section R605)	3/8" or ½" for maximum 16" stud spacing		1 1/2" galvanized roofing nails or 8d common (2 1/2" × 0.131) nails at 3" spacing (panel edges) at 6 spacing (intermediate supports)
PCP	Portland cement plaster	See Section R703.6 For maximum 16" stud spacing		1 ½", 11 gage, 7/16" head nails at 6" spacing ~~or 7/8", 16 gage staples at 6" spacing~~
HPS	Hardboard panel siding	7/16" For maximum 16" stud spacing		0.092" dia., 0.225" head nails with length to accommodate 11/2" penetration into studs at 4" spacing (panel edges), at 8" spacing (intermediate supports)
ABW	Alternate braced wall	See Section R602.10.3.2		See Section R602.10.3.2
PFH	Intermittent portal frame	See Section R602.10.3.3		See Section R602.10.3.3
PFG	Intermittent portal frame at garage	See Section R602.10.3.4		See Section R602.10.3.4

a. Methods GB and PCP braced wall panel h/w ratio shall not exceed 1:1 in SDC D_0, D_1, and D_2.
Methods LIB, DWB, SFB, PBS, HPS, and PFG are not permitted in SDC D_0, D_1, and D_2.

REASON:
3/8" thick 3 ply-plywood shear walls experienced many failures during the Northridge Earthquake. This proposed amendment specifies minimum WSP sheathing thickness and nail size and spacing so as to provide a uniform standard of construction for designers and buildings to follow. This is intended to improve the performance level of buildings and structures that are subject to the higher seismic demands placed on buildings or structure in this region. This proposed amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance observed in 1994 Northridge Earthquake. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles for the California Building Code. In September 2007, cyclic testing data was provided to the structural code committee showing that stapled wood structural shear panels do not exhibit the same behavior as the nailed wood structural shear panels. In addition, the test results of the stapled wood structural shear panels appeared much lower in strength and drift than the nailed wood structural shear panel test results.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to place design and construction limits on stapled nail fasteners used in wood structural panel shear walls or diaphragms not substantiated with cyclic testing will help to maintain minimum quality of construction and performance standards of structures and therefore need to be incorporated into the code to assure that new buildings and additions to existing buildings are designed and constructed in accordance with the scope and objectives of the International Residential Code.



For SI: 1 inch = 25.4 mm.

~~FIGURE R602.10.3.2~~
ALTERNATE BRACED WALL PANEL

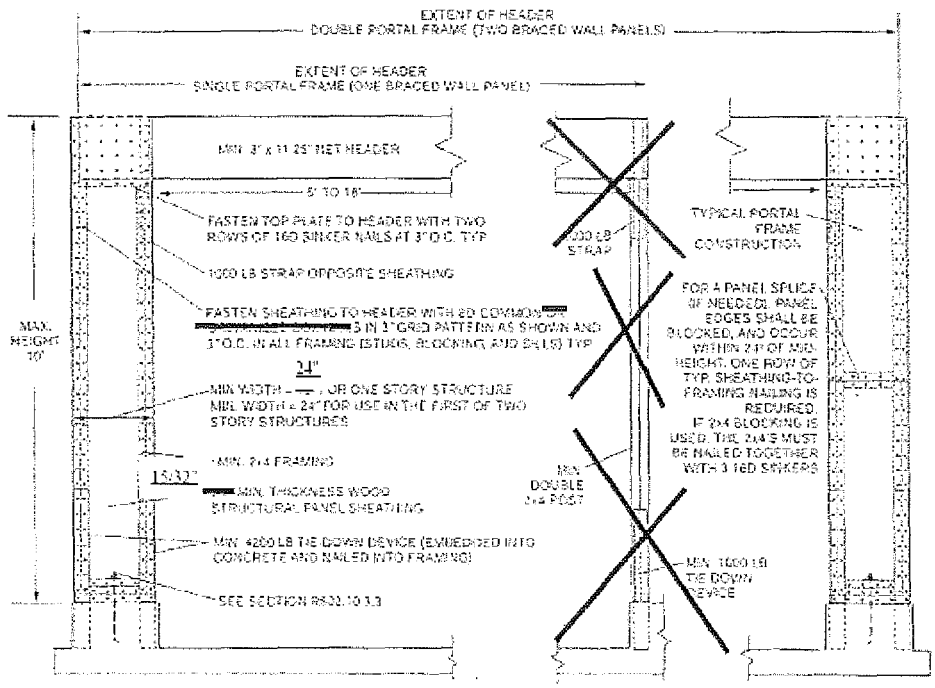
REASON:

3/8" thick 3 ply-plywood shear walls experienced many failures during the Northridge Earthquake. The poor performance of such shear walls sheathed in the 1994 Northridge Earthquake was investigated by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Task Force. Box nails were observed to cause massive and multiple failures of the typical 3/8" thick 3 plyplywood during the Northridge Earthquake. The cities and county of the Los Angeles region has taken
extra measures to maintain the structural integrity of the framing of the shear walls when designed for high levels of seismic loads. The proposal for minimum lap splice requirement is consistent with Section 12.16.1 of ACI 318-05. The performance of modern day braced wall panel construction is directly related to an adequate load path extending from the roof diaphragm to the foundation system. This proposed amendment continues amendments adopted during the previous code cycle for the California Building Code.

FINDINGS:

Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to place design and construction limits on 3/8" thick 3

ply-plywood used in wood structural panel shear walls will help to maintain minimum quality of construction and performance standards of structures and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.



For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound force = 4.448 N

FIGURE ~~R602.10.3.3~~ R602.10.3.3
METHOD PFH: PORTAL FRAME WITH HOLD-DOWNS

REASON:
3/8" thick 3 ply-plywood shear walls experienced many failures during the Northridge Earthquake. The poor performance of such shear walls sheathed in the 1994 Northridge Earthquake was investigated by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Task Force. The cities and county of the Los Angeles region has taken extra measures to maintain the structural integrity of the framing of the shear walls when designed for high levels of seismic loads. Box nails were observed to cause massive and multiple failures of the typical 3/8-inch thick plywood during the Northridge Earthquake. This proposed amendment continues amendments adopted during the previous code cycle for the California Building Code.

FINDINGS:

Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to place design and construction limits on 3/8" thick 3 ply-plywood used in wood structural panel shear walls will help to maintain minimum quality of construction and performance standards of structures and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

91.R602.10.3.3 Method PFH: Portal frame with hold-downs. Method PFH *braced wall panels* constructed in accordance with one of the following provisions are also permitted to replace each 4 feet (1219 mm) of *braced wall panel* as required by Section R602.10.3 for use adjacent to a window or door opening with a full-length header:

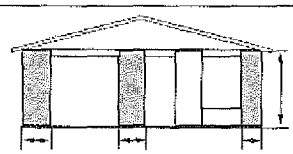
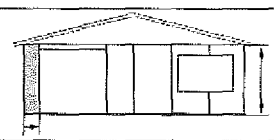
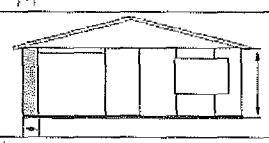
1. Each panel shall be fabricated in accordance with FigureR602.10.3.3. The wood structural panel sheathing shall extend up over the solid sawn or glued-laminated header and shall be nailed in accordance with Figure 91.R602.10.3.3. A spacer, if used with a built-up header, shall be placed on the side of the built-up beam opposite the wood structural panel sheathing. The header shall extend between the inside faces of the first full-length outer studs of each panel. One anchor bolt not less than 5/8-inch-diameter (16 mm) and installed in accordance with Section R403.1.6 shall be provided in the center of each sill plate. The hold-down devices shall be an embedded-strap type, installed in accordance with the manufacturer's recommendations. The panels shall be supported directly on a foundation which is continuous across the entire length of the braced wall line. The foundation shall be reinforced as shown on Figure R602.10.3.2. This reinforcement shall be lapped not less than ~~15~~ 24 inches (~~381~~ 610 mm) with the reinforcement required in the continuous foundation located directly under the braced wall line.
2. In the first *story* of two-story buildings, each wall panel shall be braced in accordance with item 1 above, except that each panel shall have a length of not less than 24 inches (610 mm).

REASON:
The proposal change to the minimum lap splice requirement is consistent with Section 12.16.1 of ACI 318-05.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to increase the lap splice requirement is consistent ACI 318 and therefore need to be incorporated into the code to assure that new buildings and

structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

TABLE 91.R602.10.4.1
CONTINUOUS SHEATHING METHODS

METHOD	MATERIAL	MINIMUM THICKNESS	FIGURE	CONNECTION CRITERIA
CS-WSP	Wood structural panel	15/32" ~~3/8"~~		8d ~~6d~~ common (2" x 0.113") nails at 6" spacing (panel edges) and at 12" spacing (intermediate supports) or ~~16 ga. x 1 3/4 staples at 3" spacing (panel edges) and at 12" spacing (intermediate supports)~~
CS-G	Wood structural panel adjacent to garage openings and supporting roof load only[a, b]	15/32" ~~3/8"~~		See method CS-WSP
CS-PF	Continuous portal frame	See Section R602.10.4.1		See Section R602.10.4.1

For SI: 1 inch = 25.4 mm, 1 pound per square foot = 47.89 Pa.
a. Applies to one wall of a garage only.
b. Roof covering dead loads shall be 3 psf or less.

REASON:

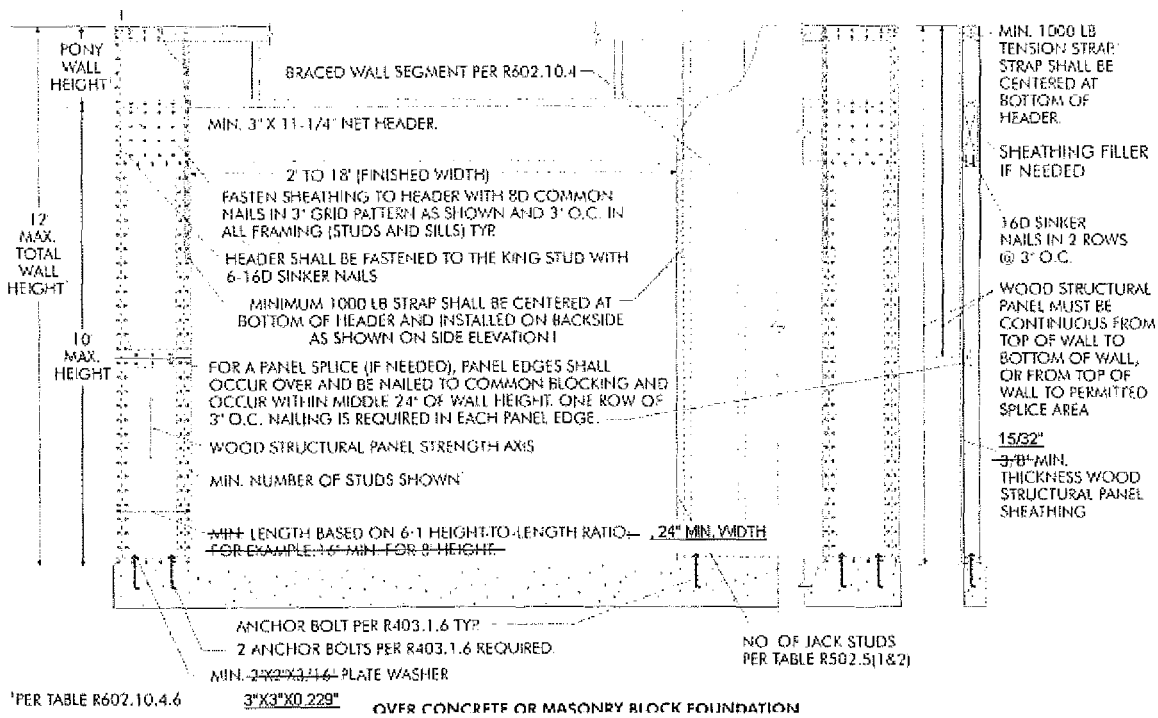
3/8" thick 3 ply-plywood shear walls experienced many failures during the Northridge Earthquake. The poor performance of such shear walls sheathed in the 1994 Northridge Earthquake was investigated by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Task Force. The cities and county of the Los Angeles region has taken extra measures to maintain the structural integrity of the framing of the shear walls when designed for high levels of seismic loads. This proposed amendment continues the previous amendment adopted during the 2007 code adoption cycle for the California Building Code.

In September 2007, limited cyclic testing data was provided to the ICC Los Angeles Chapter Structural Code Committee showing that stapled wood structural shear panels do not exhibit the same behavior as the nailed wood structural shear panels. As a matter of fact, the test results of the stapled wood structural shear panels appeared

much lower in strength and drift than the nailed wood structural shear panel test results. Therefore, the use of staples as fasteners for shear walls sheathed with other materials shall not be permitted without being substantiated by cyclic testing. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.

FINDINGS:

Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to place design and construction limits on 3/8" thick 3 ply-plywood used in wood structural panel shear walls will help to maintain minimum quality of construction and performance standards of structures and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.



REASON:

3/8" thick 3 ply-plywood shear walls experienced many failures during the Northridge Earthquake. The poor performance of such shear walls sheathed in the 1994 Northridge Earthquake was investigated by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Task Force. The cities and county of the Los Angeles region has taken extra measures to maintain the structural integrity of the framing of the shear walls when designed for high levels of seismic loads. This proposed amendment continues the previous amendment adopted during the 2007 code adoption cycle for the California Building Code.

The proposal in which "washers shall be a minimum of 0.229 inch by 3 inches by 3 inches in size" is consistent with Section R602.11.1 of the 2009 International Residential Code and Section 2308.12.8 of the 2009 International Building Code..

FINDINGS:

Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to place design and construction limits on 3/8" thick 3 ply-plywood used in wood structural panel shear walls will help to maintain minimum quality of construction and performance standards of structures and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

~~R602.10.7.1 Braced wall panel support for Seismic Design Category D_2.~~
~~In one-story buildings located in Seismic Design Category D_2, braced wall panels shall be supported on continuous foundations at intervals not exceeding 50 feet (15 240 mm).~~
~~In two-story buildings located in Seismic Design Category D_2, all braced wall panels shall be supported on continuous foundations.~~

~~Exception: Two-story buildings shall be permitted to have interior braced wall panels supported on continuous foundations at intervals not exceeding 50 feet (15 240 mm) provided that:~~

~~1. The height of cripple walls does not exceed 4 feet (1219 mm).~~

~~2. First-floor braced wall panels are supported on doubled floor joists, continuous blocking or floor beams.~~

~~3. The distance between bracing lines does not exceed twice the building width measured parallel to the braced wall line.~~

REASON:

The performance of modern day braced wall panel construction is directly related to an adequate load path extending from the roof diaphragm to the foundation system. Interior braced wall panels, therefore, are also directly dependent upon the adequacy of the foundation system. In addition, the LARUCP proposed amendment for Section R403.1.2 specifies that all exterior walls and required interior braced wall panels in buildings shall be supported with continuous footings.

FINDINGS:

Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to require all exterior walls and interior braced wall panels in buildings be supported on continuous footings for a complete load path and therefore, need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code

91.R603.2.4 Fastening requirements. Screws for steel-to-steel connections shall be installed with a minimum edge distance and center-to-center spacing of 1/2 inch (12.7 mm), shall be self-drilling tapping and shall conform to ASTM C 1513. Structural sheathing shall be attached to cold-formed steel studs with minimum No. 8 self-drilling tapping screws that conform to ASTM C 1513. Screws for attaching structural sheathing to cold-formed steelwall framing shall have a minimum head diameter of 0.292 inch (7.4 mm) with countersunk heads and shall be installed with a minimum edge distance of 3/8 inch (9.5 mm).Gypsum board shall be attached to cold-formed steel wall framing with minimum No. 6 screws conforming to ASTM C 954 or ASTM C 1513 with a bugle head style and shall be installed in accordance with

Section R702. For all connections, screws shall extend through the steel a minimum of three exposed threads. All fasteners shall have rust inhibitive coating suitable for the installation in which they are being used, or be manufactured from material not susceptible to corrosion.

Where No. 8 screws are specified in a steel-to-steel connection, the required number of screws in the connection is permitted to be reduced in accordance with the reduction factors in Table R603.2.4, when larger screws are used or when ~~one of~~ the sheets of steel being connected is thicker than 33 mils (0.84mm). When applying the reduction factor, the resulting number of screws shall be rounded up.

REASON:
The term "one" conflicts with Table R603.2.4, whereas in the table it states the "thinnest connected steel sheet". The term "one" in the code language can misleadingly be interpreted as though one of the sheets can be 33 mils and the other sheet thicker, but that you still qualify for a reduction factor; this is not the intent of the tables.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake, or soils conditions that may cause liquefaction conditions. The proposed modification to clarify that the steel sheets need to be thicker than 33mils to qualify for the reduction factors, need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Code.

91.R606.2.4 Parapet walls. Unreinforced solid masonry parapet walls shall not be less than 8 inches (203 mm) thick and their height shall not exceed four times their thickness. Unreinforced hollow unit masonry parapet walls shall be not less than 8 inches (203 mm) thick, and their height shall not exceed three times their thickness. Masonry parapet walls in areas subject to wind loads of 30 pounds per square foot (1.44 kPa) or located in Seismic Design Category D_0, D_1 or D_2, or on townhouses in Seismic Design Category C shall be reinforced in accordance with Section R606.12.

REASON:
The addition of the word "or" will prevent the use of unreinforced parapets in Seismic Design Category D_0, D_1 or D_2, or on townhouses in Seismic Design Category C.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to not allow the use of unreinforced masonry is prevent a nonductile failure and prevent sudden structural collapse, and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing

buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

91.R606.12.2.2.3 Reinforcement of requirements for masonry elements. Masonry elements listed in Section R606.12.2.2.2 shall be reinforced in either the horizontal or vertical direction as shown in Figure ~~R606.11(2)~~R606.11(3) and in accordance with the following:

1. Horizontal reinforcement. Horizontal joint reinforcement shall consist of ~~at least two longitudinal W1.7 wires spaced not more than 16 inches (406 mm) for walls greater than 4 inches (102 mm) in width and at least one longitudinal W1.7 wire spaced not more than 16 inches (406 mm) for walls not exceeding 4 inches (102 mm) in width; or~~ at least one No. 4 bar spaced not more than 48 inches (1219 mm). ~~Where two longitudinal wires of joint reinforcement are used, the space between these wires shall be the widest that the mortar joint will accommodate.~~ Horizontal reinforcement shall be provided within 16 inches (406 mm) of the top and bottom of these masonry elements.

2. Vertical reinforcement. Vertical reinforcement shall consist of at least one No. 4 bar spaced not more than 48 inches (1219 mm). Vertical reinforcement shall be within ~~16~~ 8 inches (406mm) of the ends of masonry walls.

REASON:
Reinforcement using longitudinal wires is deficient in high seismic areas such as D_O and D_I.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to increase the reinforcement is intended to assure the ductility requirements for high seismic region is provided and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

Sec. 6. Chapter 7 of the C.R.C is hereby adopted by reference.

Sec. 7. Chapter 8 of the C.R.C is hereby adopted by reference with the following exceptions: Table R802.5.1(9), Sections R802.8, and R802.10.2, are not adopted and in lieu thereof Table 91.R802.5.1(9), Sections 91.R802.8, 91.R802.10.2, and 91.R802.12 are added as provided.

TABLE 91.R802.5.1(9)

RAFTER/CEILING JOIST HEEL JOINT CONNECTIONS[a, b, c, d, e, f, h]

RAFTER SLOPE	RAFTER SPACING (inches)	GROUND SNOW LOAD (psf)															
		20[g]				30				50				70			
		Roof span (feet)															
		12	20	28	36	12	20	28	36	12	20	28	36	12	20	28	36
		Required number of 16d common nails[a, b] per heel joint splices[c, d, e, f]															
3:12	12	4	6	8	10	4	6	8	11	5	8	12	15	6	11	15	20
	16	5	8	10	13	5	8	11	14	6	11	15	20	8	14	20	26
	24	7	11	15	19	7	11	16	21	9	16	23	30	12	21	30	39
4:12	12	3	5	6	8	3	5	6	8	4	6	9	11	5	8	12	15
	16	4	6	8	10	4	6	8	11	5	8	12	15	6	11	15	20
	24	5	8	12	15	5	9	12	16	7	12	17	22	9	16	23	29
5:12	12	3	4	5	6	3	4	5	7	3	5	7	9	4	7	9	12
	16	3	5	6	8	3	5	7	9	4	7	9	12	5	9	12	16
	24	4	7	9	12	4	7	10	13	6	10	14	18	7	13	18	23
7:12	12	3	4	4	5	3	3	4	5	3	4	5	7	3	5	7	9
	16	3	4	5	6	3	4	5	6	3	5	7	9	4	6	9	11
	24	3	5	7	9	3	5	7	9	4	7	10	13	5	9	13	17
9:12	12	3	3	4	4	3	3	3	4	3	3	4	5	3	4	5	7
	16	3	4	4	5	3	3	4	5	3	4	5	7	3	5	7	9
	24	3	4	6	7	3	4	6	7	3	6	8	10	4	7	10	13
12:12	12	3	3	3	3	3	3	3	3	3	3	3	4	3	3	4	5
	16	3	3	4	4	3	3	3	4	3	3	4	5	3	4	5	7
	24	3	4	4	5	3	3	4	6	3	4	6	8	3	6	8	10

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square foot = 0.0179kPa.

a. 10d box nails shall be permitted to be substituted for 16d common nails.

b. Nailing requirements shall be permitted to be reduced 25 percent if nails are clinched.

c. Heel joint connections are not required when the ridge is supported by a load-bearing wall, header or ridge beam.

d. When intermediate support of the rafter is provided by vertical struts or purlins to a loadbearing wall, the tabulated heel joint connection requirements shall be permitted to be reduced proportionally to the reduction in span.

e. Equivalent nailing patterns are required for ceiling joist to ceiling joist lap splices.

f. When rafter ties are substituted for ceiling joists, the heel joint connection requirement shall be taken as the tabulated heel joint connection requirement for two-thirds of the actual rafter slope.

g. Applies to roof live load of 20 psf or less.

h. Tabulated heel joint connection requirements assume that ceiling joists or rafter ties are located at the bottom of the attic space. When ceiling joists or rafter ties are located higher in the attic, heel joint connection requirements shall be increased by the following factors.

i. Edge distances, end distances and spacing for nails shall be sufficient to prevent splitting of the wood.

H_C/H_R	Heel Joint Connection Adjustment Factor
1/3	1.5
1/4	1.33
1/5	1.25
1/6	1.2
1/10 or less	1.11

where:

H_C = Height of ceiling joists or rafter ties measured vertically above the top of the rafter support walls.

H_R = Height of roof ridge measured vertically above the top of the rafter support walls.

REASON:

The number of nails required for the heel joint connection per Table R802.5.1(9) can be excessive depending on the rafter slope, spacing, and roof span. This footnote will help to prevent splitting of connecting wood members when large numbers of nail are required as stated in the National Design Specification for Wood Construction (NDS).

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to require connecting members to be of sufficient size will help to prevent splitting and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

91.R802.8 Lateral support. Roof framing members and ceiling joists having a depth-to-thickness ratio exceeding ~~5~~2 to 1 based on nominal dimensions shall be provided with lateral support at points of bearing to prevent rotation. For roof rafters with ceiling joists attached per Table R602.3(1), the depth-thickness ratio for the total assembly shall be determined using the combined thickness of the rafter plus the attached ceiling joist.

REASON:
This proposed amendment provide provisions to ensure that the ends of wood members and the points of bearing have adequate lateral support to prevent rotation and to help stabilized the members during construction. This proposed amendment is consistent with and similar to requirements contained in the NDS.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to provide lateral bracing at the ends of members will prevent rotation and stabilize the members during construction and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

91.R802.10.2 Design. Wood trusses shall be designed in accordance with accepted engineering practice. The design and manufacture of metal-plate-connected wood trusses shall comply with ANSI/TPI 1. The truss design drawings shall be prepared by a registered professional ~~where required by the statutes of the jurisdiction in which the project is to be constructed in accordance with Section R106.1~~.

REASON:

Wood trusses are engineered structural elements that require engineered design and calculations. This amendment provides clarifications that all wood truss design drawings are to be prepared by a registered professional.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to provide clarification that a registered design professional is required to ensure proper design of wood trusses and therefore need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

91.R803.2.4 Openings in horizontal diaphragms. Openings in horizontal diaphragms shall conform with Section R503.2.4.

REASON:
Limited cyclic testing of wood structural panels connected to wood stud walls using staples resulted in poor performance of the lateral force resisting system. Section R804.1 is proposed to limit the use of staples unless substantiated by cycle testing and approved by the building official. Section R804.2 is proposed to provide steel straps at corners of openings in the roof diaphragm. The steel straps help distribute the concentrated loads at the corners into the diaphragm.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed amendment need to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Code.

Sec. 8. Chapter 9 of the C.R.C is hereby adopted by reference.

Sec. 9. Chapter 10 of the C.R.C is hereby adopted by reference with the following exceptions: Section R1001.3.1 is not adopted and in lieu thereof Section 91.R1001.3.1 is added as provided.

91.R1001.3.1 Vertical reinforcing. For chimneys up to 40 inches (1016 mm) wide, four No. 4 continuous vertical bars adequately anchored into the concrete foundation shall be placed between wythes of solid masonry or within the cells of hollow unit masonry and grouted in accordance with Section R609. Grout shall be prevented from bonding with the flue liner so that the flue liner is free to move with thermal expansion. For chimneys more than 40 inches (1016 mm) wide, two additional No. 4 vertical bars adequately anchored into the concrete foundation shall be provided for each additional flue incorporated into the chimney or for each additional 40 inches (1016 mm) in width or fraction thereof.

REASON:
The performance of fireplace/chimney without anchorage to the foundation has been observed to be inadequate during major earthquakes. The lack of anchorage to the foundation results in overturn or displacement.

FINDINGS:
Local Geological Conditions – The greater Los Angeles region is a densely populated area having buildings and structures constructed over and near a vast array of fault systems capable of producing major earthquakes, including but not limited to the recent 1994 Northridge Earthquake. The proposed modification to anchor masonry chimneys into concrete foundation will reduce injuries, save lives, and minimize structural damages. Therefore, this amendment needs to be incorporated into the code to assure that new buildings and structures and additions or alterations to existing buildings or structures are designed and constructed in accordance with the scope and objectives of the International Residential Code.

2011 Los Angeles Electrical Code
Draft of Revision (R) and New (N) Sections

		(R) or (N)	Type of Change
1. Section 93.0202.9	_____	R _____	Clarification of intend
2. Section 93.0202.13	_____	R _____	Update the Code Sections
3. Section 93.0301	_____	R _____	Update the Code Section
4. Section 93.0302	_____	R _____	Update the Code Section
5. Section 93.0303	_____	R _____	Clarified the Code Section
6. Section 93.0311(f)	_____	R ___	Expanded the Application of the Section
7. Section 93.0600	_____	N ____	Definition: Ambient Temperature
8. Section 93.0700	_____	R _____	Update the Code Sections

Justification as required per State Code:

1. Division 1 through 5 are all part of administrative portion of the Los Angeles Electrical Code. The following modified code sections are located within specified administrative parts of the code:

   a. Sections 93.0202.9 and 93.0202.13 are located in Division 2
   b. Sections 93.0301, 93.0302, 93.0303, and 93.0311(f) are located in Division 3

2. Division 6 is the technical part of the Los Angeles Electrical Code. Section 93.0600, a new definition is added to our code for "ambient temperature" based on climatic reason.

3. Division 7 is also the technical part of the Los Angeles Electrical Code. However, section 93.0700, which is located in Division 7, is in the administrative part of the Los Angeles Electrical Code. The changes indicate adoption of the California Electrical code, the national electrical code and their pertinent annexes.

DIVISION 2 - PERMITS, PLANS AND FEES

SEC. 93.0201. PERMIT REQUIRED.

No person shall, install, alter, reconstruct or repair any electrical wiring unless a permit therefor has been obtained from the Department except as otherwise provided in this Code.

EXCEPTIONS:
1. A separate electrical permit shall not be required for any electrical wiring for which a combined building-mechanical permit has been obtained pursuant to LAMC Section 91.107.2.2.
2. No person shall be subject to fine, imprisonment or payment of an investigation fee for starting or doing any electrical wiring without a permit being first obtained if a permit is obtained therefor on or before 12:00 noon on the third day the office of the Department is open for public business after the electrical wiring was started.

SEC. 93.0202. EXCEPTIONS, PERMITS NOT REQUIRED.

(a) No permit shall be required in the following cases:

1. Electric wiring expressly declared to be exempt from the provisions of this Code by any other sections of the Code or by any other provision of the LAMC.

2. Wiring for temporary theater sets on the theater stages or temporary motion picture or television sets on any property belonging to or under the control of the City of Los Angeles, privately owned studios, theaters, or similar locations designed for that usage.

3. Installation of any portable motor or other portable appliance energized by means of a cord or cable having an attachment plug end, when that cord or cable is permitted by this Code.

4. Repair or replacement of fixed motors or fixed appliances, supplied by branch circuits not exceeding 20 amperes and not exceeding 240 volts nominal, of the same type and rating in the same location where not located in an area classed as **"hazardous"** under Article 500 of the C.E.C.

5. Festive temporary decorative lighting in dwelling occupancies only, for a period not to exceed 90 days.

6. Repair or replacement of current-carrying parts of any switch, contactor or control device.

7. Reinstallation of attachment plug receptacle, but not the outlets for it.

8. Replacement of any overcurrent device of the same rating and in the same location.

9. Replacement of gas tube electrodes, transformers, tubes, drivers and power supplies with the same original manufactured parts having the same size, type, capacity and ratings for electric signs, or ~~gas tube~~ luminaires.

~~**EXCEPTION:** This does not include the retrofitting of exit fixtures that are part of a required emergency lighting system.~~

10. Taping of joints.

11. Removal of electric wiring.

12. Temporary wiring for experimental purposes in suitable experimental laboratories.

13. The following electrical wiring:

(i) Non-required signaling circuits supplied by an approved Class 2 limited power source, capable of supplying not more than 30 volts and 100 volt-amperes; and
(ii) Non-required communication circuits which have the power limited in accordance with Section ~~725.41~~ 725.121 of the C.E.C.; and
(iii) Non-required amplifier output circuits which are permitted by Section ~~640-5~~ 640.9(C) of the C.E.C. to employ Class 2 or Class 3 wiring; and
(iv) Any non-required circuit which operates at 15 volts or less and does not generate, transmit, transform, utilize or control more than 25 watts or volt-amperes of electric power.

Provided the wiring for any of the above items is not located in any of the following locations:

(i) Area classified as "**hazardous**" under Article 500 of the C.E.C.; or

(ii) Appurtenant to a required fire warning system as classified under Article 760 of the C.E.C.; or

(iii) Penetrating any fire-resistive wall or floor system; or

(iv) In a plenum, duct or other space used for environmental air including access floors.

14. Any similar repair or replacement determined by the Department not to involve any hazard to life or property.

15. Repair or replacement of incandescent lighting fixtures in single-family dwellings.

16. Any electric wiring, except wiring located in an area classified as "**hazardous**" under Article 500 of the C.E.C. after the branch circuit distribution panelboards used exclusively to supply or interconnect equipment installed, owned, operated or maintained by a communication public utility and used exclusively for communication purposes, in the exercise of its communication public utility functions within the communication public utility controlled areas.

17. The replacement of defective smoke detectors in a single-family dwelling when the work is performed by a contractor with a valid Certificate of Registration pursuant to Section 91.1705. A Certificate of Compliance pursuant to Section 91.108.12 must be filed with the City in lieu of a permit.

(b) The provisions of the foregoing exceptions shall not apply to any repairs or replacements of electrical devices, apparatus, or appliances which were originally installed without a permit when such permit is required for the original installation, or when energized by, or which is a part of any hazardous or illegal wiring system.

(c) The foregoing exceptions from permit requirements shall not be deemed to allow any electric wiring to be done in a manner contrary to other provision's of this Code.

DIVISION 3 - ENFORCEMENT

SEC. 93.0301. POWERS OF DEPARTMENT AND BOARD.

The powers of the Department and the Board are those enumerated in Section 98.0403.1 of the Los Angeles Municipal Code.

SEC. 93.0302. APPEALS.

Appeals or requests for slight modifications in individual cases from the requirements of this Code shall be made in accordance with the procedure established in Section 98.0403.2 of the Los Angeles Municipal Code.

SEC. 93.0303. NEW MATERIALS AND METHODS OF CONSTRUCTION.

New or alternate materials and methods of construction may be approved by the Department in accordance with the provisions of section 98.0502, Division 5 of Article 8, Chapter IX, of the Los Angeles Municipal Code.

SEC. 93.0311. AUTHORITY TO CONDEMN INSTALLATIONS.

(a) When the Department determines that an electrical installation is in violation of this Code, an order shall be given to the owner or person in responsible charge of the installation to either remove or replace the installation. The order shall be in writing and shall specify the particulars in which the installation is in violation and shall fix a reasonable time for compliance with the order. In cases of extreme danger to life or property, as determined by the Department, the order shall further require that all persons cease using electric current through the installation and to disconnect the installation at once.

(b) If the violations continue to exist by the expiration of the time fixed by the order, or should the Department find that persons are using an installation that has been ordered disconnected, the Department is hereby authorized to physically disconnect the portion of the installation in violation, or to order the serving agency to disconnect electric service to the consumer's wiring system.

(c) Where a disconnection has been made by the Department a seal shall be attached to the electric wiring at the point of disconnection.

(d) The seal shall be of metal and shall be attached to a tag not less than three inches by four inches in size of substantial paper or cardboard, red in color, and bearing a printed warning that the installation has been sealed by the Department. No person shall break, mutilate, destroy or remove the seal or tag, or energize the wiring until the seal has been removed by the Department. When the required changes or repairs have been made and the work inspected and approved, the Department shall cause the seal to be removed.

(e) When an electric wiring installation has been sealed by the Department, a person who causes, permits or allows his agent, servant, employee or other persons to use such installation prior to the removal of the seal by the Department or after the seal has been removed or broken by any person other than a representative of the Department, shall be guilty of a misdemeanor.

(f) Nothing contained in this section shall be construed to require a person to change wiring which complied with the laws and regulations therefor in effect before the effective date of this Code and which is maintained to comply with those regulations

EXCEPTIONS:

1. When the Department determines that the wiring may become a hazard to life and property.
2. Where the occupancy of the building or premises has been changed in accordance with Section 93.0111.

3. Where cord wiring is found in dwelling occupancies it shall be replaced by not less than two approved receptacle outlets in each kitchen, living room and bedroom. A receptacle outlet, which may be one of the kitchen receptacle outlets, must be provided for each washing machine. Kitchen receptacle outlets shall be supplied by at least two branch circuits, one of which may also supply lighting circuits.
4. Where existing plug fuseholders are used in new circuits or in existing circuits with new electric wiring they shall be provided with TYPE S fuse adapters. The Department shall require all the fuseholders in an existing panelboard to be provided with TYPE S adapters where evidence or bridging, tampering or conditions of over-fusing are found in over 10% of the total number of fuses.
5. Where changes are made to utility company transformers or ~~service equipment~~ distribution system of existing electrical installations that causes an increase of available short-circuit currents, provisions shall be made as required by Sections 110.9 and 110.10 of the C.E.C. to protect the equipment.

DIVISION 6 - DEFINITIONS AND REQUIREMENTS FOR ELECTRICAL INSTALLATIONS

SEC. 93.0600. BASIC PROVISIONS.

Chapter 1 of the C.E.C. is hereby adopted by reference for the purpose of providing definitions and requirements for electrical installations with the following additions and amendments and as specifically provided herein.

ACCESS FLOOR. An assembly consisting of panels mounted on pedestals to provide an underfloor space for the installation of electrical, communications, or mechanical systems.

AMBIENT TEMPERATURE. The air temperature of locations in City of Los Angeles as described in the Table below:

LOCATION	TEMPERATURE
In normally heated building	30°C (86°F)
Poorly or unventilated rooms or spaces such as attics, transformer, machinery (refrigeration) or *elevator rooms, etc.	45°C (113°F)
Ventilated transformer rooms, machinery (refrigeration) rooms, elevator rooms* or spaces, etc	37°C (99°F)
In buildings with major heat sources such as power stations or industrial processes	45°C (113°F)
Furnace and boiler rooms	60°C (140°F) Within 2 ft. of a furnace or boiler 40°C (104°F)
In thermal insulation	45°C (113°F)
Outdoors un-shaded areas	39°C (102°F)
Outdoors in shaded areas	34°C (93°F)
Outdoors lowest expected temperature	-7°C (20°F)
Behind stand-off (i.e., parallel to the roof) or integral flat photovoltaic crystalline-silicon cell module, panel or array (up to 6 inches, add 4 °C to the ambient temperature, where channels (rails) are installed under the modules as part of the mounting system)	Within 1 inch = 60°C (140 °F) Over 1 to 3 inches = 56°C (133 °F) Over 3 to 6 inches = 55°C (131 °F) Over 6 inches = 39°C (102°F)
Behind rack mounted (i.e., at an angle to the roof) flat photovoltaic crystalline-silicon cell module, panel or array	Within 1 inch = 54°C (129 °F) Over 1 inch = 39°C (102°F)
Behind direct mounted flat photovoltaic crystalline-silicon cell module, panel or array	63°C (145 °F)

* Lower ambient temperature in elevator room is permitted when it is required to be maintained at a specified maximum ambient temperature per equipment manufacturer as permitted in the Los Angeles Elevator Code.

C.E.C. California Electrical Code

DIVISION 7 - REQUIREMENTS FOR INSTALLATION METHODS AND MATERIALS.

SEC. 93.0700. THE CALIFORNIA ELECTRICAL CODE.

Chapters 1 through 9, Annex C, F and G of the ~~2005~~ 2008 Edition of the National Electrical Code (N.E.C.), as published by the National Fire Protection Association (N.F.P.A. 70-~~2005~~ 2008), the ~~2007~~ 2010 California Electrical Code and the California Building Standards Code are adopted by reference as part of the Code. When there is a conflict between the ~~2005~~ 2008 National Electrical Code, the ~~2007~~ 2010 California Electrical Code and the Los Angeles Municipal Code, Section 93.0105 shall prevail. Except as specified in Divisions 1 through 6 of Article 3, Chapter IX of the Los Angeles Municipal Code, all electrical installations and materials shall be in conformity with the ~~2007~~ 2010 California Electrical Code, as adopted by reference to be part of this Code and Sections 93.515.17 and 93.515.18 are added as provided here.

ORDINANCE NO. _____

An ordinance amending the Los Angeles Municipal Code and incorporating by reference the 2010 Edition of the California Plumbing Code and further adopt all the current amendments of the Article 4 of Chapter IX of the Los Angeles Municipal Code except for the following changes.

THE PEOPLE OF THE CITY OF LOS ANGELES

DO ORDAIN AS FOLLOWS:

Section 1. Section 94.101.3.6. of the Los Angeles Municipal Code is amended to read:

101.3.6. Types of Plans Required to be Submitted. Plans signed by a qualified submitter shall be filed with and approved by the Department before any work listed below is started:

1. Drainage systems.
- **a.** Drainage and vent systems for a building or structure involving fixtures that discharge 217 or more drainage fixture units.
- **b.** Drainage pumps and ejectors.

2. Combination waste and vent systems.
3. Fuel gas piping with any of the following:
- **a.** Systems having more than ten outlets.
- **b.** Medium pressure gas systems.
- **c.** High pressure gas systems.
- **d.** Methane gas extraction systems.

4. Potable water piping with any of the following:
- **a.** Systems requiring a 2-inch or larger supply.
- **b.** Systems designed from the procedure in Section 610.5 of the Code.
- **c.** Systems utilizing cross-linked polyethylene tubing (PEX)
- **d.** Systems utilizing CPVC piping.

EXCEPTION: Plan check is not required for existing systems that are added to or altered, with branch lines that serve fewer than 20 fixture units and sized by Table 6-4.

5. Rainwater piping systems with more than ten interconnected rainwater or overflow drains, or a rainwater pump.
6. Special water piping systems for reclaimed water piping.
7. Subsurface drainage piping.
8. Swimming pool circulating water systems.

EXCEPTIONS:
Private swimming pools

9. Fire Protection.
- **a.** Class H Standpipes.

b. Standpipes: Class I, II, III
c. Fire pump systems.
d. Fire hydrant systems.
e. Hand hose systems connected to fire sprinkler piping.
f. Monitor nozzle systems.
g. Underground fire protection piping.
h. Fire sprinkler systems

EXCEPTIONS:

1. Raising or lowering of sprinklers due to change in ceiling height.
2. Replacing of sprinklers of the same type, orifice size and temperature rating.
3. Relocation of sprinklers in previously occupied buildings or tenant spaces.

Justification:
Exception to subsection 8 has been added to for clarification. Mechanical plan check has not being checking private swimming pools. It was never intended to require plan check for private swimming pools for non commercial use accessory to a single-family dwelling and available to the family of the house hold and their guests. The requirements for private pools are less stringent than for public pools and to generate plans and calculations would be an undue burden. Subsections c and d have been added to account for new materials allowed in this code.

Section 2. Section 94.103.3.4 of the Los Angeles Municipal Code is amended to read:

103.3.4 Expiration <u>of Permits</u>. ~~Every permit issued by the Authority Having Jurisdiction under the provisions of this code shall expire by limitation and become null and void if the work authorized by such permit is not commenced within one hundred eight (180) days from the date of such permit, or if the work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of one hundred eighty (180) days. Before such work can be recommenced, a new permit shall first be obtained to do so, and the fee therefore shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original plans and specifications for such work, and provided further that such suspensions or abandonment has not exceeded one year.~~

~~Any permittee holding an unexpired permit may apply for an extension of the time within which work may commence under that permit when the permittee is unable to commence work within the time required by this section for good and satisfactory reasons. The Authority Having Jurisdiction may extend the time for action by the permittee for a period not exceeding one hundred eight (180) days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken. No permit shall be extended more than once. In order to renew action on a permit after expiration, the permittee shall pay a new full permit fee.~~

<u>Permits shall expire as provided for in Section 98.0602 of the Los Angeles Municipal Code.</u>

Justification: The requirements of this section are covered in Section 98.0602, which applies to the expiration of all permits including plumbing permits.

Section 3. Section 94.103.3.5 of the Los Angeles Municipal Code is amended to read:

103.3.5 Suspension or Revocation. ~~The Authority Having Jurisdiction may, in writing, suspend or revoke a permit issued under the provisions of this code whenever the permit is issued in error or on the basis of incorrect information supplied or in violation of other ordinance or regulation of the jurisdiction,~~

Permits may be revoked as provided in Section 98.0601of the Los Angeles Municipal Code.

Justification: The requirements of this section are covered in section 98.0601, which applies to the suspension and revocation of all permits including plumbing permits.

CHAPTER 2 - DEFINITION OF TERMS

Section 4. Chapter 2 of the California Plumbing Code (C.P.C.) is hereby adopted by reference with the following exceptions:

203.0. A.

Section 203.0 of the C.P.C. is hereby adopted by reference with the following additions and amendments:

Administrative Authority - The Superintendent of Building or an authorized agent.

Applicant - The person signing the application and paying the fees.

Authority Having Jurisdiction - ~~The organization, office, or individual responsible for enforcing the requirements of a code or standard or approving equipment, Materials, installations, or procedures. The Authority Having Jurisdiction shall be federal, state, local, or other regional department or an individual such as a plumbing official, mechanical official, labor department official, or others having statutory authority, the Authority Having Jurisdiction may be some other responsible party. This definition shall include the Authority Having Jurisdiction's duly authorized representative.~~ The City of Los Angeles Department of Building and Safety.

Justification: Carry over from previous Code (Editorial change).

204.0. B.

Section 204.0 of the C.P.C. is hereby adopted by reference with the following addition:

Board - The Board of Building and Safety Commissioners.

Justification: Carry over from previous Code (Editorial change).

205.0. C.

Section 205.0 of the C.P.C. is hereby adopted by reference with the following addition:

Commercial Pre-rinse Spray Valves (PRSV) - Assemblies consisting of a flexible hose and spray head for attachment to a faucet with a built-in diverter

Justification: To incorporate definitions from the City of Los Angeles Ordinance Number 180822.

206.0. D.

Section 206.0 of the C.P.C. is hereby adopted by reference with the following amendments and additions:

Department - The Department of ~~Housing and Community Development~~ Building and Safety.

Justification: Carry over from previous Code (Editorial change).

Dual Flush Toilet - A toilet that has two flush modes, one at 1.1 gallons per flush or less and one at 1.6 gallons per flush or less with an effective 1.28 gallons per flush

Justification: To incorporate definitions from the City of Los Angeles Ordinance Number 180822.

207.0. E.

Section 207.0 of the C.P.C. is hereby adopted by reference with the following addition:

Energy Star® - A joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy. ENERGY STAR is a voluntary program designed to identify and promote energy-efficient products and practices.

Justification: To incorporate definitions from the City of Los Angeles Ordinance Number 180822.

215.0. M.

Section 215.0 of the C.P.C. is hereby adopted by reference with the following additions:

Maintenance Certificate of Registration - A certificate issued to the owner or occupant of specified premises for the sole purpose of adding to, altering, maintaining or repairing existing plumbing, only on the premises specified.

Maintenance Supervisor - A person holding a valid Certificate of Qualification as a maintenance supervisor and who is in the employ of a person holding a valid Maintenance Certificate of Registration.

Justification: Carry over from previous Code (Editorial change).

218.0. P.

Section 218.0 of the C.P.C. is hereby adopted by reference with the following additions:

Private or Private Use - "Private" or "Private Use" refers to plumbing fixtures in residences and apartments, private bathrooms in hotels and hospitals, and restrooms in commercial establishments where the fixtures are intended for the use of a family and their guests or an individual.

Public or Public Use - All uses of fixtures or structures that are not defined as private or private use.

Justification: To incorporate definitions from the City of Los Angeles Ordinance Number 180822.

221.0. S.

Section 221.0 of the C.P.C. is hereby adopted by reference with the following addition:

Self-Closing Faucet - A faucet designed to close itself as the activating mechanism is released.

Justification: To incorporate definitions from the City of Los Angeles Ordinance Number 180822.

CHAPTER 3 - GENERAL REGULATIONS

Section 5. Chapter 3 of the C.P.C. is hereby adopted by reference.

CHAPTER 4 - PLUMBING FIXTURES AND FIXTURE FITTINGS

Section 6. Chapter 4 of the C.P.C. is hereby adopted by reference, with the following amendments:

Section 402.1 is not adopted

Justification: This Section has been incorporated into Section 402.1.1 to capture the requirements from the City of Los Angeles Ordinance Number 180822.

Section 402.1.1 is hereby added to read:

402.1.1 All plumbing fixtures shall meet the following flow rate requirements:

Fixture Type	**Maximum Flow rate**
Shower heads	2 gpm
Lavatory faucets for private use	1.5 gpm
Lavatory faucets for public use	0.5 gpm
Metered faucets	0.25 gallons per cycle
Kitchen faucets	2.2 gpm
Pre-rinse spray valves in commercial kitchen	1.6 gpm
All other faucets	2.2 gpm
Wash fountains	2.2 gpm
Water closets	1.28 gallons per flush
Urinals	0.125 gallons per flush
Domestic dishwasher	5.8 gallons per washing cycle
Commercial dishwashers	The maximum water use for high efficiency commercial dishwashers shall be in accordance with Table 4-0.

TABLE 4-0
WATER USE FOR COMMERCIAL DISHWASHER WATER USE[1,2]

Type	High-Temperature Maximum gallons per rack	Chemical Maximum gallons per rack
Conveyer	0.70	0.62
Door	0.95	1.16
Under-counter	0.90	0.98

1. The maximum water use per washing cycle for high efficiency domestic dishwashers shall be 5.8 gallons.
2. All installed dishwashers shall be Energy Star® rated.

Justification: To incorporate requirements from the City of Los Angeles Ordinance Number 180822.

Section 402.2.of the CPC is not adopted.

Justification: This section has been incorporated into Section 402.1.1 to capture the requirements from the City of Los Angeles Ordinance Number 180822.

Section 402.3 of the CPC is amended to read as follows:

402.3 Urinals

Section 402.3 of the C.P.C. is modified to read:

~~**402.3 Urinals.** Urinals shall have an average water consumption of a maximum of 1 gallon (3.8 liters) of water per flush.~~
~~**402.3.1 Urinals after January 1, 1994 [HCD 1 & HCD 2]** Urinals and associated flushometer valves sold or installed after January 1, 1994, shall use no more than an average of one gallon (3,8 liters) per flush. See Health and Safety Code Section 17921.3~~
~~**402.3.2 Urinals on or after July 1, 2011 [HCD 1 & HCD 2]** Urinals and associated flushometer valves sold or installed on or after July 1, 2011, shall use no more than 0.5 gallons (1.9 liters) per flush and meet performance criteria as established in ASME A112.19.2, Standard for Vitreous China Plumbing Fixtures and Hydraulic Fixtures Requirements for Water Closets and Urinals.~~
402.3.3 Nonwater Supplied Urinals (Waterless Urinals) [HCD 1 & HCD 2] - Waterless urinals sold or installed in this state shall comply with all of the following requirements:

(1) Meet performance, testing, and labeling requirements established by ASME A112.1919-2006, Standard for Vitreous China Nonwater Urinals, for vitreous china non-water supplied urinals.
(2) Be listed by an ANSI accredited third-party certification agency to ASME A 112.19.19-2006, Standard for Vitreous China Nonwater Urinals.
(3) Follow cleaning and maintenance procedures established by the manufacturer.
(4) Conform to reference standards in Table 14-1 for non-vitreous ceramic or plastic urinal fixtures.
(5) Provide water distribution and fixture supply piping, sized as required elsewhere in this code, roughed-in immediately adjacent to each waterless urinal fixture installed.

For additional information, see the California Health and Safety Code Section 17921.4.

402.3.4. Nonwater Urinals. [Not adopted by OSHPD 1, 2, 3, and 4] Nonwater urinals shall be listed and comply with the applicable standards referenced in Table 14-1. Nonwater urinals shall have a barrier liquid sealant to maintain a trap seal. Nonwater urinals shall permit the uninhibited flow of waste through the urinal to the sanitary drainage system. Nonwater urinals shall be cleaned and maintained in accordance with the manufacturer's instructions after installation. Where nonwater urinals are installed they shall have a water distribution line rough-in to the urinal location to allow for the installation of an approved backflow prevention device in the event of a retrofit.

Justification: This Section has been incorporated in section 402.1.1 to capture the requirements from the City of Los Angeles Ordinance Number 180822.

Section 402.4 of the C.P.C. is hereby adopted by reference with the following additions and amendments:

402.4 Metered faucets - All faucets in public restrooms shall be s~~S~~elf-closing or self-closing metering faucets ~~shall be installed on lavatories intended to serve the transient public, such as those in, but not limited to, service stations, airports restaurants, and convention halls. Metered faucets shall deliver a maximum of 0.26 gallons (1.0) liter) of water per use.~~

Justification: To incorporate requirements from the City of Los Angeles Ordinance Number 180822.

CHAPTER 5 - WATER HEATERS

Chapter 5 of the C.P.C. is hereby adopted by reference.

CHAPTER 6 - WATER SUPPLY AND DISTRIBUTION

Section 7. Chapter 6 of the C.P.C. is hereby adopted by reference with the following exception:

604.10 ~~Water pipe and fittings with a lead content which exceeds eight (8) percent shall be prohibited in piping systems used to convey potable water.~~ Water pipes, plumbing fittings, fixtures, solder, and flux with lead content shall comply with the California Health and Safety Code Section 116875

~~*Note: On or after January 1, 2010, see section 116875of the Health and Safety Code For the lead content pipes, or plumbing fittings, or fixtures intended for to convey or dispense water for human consumption.*~~

Justification: Mandated by the California Health and Safety Code, Section 116875. In addition, the "*Note*" does not apply because this Code became effective after January 1, 2010, and the requirements have already been incorporated in the 2007 C.P.C.

CHAPTER 7 - SANITARY DRAINAGE

Chapter 7 of the C.P.C. is hereby adopted by reference.

CHAPTER 8 - INDIRECT AND SPECIAL WASTE

Chapter 8 of the C.P.C. is hereby adopted by reference.

CHAPTER 9 - VENTS

Chapter 9 of the C.P.C. is hereby adopted by reference.

CHAPTER 10 – TRAPS AND INTERCEPTORS

Chapter 10 of the C.P.C. is hereby adopted by reference.

CHAPTER 11 - STORM DRAINAGE

Section 8. Chapter 11 of the C.P.C. is adopted by reference, with the following additions and amendments:

Section 1101.11.2.2.2 is not adopted.

Section **1101.13** of the C.P.C. is hereby adopted by reference with the following additions and amendments:

1101.13 All rainwater shall drain by gravity to a place of disposal satisfactory to the Department. If the rainwater cannot be drained by gravity, discharge into a sump may be permitted. Roof drainage shall not have a direct connection to a sump having an air-tight cover. Rainwater sumps serving "public use" occupancy buildings shall be provided with dual pumps arranged to function alternately in case of overload or mechanical failure. The pumps shall have an audio and visual alarm, readily accessible, that signals pump failure or an overload condition. The lowest inlet shall have a minimum clearance of two (2) inches (51 mm) from the high-water or "starting" level of the sump.

Justification: Los Angeles has long periods of drought, and if the pumping system is not regularly exercised it may fail and cause the roof to be overloaded and possibly collapse.

Section 1104.3 is not adopted.

Justification: Carry over from previous Code (Editorial change).

CHAPTER 12 - FUEL PIPING

Section 9. Chapter 12 of the C.P.C is hereby adopted by reference.

CHAPTER 13 - HEALTH CARE FACILITIES AND MEDICAL GAS AND VACUUM SYSTEMS

Chapter 13 of the C.P.C. is not adopted.

Justification: Carry over from previous Code (The Department does not regulate Medical Gas and Vacuum Systems in Health Care Facilities).

CHAPTER 14 - MANDATORY REFERENCED STANDARDS

Chapter 14 of the C.P.C. is hereby adopted by reference.

Section 10. Chapter 15 of the C.P.C is not adopted.

Language to be incorporated under the "Title" with the following sentence:

CHAPTER 15 – FIRE STOP PROTECTION

Not adopted by the City of Los Angeles.

Justification: Although the model Code language for this Chapter has been published, no State Agency has adopted this Chapter. This specification avoids confusion.

CHAPTERS 16 – NONPOTABLE WATER REUSE SYSTEMS

Section 11. Chapter 16A of the C.P.C. is hereby adopted.

Section 12. Chapter 17 is added to the Los Angeles Municipal code to read:

CHAPTER 17 – UNIFORM SWIMMING POOL, SPA, AND HOT TUB

1700.0. BASIC PROVISIONS. The 2009 Uniform Swimming Pool, Spa and Hot Tub Code is hereby adopted by reference.

Justification: Nowhere else in the Plumbing Code are the requirements for Swimming Pool Spa and Hot Tubs addressed. Since the City of Los Angeles has a relatively hot climate, the use of swimming pools are very common.

Section 13. Chapter 18 is added to the Los Angeles Municipal Code to read:

CHAPTER 18 – UNIFORM SOLAR ENERGY CODE

1800.0. BASIC PROVISIONS. The 2009 Uniform Solar Energy Code, Chapters 2 through 8, is hereby adopted by reference.

Justification: Since Los Angeles has the ideal climate for Solar Energy Systems, they are being installed more and more frequently. Chapters 2 through 8 are the relevant Chapters to the Plumbing Code.

APPENDICES

Section 14. Appendices A, B, D, G, I, and K of the C.P.C. are hereby adopted by reference.

Section 15.

CHAPTER 20 - FIRE PROTECTION SYSTEMS

Section 94.2002.0 of the Los Angeles Municipal Code is hereby amended to read:

94.2002.0. ADOPTED STANDARDS. All fire sprinkler and standpipe design, installation and materials shall be in conformity with the ~~2001~~ 2010 edition of the California Building Code and to the applicable portions of standards as specified in Table 20-1 of this Chapter ~~Division~~, except when specified in this Chapter ~~Division~~ as modified or not adopted.

TABLE 20-1

FIRE PROTECTION STANDARDS.	**STANDARD***
Installation of Sprinkler Systems	NFPA 13-~~2002~~ 2010
Installation of Sprinkler Systems in Group R Occupancies Four or Fewer Stories	NFPA 13R-~~2002~~ 2010
Installation of Sprinkler Systems in One- and Two-Family Dwellings	NFPA 13D-~~2002~~ 2010
Standpipe and Hose Systems	NFPA 14-~~2003~~ 2007
Centrifugal Fire Pumps	NFPA 20-~~2003~~ 2007
Water Tanks for Private Fire Protection	NFPA 22- 2003
Private Fire Service Mains	NFPA 24-~~2002~~ 2010
Standard for the Inspection, Testing, and Maintenance of Water – Based Fire Protection Systems	NFPA 25 2006 California Edition
Cutting and Welding Processes	NFPA 51B-~~1999~~ 2009
Hose Threads	NFPA 1963-~~1998~~ 2009
Power Piping	ANSI/ASME B31-1-2001

*NFPA - Published by the National Fire Protection Association.
*ANSI/ASME - Published by the American Society of Mechanical Engineers.

Other NFPA Standards as applicable in Section 2.2 of NFPA 13-~~2002~~ 2010 may be used by reference except when specified in this Chapter ~~Division~~ as modified or not adopted. Wherever reference is made to the Uniform Fire Code it shall mean the Los Angeles Fire Code.

Justification: The California Building Code (CBC) has adopted new standards. "Division" has been changed with "Chapter" for consistency.

Section 16

Section 94.2003.0 of the Los Angeles Municipal Code is hereby amended to read:

94.2003.0. DEFINITIONS.

The terms defined herein shall apply to this Chapter and shall be in addition to the terms defined by NFPA in the Fire Protection Standards adopted in Table 20-1 of this Chapter unless otherwise stated.

Acceptance is acceptance by the building official of Administrative Authority.

Arm-over is a horizontal pipe the extends from the branch line to a single sprinkler or sprinkler above and below a ceiling

~~**Authority having Jurisdiction** is the Building official or the Administrative Authority~~

Justification: Already defined in Section 203.0 of the Los Angeles Plumbing Code.

Building Official is the Superintendent of Building and Safety, or authorized representative, charged with the administrative enforcement of this Code.

Compact Storage is a system of mobile shelving units mounted on rails, and designed to provide the maximum number of rows in a minimum area of floor space.

~~**Compartment** is a space completely enclosed by walls and ceiling. The compartment enclosure is permitted to have openings in walls to an adjoining space if the openings have a minimum lintel depth of 8 inches from the ceiling and the total of all openings do not exceed 8 feet in width. A single opening of 36 inches or less is permitted when there are no other openings to adjoining spaces.~~

Justification: The NFPA 13, 2010 Standard defines Compartment.

Pilot Heads are wet fire sprinklers installed over piping in unsprinklered areas to protect them from fire damage.

Out of Operation is the state of either a pump, a pump driver, a riser, a pressure regulator or any other fire protection appurtenance being non-functional.

Residential Occupancies are Group R Occupancies.

~~**Small Room** is a room of light hazard occupancy classification having unobstructed construction and floor areas not exceeding 800 ft^2 that are enclosed by walls and a ceiling. Openings in walls not exceeding 8 feet in width to adjoining spaces are permitted if the minimum lintel depth is 8~~

~~inches from the ceiling. A single opening of 36 inches or less in width without a lintel is permitted when there are no other openings to adjoining spaces.~~

Justification: The NFPA 13, 2010 Standard defines Small Room.

Sprinkler Alarm is a local alarm unit assembly or apparatus constructed and installed so that any flow of water from a sprinkler system equal to or greater than that from a single automatic sprinkler will result in audible alarm signal on the premises.

Sprinkler System for fire protection purposes is an integrated system of underground and overhead piping designed in accordance with fire protection engineering standards. The installation includes a water supply, such as a gravity tank, fire pump, reservoir or pressure tank and/or connection by underground piping to the City main.
The portion of sprinkler system above ground is a network of specially sized or hydraulically designed piping installed in a building, structure or area, generally overhead and to which sprinklers are connected in a systematic pattern. The system includes a controlling valve and a device for actuating an alarm when the system is in operation. The system is activated by heat or smoke from a fire and discharges water over the fire area.

Standard is a document containing only mandatory provisions, using the word "shall" to indicate requirements. Explanatory material may be included only in the form of fine print notes, in footnotes, or in an appendix.

Standpipe System is a wet or dry system of piping, valves, outlets and related equipment designed to provide water at specified pressures and installed exclusively for the fighting of fires including the following:

> **Class I** is a standpipe system equipped with 2-1/2 inch outlets.
> **Class II** is a wet standpipe system directly connected to a water supply and equipped with 1-1/2 inch outlets intended for use by the building occupants.
> **Class III** is a combination standpipe system directly connected to a water supply and equipped with both 1-1/2 inch outlets for use by the building occupants and 2-1/2 inch outlets for use by the Fire Department or trained personnel. Hose connections for Class III systems may be made through 2-1/2 inch hose valves with easily removable 2-1/2 inch by 1-1/2 inch reducers.

Water Curtain is a line of closely spaced fire sprinklers (or a single sprinkler) aligned adjacent to openings to keep fire from penetrating those openings.

Section 17

Section 94.2007.0 of the Los Angeles Municipal Code is hereby amended to read:

94.2007.0. ~~Reserved~~ DRAINAGE REQUIREMENT FIRE PROTECTION SYTEMS.

All drains shall terminate to an approved location as follows:

1. Drains shall terminate outside the building, subject to the approval of the Department

2. Sanitary Sewer, provided that the Sewer System is adequately sized per the Plumbing Code.

3. Discharge through the curb-face at the street.

4. In high-rise buildings all drains shall terminate to the fire water storage tank, when available. In the event drains are located below the water level of the tank, a sump pump shall be provided to pump the water back to the fire water storage tank.

Justification: Clarification of an approved drainage location, and to enhance the State and the City Los Angeles's efforts to conserve water.

Section 18

Section 94.2010.0 of the Los Angeles Municipal Code is hereby amended to read:

94.2010.0. NFPA-13.

NFPA 13-~~2002~~ 2010 is adopted by reference with the following exceptions and modifications.

2010.1. Section 1.4 is not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.2. Section 3.2 is adopted by reference except that the following terms are not adopted:

3.2.2 Authority Having Jurisdiction.

3.2.6 Standard

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

~~3. **Section 3.3** is adopted by reference except that the following sections are not adopted~~

~~**3.3.6** COMPARTMENT~~
~~**3.3.20** SMALL ROOM~~

Justification: The NFPA-13, 2010 Standard defines Compartment and Small Room.

2010.3 ~~**4 Section**~~ **5.1.3** ~~**2-1**~~ is amended to read:

5.1.3 Classification of Occupancies. For the purpose of determining the level of protection to be provided by required sprinkler system installations, Table No. 5-1 of this ~~Division~~ Chapter shall be used.

For hazard classification other than those indicated, see appropriate nationally recognized standards for design criteria.

When fire sprinkles systems are required in buildings of undetermined use, they shall be designed and installed to have a sprinkler density of not less than that required of an Ordinary Hazard Group 2 use with a minimum design area of 3,000 square feet. Use is considered undetermined if not specified at the time of permit issued.

Where a subsequent occupancy requires a system with a greater capability, it shall be the responsibility of the occupant and/or owner to upgrade the system to the required density for the new occupancy.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards. In addition, "Division" has been changed with "Chapter" for consistency.

2010.3.1 is added to read:

5.1.3.1 Group H, Division 5 Occupancies. Where the design area of the sprinklers system consists of a corridor protected by one row of sprinklers, the maximum number of sprinkler required to be calculated is 13.

Justification: Added by the Office of the State Fire Marshall (SFM) (CBC 903.2.5.2)

2010.3.2 is added to read:

5.1.3.2 Group L Occupancies. Research laboratories and similar areas of a group L occupancy shall not be less than that required for Ordinary Hazard Group 2 with a design area of not less than 3,000 square feet (279 m^2)

Justification: Added by the Office of the State Fire Marshall (SFM) (CBC 903.2.16)

TABLE NO. 5.1

HAZARD CLASSIFICATION

OCCUPANCY OF BUILDING OR PORTION THEREOF	HAZARD CLASSIFICATION
Group A Occupancies used as meeting rooms, library reading rooms, restaurant seating areas, clubs, theaters, museums, health clubs, educational classrooms and churches. Group B Occupancies used as offices, data processing areas, colleges and universities. Group E Occupancies other than shops and laboratories. Group I Occupancy living and sleeping areas Group R, Division I Occupancies[1]. Typically, one would expect that these uses are such that the quantity and combustibility of contents results in relatively low-rate-of-heat-release fires.	Light

Groups B, F, S and U Occupancies used for light manufacturing, commercial kitchens, laundries, automobile parking garages, bakeries, canneries, electronic plants, beverage manufacturing and glass products manufacturing plants not producing dust or fibers. In mixed occupancies housing group L occupancies, the portions of the building not classified as group L occupancy. Typically these uses are such that the quantity of combustibles is relatively low, the combustibility of contents is moderate, storage does not exceed 8 feet in height, and moderate-rate-of-heat-release fires would be expected.	Ordinary Group I

Groups B, F, M, and S Occupancies used for chemical plant laboratories, mercantile, machine shops, printing plants, library stack areas, metal working, wood product assembly, textile manufacturing, confectionery products, cold storage warehouses[2], cereal mills, service stations and repair garages. Typically these uses are such that the quantity of combustibles is moderate. The combustibility of contents is moderate, storage does not exceed 12 feet in height[2] and moderate-rate-of-heat-release fires would be expected. Also: Group A Occupancies such as exhibition halls. Groups B, F and S Occupancies used as tobacco products manufacturing, paper and pulp mills, piers and wharfs, and warehousing[2] of higher combustible contents (including packaging). Group H Occupancies used as feed mills, tire manufacturing, chemical plants, repair garages and woodworking. Group H, Division ~~6~~ 5 Occupancies, except storage rooms with dispensing ~~extra hazard areas).~~ Research laboratories and similar areas of a group L occupancy. Typically these uses are such that high-rate-of-heat-release fires would be expected and the spread of fire would be rapid.	Ordinary Group 2
Group H Occupancies used for printing (using inks with flashpoints below 100 degrees F.) combustible hydraulic fluid-use areas such as die casting and metal extruding, upholstering with plastic foam, rubber reclaiming, compounding, drying, milling, vulcanizing, plywood and particle board manufacturing, saw mills, textile picking, opening, blending, garneting, carding and combining of cotton, synthetics, wool shoddy or burlap. Typically these uses are such that a significant fire hazard exists.	Extra Hazard Group I
Group H Occupancies used as asphalt saturating, flammable liquids spraying, flow coating, open oil quenching, varnish and paint dipping, solvent cleaning and manufactured home or modular building manufacturing (where the finished building enclosure is present and has combustible interiors). Storage rooms with dispensing located in Group H, Division 5 Occupancies. These uses are such that a severe fire hazard exits.	Extra Hazard Group 2[3]

1. See also Section 8.4.5 of NFPA 13- ~~2002~~ 2010.
2. For high-piled storage, see NFPA 13- ~~2002~~ 2010.
3. For additional and more stringent criteria, see California Fire Code Chapters 27, 28, 34 and the Los Angeles Fire Code.

Justification: Group H division 6 occupancy no longer exists in the Building Code. Hazard classifications for H5 Occupancies have been amended by the SFM (CBC Table 903.2.5.2)
2010.4 ~~5.~~**Section 6.1.1.2** is not adopted and **Section 6.1.1.1** is modified to read:

6.1.1.1 All materials and devices shall be listed an approved.

2010.5. ~~6~~ **Section 6.3.6.1** is modified to read:

Section 6.3.6.1 Other types of pipe or tube, such as plastic, may be used if it is investigated and found to be listed for this service.

2010.6 ~~7.~~**Section 6.7.1.3.3** is not adopted

2010.7 ~~8~~ **Section 6.9.1** is modified to read:

Section 6.9.1 Waterflow alarm apparatus shall be listed for the service and constructed and installed so that any flow of water from a sprinkler system equal to or greater than that from a single automatic sprinkler of the smallest orifice size installed on the system shall result in an audible alarm on the premises within two minutes after the flow begins.

2010.8. ~~9~~ **Section 6.9.4.1** is modified to read:

Section 6.9.4.1 Electrically operated alarm attachments forming part of an auxiliary, proprietary, remote station or local signaling system shall be installed in accordance with the Los Angeles Fire Code.

Justification: Sections 2010.4 through 2010.8 have been renumbered.

2010.9. ~~10~~ Section ~~8.14.1.2.9~~ 8.15.1.2.9 is modified to read:

~~**8.14.1.2.9**~~ 8.15.1.2.9 Concealed spaces with volumes not exceeding 160 cubic feet above a room or aggregate of rooms not exceeding 55 square feet in area, shall not require sprinkler protection

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

~~11 Sections 8.14.4.1 through 8.14.4.5 are not adopted and section8.14.4 is modified to read:~~

~~**8.14.4.** Water curtains shall consist of closely spaced sprinklers in combination with draft stops. The draft stops shall be located immediately adjacent to the opening, shall be at least 18 inches deep and shall be of noncombustible to limited combustible material that will stay in place before and during sprinkler operation. Sprinklers shall be spaced not more than six feet apart and placed six to 12 inches from the draft stop on the side away from the opening. Where sprinklers are closer than six feet, cross baffles shall be provided in accordance with Section 8.6.3.4.2 of NFPA-13~~

Justification: This section has been relocated to 2010.14

~~12. Section 8.15.1.1.2.5 is added to read:~~

~~8.15.1.1.2.5. All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electrically monitored where the number of sprinklers are:~~

~~1. Twenty or more in Group I, Division 1.1 and 1.2 Occupancies.~~

~~2. One hundred or more in all other occupancies. Valve monitoring and water flow alarm and trouble signals shall be distinctly different and shall be automatically transmitted to an approved central station, remote station or proprietary monitoring station as defined by national standards, or, when approved by the Building Official with the concurrence of the Chief of the Fire Department, sound an audible signal at a constantly attended location.~~

~~**EXCEPTION:** Underground key or hub valves in roadway boxes provide by the municipality or public utility need not be monitored.~~

Justification: This Section has been relocated to Section 2010.22.

~~13. Section 8.15.1.1.7 is modified to read:~~

~~8.15.1.1.7. **Valve Access.** All valves controlling water supplies for sprinkler systems or portions of the system shall be accessible. These valves shall be within six feet six inches of the floor or shall be operable from fixed ladders or clamped tread ladders on risers, or use chains within six feet six inches of the floor connected to valve hand wheels or other suitable means. All valves shall be provided with adequate clearance for normal operation~~

Justification: This Section has been relocated to Section 2010.23

~~**2010.10** 14 Section 8.15.1.1.9 is added to read:~~

~~**8.15.1.1.9 Floor (Level) Control Valves.**~~

~~**1. Where required.** In buildings with over two levels or two floors, a supervised valve capable of independently controlling the fire sprinkler system on each level, penthouse, roof structure, mezzanine, and basement level shall be installed. The maximum area covered by a single floor control valve shall not exceed the areas specified in section 8.2 of NFPA 13.~~

~~**EXCEPTIONS:**~~

~~1. Floor control valves need not be provided for levels, penthouses, roof structures, mezzanines and basement levels with 20 or fewer fire sprinklers.~~

~~2. In partially sprinklered buildings, sprinklers serving window openings along an exitway or property line, or stair shafts and adjacent doors may have a sectional control valve to control the system in each of these areas instead of a floor control valve.~~
~~3. Valves required for hazardous locations may be located downstream of a floor control valves.~~
~~4. One- and two-family dwellings.~~

~~**2. Locations.** Floor control valves shall be within a stairway enclosure or within the vestibule or on the access balcony of a smoke proof enclosure.~~

~~**EXCEPTIONS:**~~

~~1. In buildings with three or fewer stories or where there is no stair way that serves a floor, control valves may be located elsewhere on the floor level.~~
~~2. Unenclosed stair ways in parking garages.~~

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.11 ~~15~~ Section 8.15.1.1.10 is amended and added to read:

8.15.1.1.10 Special Hazard Locations and Hazardous Occupancies. The piping serving each linen chute, each paint spray booth, each trash room, and each separate trash room shall be controlled by valves that control no other sprinklers.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010. 12 ~~16~~ Section 8.15.1.2.6 is amended and added to read:

8.15.1.2.6 Identification Pressure Regulators. Signs shall be posted at pressure regulators for fire sprinklers stating the required setting of the pressure regulator.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.13. Section 8.15.1.2.15 is amended and added to read:

8.15.1.2.15 Exterior columns under 10 ft^2 (0.93 m^2) in total area, formed by studs or wood joist, with no sources of ignition within the column, supporting exterior canopies that are fully protected with a sprinkler system, shall not require sprinkler protection.

Justification: Amended by the Office of the State Fire Marshall (SFM), and renumbered to provide the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.14. Sections **8.15.4.1 through 8.15.4.5** are not adopted and Section ~~8.14.4~~ 8.15.4 is modified to read:

8.15.4 Water curtains shall consist of closely spaced sprinklers in combination with draft stops. The draft stops shall be located immediately adjacent to the opening, shall be at least 18 inches deep and shall be of noncombustible or limited-combustible material that will stay in place before and during sprinkler operation. Sprinklers shall be spaced not more than six feet apart and placed six to 12 inches from the draft stop on the side away from the opening. Where sprinklers are closer than six feet, cross baffles shall be provided in accordance with Section 8.6.3.4.2 of NFPA-13.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.15. Section 8.15.7.1 is amended and added to read:

8.15.7.1 Unless the requirements of 8.15.7.2 8.15.7.3 are met sprinklers shall be installed under exterior roofs, canopies, porte-cocheres, balconies, decks or similar projections exceeding 4ft (1.2m) in width.

Justification: Amended by the Office of the State Fire Marshall (SFM).

2010.16. Section 8.15.7.2 is amended and added to read:

8.15.7.2. Sprinklers shall be permitted to be omitted where the canopies, roofs, balconies, decks, or similar projections are constructed with materials that are noncombustible, limited-combustible, or fire retardant treated wood as defined in NFPA 703, Standard for Fire Retardant-Treated Wood and Fire Retardant Coatings for Building Materials.

Justification: Amended by the Office of the State Fire Marshall (SFM).

2010.17. Section 8.15.7.3 is amended and added to read:

8.15.7.3 Sprinklers shall be permitted to be omitted from below the canopies, roofs, ~~porte-cochere,~~ balconies, decks, or similar projections of combustible construction, provided the exposed finish material on the roof, or canopy, is noncombustible, limited-combustible, or fire retardant treated wood as defined in NFPA 703, Standard for Fire Retardant–Treated Wood and Fire-Retardant Coatings for Building Materials, and the roofs, or canopies, contains only sprinklered concealed spaces or any of the following unsprinklered combustible concealed spaces:

1. Combustible concealed spaces filled entirely with noncombustible insulation.

2. Light or ordinary hazard occupancies where noncombustible or limited-combustible ceilings are directly attached to the bottom of solid wood joists so as to create enclosed joist spaces 160 ft^3 (4.5 m^3) or less in volume, including space below insulation that is laid directly on top or within the ceiling joists in an otherwise sprinklered attic [See 11.2.3.1.4(4)(d)].

3. Concealed spaces over isolated small roofs, or canopies, not exceeding 55 ft^2.

Justification: Amended by the Office of the State Fire Marshall (SFM).

2010.18 Section 8.15.7.4 is not adopted

Justification: Section deleted by the Office of the State Fire Marshall (SFM).

2010.19 ~~17~~ Section 8.16.1.1 is amended and modified to read:

8.16.1.1 Local water-flow alarms shall be provided on each sprinkler system having more than five sprinklers and shall be located in an area approved by the Administrative Authority.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.20 Section 8.16.1.1.1.4 is amended and added to read:

8.16.1.1.1.4 Where a system includes floor control valves, a hydraulic design information sign containing information for the floor shall be provided at each floor control valve. A hydraulic design information sign shall be provided for each area calculated. The installing contractor shall identify a hydraulically designed sprinkler system with a permanently marked weatherproof metal or rigid plastic sign secured with corrosion resistant wire, chain, or other approved means. Such signs shall be placed at the alarm valve, dry pipe valve, pre-action valve, or deluge valve supplying the corresponding hydraulically designed area.

Justification: Added Section by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.21. Section 8.16.1.1.1.5 is added, modified and amended to read:

8.16.1.1.1.5 Control valves, check valves, drain valves, antifreeze valves shall be readily accessible for inspection, testing, and maintenance. Valves located more than ~~7 feet~~ 6'-6" above the finished floor shall be provided with a means of opening and closing the valve from the floor level.

Justification: Added Section by the Office of the State Fire Marshall (SFM). Modified to avoid conflict with Section 8.16.1.1.7. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.22 Section 8.16.1.1.2.5 is amended and added to read:

8.16.1.1.2.5 All valves controlling the water supply for automatic sprinkler systems and water-flow switches on all sprinkler systems shall be electrically monitored where required by the Los Angeles Building Code Section 91.903.4 and 91.903.4.1.

> **EXCEPTION:** Underground key or hub valves in roadway boxes provided by the municipality or public utility need not be monitored.

Justification:
1. Section relocated from Section 2010.0, Sub-section 12.
2. Monitoring is addressed in the Los Angeles Building Code Section 91.903.4 and 91.903.4.1.
3. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.23. Section 8.16.1.1.7 is amended and added to read:

8.16.1.1.7 Valve Access. All valves controlling water supplies for sprinkler systems or portions of the system shall be accessible. These valves shall be within six feet six inches of the floor or shall be operable from fixed ladders or clamped tread ladders on risers, or use chains within six feet six inches of the floor connected to valve hand wheels or other suitable means. All valves shall be provided with adequate clearance for normal operation.

Justification: Section relocated from Section 2010.0, Sub-section 13. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.24. Section 8.16.1.1.9 is amended and added to read:

8.16.1.1.9 Floor (Level) Control Valves.

1. Where required. In buildings with over two levels or two floors, a supervised valve capable of independently controlling the fire sprinkler system on each level, penthouse, roof structure, mezzanine and basement shall be installed. The maximum area covered by a single floor control valve shall not exceed the areas specified in section 8.2 of NFPA 13.

EXCEPTIONS:

> **1.** Floor control valves need not be provided for levels, penthouses, roof structures, mezzanines and basement with 20 or fewer fire sprinklers.

2. In partially sprinklered buildings, sprinklers serving window openings along an exit way or property line, or stair shafts and adjacent doors may have a sectional control valve to control the system in each of these areas instead of a floor control valve.

3. Valves required for hazardous locations may be located downstream of floor control valves.

4. One- and two-family dwellings.

2. Locations. Floor control valves shall be within a stairway enclosure or within the vestibule or on the access balcony of a smoke proof enclosure.

EXCEPTIONS:

1. In buildings with three or fewer stories or where there is no stairway that serves a floor, control valves may be located elsewhere on the floor level.
2. Unenclosed stairways in parking garages.

Justification:
1. Section relocated from section 2010.0, Sub-section 14.
2. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.25. Section 8.16.1.1.10 is amended and added to read:

8.16.1.1.10 Special Hazard Locations and Hazardous Occupancies. The piping serving each linen chute, each paint spray booth, each trash chute, including trash room, and each separate trash room shall be controlled by valves that control no other sprinklers.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.26. Section 8.16.1.2.6 is amended and added to read:

8.16.1.2.6 Identification Pressure Regulators. Signs shall be posted at pressure regulators for fire sprinklers stating the required setting of the pressure regulator.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.27. Section 8.16.1.5.1 is amended to read:

8.16.1.5.1. ~~Large~~ private fire service main systems shall have sectional fire control valves at appropriate points in order to permit sectionalizing the system in the event of break or for the making of repairs or extensions.

Justification: Amended by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.28. Section 8.16.1.5.1.1 is amended and added to read:

8.16.1.5.1.1 Sectional control valves are not required when the fire service main system serves less than six fire appurtenances.

Justification: Added section by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.29. Section 8.16.1.5.1.2. is amended and added to read:

8.16.1.5.1.2 Sectional control valves shall be indicating valves in accordance with Section 6.7.1.3. NFPA 13.

Justification: Added section by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.30. Section 8.16.1.5.1.3. is amended and added to read:

8.16.1.5.1.3 Sectional control valves shall be located so that no more than five fire appurtenances are affected by shut-down of any single portion of the fire service main. Each fire hydrant, fire sprinkler system riser, and standpipe riser shall be considered a separate fire appurtenance. In-rack sprinkler systems shall not be considered as a separate appurtenance.

Justification: Added section by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.31. Section 8.16.1.5.1.4 is amended and added to read:

8.16.1.5.1.4 The number of fire appurtenances between sectional control valves is allowed to be modified by the authority having jurisdiction.

Justification: Added Section by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.32. Section 8.16.1.5.1.5 is amended and added to read:

8.16.1.5.1.5 Looped underground systems shall be provided with sectional valves regardless of the number of appurtenances.

Justification: Clarification of 8.16.1.5.1.4 (geological) in a seismic event this enables isolation of portions of system to provide fire protection to areas not affected. In addition, Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.33. Section 8.16.1.5.2 is amended, added and modified to read:

8.16.1.5.2 A valve shall be provided on each bank where a main crosses a body of water or outside the building foundation(s) where the main or section of main runs under a building.

Justification: Added section by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.34. Section 8.16.4.2.4 is not adopted:

Justification: This new Code Section has been addressed in Section 94.2004.0 exception #3 of this chapter. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.35. 8.17.1.1 is amended, added and modified to read:

8.17.1.1 Local water-flow alarms shall be provided on each sprinkler system having more than five sprinklers and shall be located in an area approved by the Administrative Authority.

Justification:
1. Section relocated from section 2010.0, Sub-section 17.
2. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.36. ~~18~~ Sections 9.1.1.2 and 9.1.1.3 are not adopted and Section 9.1.1.1 is modified to read:

9.1.1.1 General. Types of hangers shall be in accordance with the requirements of Section 9.1 of NFPA 13.

Exception: Hangers designed by a registered structural or civil engineer for lateral loads in accordance with Section 1613 of the Building Code and the requirements of section 9.3.7 of NFPA 13 shall be acceptable.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.37. Section 9.1.1.4.3 is amended and added to read:

9.1.1.4.3 Fasteners as specified in ~~9.1.3~~ **9.1.4** and **9.1.5** shall be permitted to be not listed.

Justification: Section 9.1.3 has been removed. All concrete anchors must be approved and installed per the Los Angeles Building Code and Los Angeles City research report. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.38. Section 9.1.3.1 is added to read:

9.1.3.1 Unless prohibited by **9.1.3.2** or **9.1.3.3** , the use of listed inserts set in concrete and listed post- installed anchors to support hangars shall be permitted for mains and branch lines provided they meet the requirements of the LABC 91.1613 and 91.1912 and require special inspection as required by 91.1704 of the LABC and installed in conformance with all listing requirements.

Justification: Geological Clarification of location of the requirements for hangars in concrete. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.39. Section 9.1.3.9.1.1 is amended and added to read:

9.1.3.9.1.1 Powder-driven studs used for attaching hangers to the building structure are prohibited in Seismic design Categories C, D, E and F.

Justification: Added section by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.40. ~~19~~ **Section 9.3.5.6.1** is amended and modified to read:

9.3.5.6.1 Unless the requirements of section 9.3.5.6.2 are met, the horizontal loads for braces shall be determined by analysis based on horizontal force of Fp=0.76 Wp, where Fp is the horizontal force factor and Wp is 1.15 times the weight of the water filled piping

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.41. ~~20.~~ **Section 9.3.5.8.7** is modified to read:

9.3.5.8.7 Where pipe is used for sway bracing, it shall have a wall thickness of not less than Schedule 40. The loads determined in **9.3.5.6** shall not exceed the lesser of the maximum allowable loads provided in Table **9.3.5.8.7(a),** Table **9.3.5.8.7(b)**, and Table **9.3.5.8.7(c)** or the manufacturer's certified maximum allowable horizontal loads for 30- to 44-degree, 45- to 59-degree, 60- to 89-degree, and 90-degree brace angles.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.42 ~~21.~~ **Section 9.3.5.8.10** is not adopted.

~~Figure 9.3.5.9.1 is modified by deleting the portion related to lag bolts and lag screws~~

Justification: This section has been deleted. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

~~22.~~ Section 9.3.5.9.4 is not adopted.

2010.43 Section 9.3.5.9.4 is added to read:

9.3.5.9.4 Where Lag screws or power-driven fasteners shall not be used to attach sway braces to the building structure.

Justification: Previously not adopted. However, this Section has been modified by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.44. Section 9.3.5.9.6 is amended and added to read:

9.3.5.9.6 Fastening methods other than those identified in 9.3.5.9 and 9.3.5.8.10 shall not apply to other fastening methods, which shall be acceptable for use if certified by a registered professional engineer to support the loads determined in accordance with the criteria in 9.3.5.6. Calculations shall be submitted to the authority having jurisdiction.

Justification: Modified by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.45. Section 9.3.5.9.7.2 is amended and added to read:

9.3.5.9.7.2 Concrete anchors other than those shown in Figure 9.3.5.9.1 and identified in 9.3.5.8.10 shall be acceptable for use where designed in accordance with the requirements of the building code and certified by a registered professional engineer.

Justification: Modified section by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.46. Section 9.3.6.1(3) is amended and added to read:

9.3.6.1(3) No. 12, 440 lb (200Kg) wire installed at least 45 degrees from the vertical plane and anchored on both sides of the pipe. Powder-driven fasteners for attaching restraint is allowed to be used provided that the restraint component does not support the dead load.

Justification: Modified Section by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.47. Section 9.3.7.7 is not adopted:

Justification: Not adopted by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

~~23. Section 9.3.7.8 is modified to read;~~

~~**9.3.7.8** Lag Screws or powder driven fasteners shall not be used to attach braces to the building structure~~

Justification: This Section was relocated to 2010.43

2010.48 ~~24.~~ **Section 9.3.7.9** is amended and modified to read:

~~**9.3.7.9** Lag Screws or powder driven fasteners shall not be used to attach to the building structure where t~~The systems are required to be protected against earthquakes using a horizontal force factor exceeding 0.50 Wp, where Wp is the weight of the water-filled pipe.

Justification: This Section modified due to the Office of the State Fire Marshall's clarification in Section 9.1.3.9.1.1. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.49. Section 10.6.5.is amended and added to read:

10.6.5. Pipe joints shall not be located under foundation footings. The pipe under the building or building foundation shall not contain mechanical joints.

EXCEPTIONS:
1. Where allowed in accordance with 10.6.2.
2. Alternate designs may be utilized where designed by a registered professional engineer and approved by the enforcing agency.

Justification: Amended Section by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.50. Section 10.9.1 is amended and modified to read:

10.9.1. Backfill shall be well tamped in layers or puddle under and around pipes to prevent settlement or lateral movement. Backfill shall consist of clean fill sand or pea gravel to a minimum of 6" below and to a minimum of 12" above the pipe and shall contain no ashes cinders, refuse, organic matter, or other corrosive materials. Other backfill materials and methods are permitted where designed by a registered professional engineer and approved by the enforcing agency.

Justification: Amended Section by the Office of the State Fire Marshall in NFPA 13 & 24, 2010. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.51. ~~25.~~ Section ~~11.2.3.1.8 (8)~~ 11.1.6.6 is amended and modified to read:

~~**11.2.3.1.8 (8)**~~ **11.1.6.6** When hose valves for Fire Department use are attached to wet pipe sprinkler system risers in accordance with Section ~~8.16.5.2~~ 8.17.5.2 of NFPA-13:

~~(a)~~ **(1)** The water supply shall not be required to be added to the standpipe demand as determined from Section 2020 of this chapter.
~~(b)~~ **(2)** Where the combined sprinkler system demand and hose stream allowance of Table 11.2.3.1.2 of NFPA-13 exceeds the requirements of Section 94.2020 of this division, this higher demand shall be used.
~~(c)~~ **(3)** For partially sprinklered buildings, the sprinkler demand, not including hose stream allowance, as indicated in Table 11.2.3.1.1 of NFPA-13, shall be added to the requirements given in Section 2020 of this chapter.

Justification: Editorial change to keep the proper sequence of numbers and consistency with NFPA Code Sections.

2010.52. Section 11.2.3.1.4(4)(i) is amended and added as follows:

11.2.3.1.4(4)(i) Exterior columns under 10 ft^2 (0.93m^2) in total area, formed by studs or wood joist, with no sources of ignition within the column, supporting exterior canopies that are fully protected with a sprinkler system.

Justification: Amended Section by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.53. Section 11.2.3.2.3.1 is amended and added as follows:

11.2.3.2.3.1 Where listed quick-response sprinklers, excluding ~~including~~ extended coverage quick-response sprinklers, are used throughout a system or portion of a system having the same hydraulic design basis, the system area of operation shall be permitted to be reduced without revising the density as indicated in Figure 11.2.3.2.3.1 when all of the following conditions are satisfied:

1. Wet pipe system
2. Light hazard occupancy
3. 20 ft (6.1 m) maximum ceiling height
4. There are no unprotected ceiling pockets as allowed by 8.6.7 and 8.8.7 exceeding 32 ft^2 (3 m^2)

FIGURE 11.2.3.2.3.1 Design Area Reduction for Quick-Response Sprinklers.

Justification: Amended Section by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.53. Section 11.2.3.2.3.2 is amended and added to read

11.2.3.2.3.2 The number of sprinklers in the design area shall never be less than seven.

Justification: Amended section by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.54. ~~26~~ Section ~~11.2.3.8.5~~ 11.3.3.5 is amended and added to read:

11.3.3.5 ~~11.2.3.8.5~~ When the water curtain is located in an otherwise un-sprinklered area, the design shall include all the sprinklers in each fire separation area being protected.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.55. Section 12.2.1 is amended and added to read

12.2.1 Except as allowed by section 12.2.2, small hose connections
1 ½ (38mm) shall be provided where the system is not subject to freezing in accordance with 8.17.5 for first-aid-fire-fighting and overhaul operations

Justification: Los Angeles has drought conditions that make more likely to have fires and the City of Los Angeles has always required small hose connections. Furthermore, it is impractical to install hose connections in cold storage facilities due to the fact that the water may freeze in the pipe. In addition, editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.56. ~~27~~ Section ~~**15.1.7**~~ **23.1.7** is not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.57. Section 24.1 is amended and added to read

24.1 Approval of Sprinkler Systems and Private Fire Service Mains.

The installing contractor shall do the following:

1. Notify the authority having jurisdiction and the property owner or property owner's authorized representative of the time and date testing will be performed.
2. Perform all required testing (see Section 24.2)
3. Complete and sign the appropriate contractor's material and test certificate(s) (see Figure 24.1)
4. Remove all caps and straps prior to placing the sprinkler system in service
5. Upon system acceptance by the authority having jurisdiction a label prescribed by Title 19 California Code of Regulations, Chapter 5 shall be affixed to each system riser.

Justification: Amended by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.58. Section 24.4 is amended and added to read:

24.4 Instructions.

The installing contractor shall provide the property owner or the property owner's authorized representative with the following:

(1) All literature and instructions provided by the manufacturer describing proper operation and maintenance of any equipment and devices installed
(2) NFPA 25, Standard for the Inspection, testing, and maintenance of Water-Based Fire Protection Systems, 2006 California Edition
(3) Title 19, California Code of Regulations, Chapter 5, "Fire Extinguishing Systems".

Justification: Amended by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.59. Section 24.5.1 is amended and added to read:

24.5.1 "Pipe schedule systems shall be provided with a sign indicating that the system was designed and installed as a pipe schedule system and the hazard classification(s) included in the design."

Justification: Added by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2010.60. Section 24.5.2 is amended and added to read:

24.5.2 The sign shall include the following information:

(1) Location of the design area or areas
(2) Discharge densities over the design area or areas.
(3) Required flow and ~~residual~~ pressure ~~demand~~ of the system at the base of the riser
(4) Presence of high piled storage
(5) Maximum height of storage planned
(6) Aisle width planned
(7) Required flow and pressure of the system at the water supply source.
(8) Required flow and pressure of the system at the discharge side of the fire pump where a fire pump is installed.
(9) Type or types and number of sprinklers or nozzles installed including the orifice size, temperature rating, orientation, K-Factor, Sprinkler Identification Number (SIN) for sprinkler heads when applicable and response type.

(10) The minimum discharge flow rate and pressure required from the hydraulically most demanding sprinkler.
(11) The required pressure settings for pressure reducing valves.
(12) For deluge sprinkler systems, the required flow and pressure at the hydraulically most demanding sprinkler or nozzle.
(13) The protection area per sprinkler based on the hydraulic calculations
(14) The edition of NFPA 13 to which the system was designed and installed.

Justification: Amended and added by the Office of the State Fire Marshall (SFM). Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

Section 19

Section 94.2013.0 of the Los Angeles Municipal Code is hereby amended to read:

94.2013.0. NFPA 13R

NFPA 13R- ~~2002~~ 2010 is adopted by reference with the following exceptions:

Justification: To reflect the latest NFPA Edition adopted by the Office of the State Fire Marshall.

2013.1. **Section 3.2** is adopted by reference except that the following sections are not adopted:

3.2.2 Authority Having Jurisdiction
3.2.7 Standard

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

~~**2. Section 3.3** is adopted by reference, except that the following sections are not adopted:~~

~~**3.3.2** Compartment~~
~~**3.3.6** Residential Occupancy~~
~~**3.3.8** Sprinkler System~~

Justification: New definitions in NFPA 13R

2013.2. **Section 4.1** is added to read:

4.1 Sprinklered Throughout. A building provided with a fire sprinkler system designed and installed in accordance with the requirements of section 94.2013 of this chapter, including its allowable omissions, shall be considered fully sprinklered throughout.

Justification: Editorial amendment. "This standard" was changed to "Section 94.2013 of this Chapter" to refer to the Los Angeles Municipal Code.

2013.3. Section 4.3 is added to read:

4.3 Basic Requirements. The requirements for spacing, location, and position of sprinklers shall be based on the following principals:

(1) Sprinklers shall be installed throughout the premises.
(2) Sprinklers shall be located so as not to exceed maximum protection area per sprinkler.
(3) Sprinklers shall be positioned and located so as to provide satisfactory performance with respect to activation time and distribution.
(4) Sprinklers shall be permitted to be omitted from areas specifically allowed by this standard. (see section 6.6).

Justification: Included in Section 94.2004.0 of this Chapter.

2013.4. Section 4.5 is not adopted.

Justification: Included in Section 94.2004.0 of this Chapter.

2013.5. Section 5.1.4.1 is not adopted.

Justification: Included in Section 94.2004.0 of this Chapter.

2013.6. Section 5.2.11 is added to read:

5.2.11 Welded pipe shall be permitted to be used in accordance with the rules of Section 2010 of this Chapter.

Justification: Referenced in this Chapter under Section 2010. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2013.7. Section 5.2.12.1.3.3 is not adopted.

Justification: This Code is addressed in Section 2040.0 of this Chapter.

2013.8. Section 5.3 is not adopted.

Justification: This Code is addressed in Section 2004 of this Chapter with a specific reference to underground pipe and the California Plumbing Code.

2013.9. ~~3 Section 5.3.3~~ Section 5.4.3 is modified by changing the reference "NFPA 13" to "Section 2010 of this Chapter."

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

~~4 Sections 6.3.2.1 and 6.3.2.2 are modified by changing the reference "NFPA 13" to "Section 2010 of this chapter."~~

Justification: This Section has been relocated to Section 2013.27

2013.10. Section 6.4.4 is not adopted.

Justification: This Code is addressed in Section 94.2013.0, Sub-section 3 and Section 2004 of this Chapter.

~~5. Section 6.5.3 is modified by changing the reference "NFPA13" to "Section 2010 of this Chapter."~~

Justification: This Section has been relocated to Section 2013.23

~~6 Section 6.5.6 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this chapter."~~

Justification: This Section has been relocated to Section 2013.25

~~7 Section 6.6.4.2 is modified to read:~~

~~6.6.4.2. Fire Department Connection. See Section 2020 of this chapter for requirements.~~

Justification: This Section has been relocated to Section 2013.14

~~8 Section 6.6.6 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this chapter."~~

Justification: This Section has been relocated to Section 2013.15

~~9 Section 6.7.2 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this chapter."~~

Justification: This Section has been relocated to Section 2013.21

~~10 Section 6.7.4 is modified by changing the reference "NFPA 13" to "Section 94.2010 of this chapter."~~

Justification: This Section has been relocated to Section 2013.22

2013.11. ~~11~~ **Section ~~6.8.3~~ 6.6.3** is modified by changing the reference "NFPA 220" to the "Building Code."

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2013.12. ~~12~~ **Sections ~~6.8.4 and 6.8.5~~ 6.6.5, 6.6.6 and 6.6.7** are not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2013.13. Section 6.6.7.1 is added to read:

6.6.7.1 Balconies and decks. Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of dwelling units where the building is of type V construction provided there is a roof or deck above Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors area within the 1 inch (25mm) to 6 inches (152mm) below the structural members and a maximum distance of 14 inches (356mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.

Justification: Added by the Office of the State Fire Marshall (SFM).

2013.14. Section 6.11.2 is modified to read:

6.11.2 Fire Department Connection. See Section 2020 of this chapter for requirements.

Justification:
1. Section relocated from Section 2013.0, Sub-section 7.
2. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2013.15. Section 6.13 is modified by changing the reference "NFPA 13" to "Section 2010 of this Chapter."

Justification:
1. Section relocated from Section 2013.0, Sub-section 8.
2. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2013.16. Section 6.13 is modified by changing the reference "NFPA 13" to "Section 2010 of this Chapter"

Justification: Editorial change for consistency with Code language.

2013.17. Section 6.14 is modified by changing the reference "NFPA 13" to "Section 2010 of this Chapter"

Justification: Editorial change for consistency with Code language.

2013.18. Section 6.16.3 is modified by changing the reference "NFPA 13" to "Section 2010 of this Chapter"

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2013.19. Section 7.1.2 is modified by changing the reference "NFPA 13" to "Section 2010 of this Chapter"

Justification: Editorial change for consistency with Code language

2013.20. Section 7.2 is modified by changing the reference "NFPA 13" to "Section 2010 of this Chapter"

Justification: Editorial change for consistency with Code language

2013.21. Section 7.3 is modified by changing the reference "NFPA 13" to "Section 2010 of this Chapter."

Justification:
1. Section relocated from Section 2013.0, Sub-section 9.
2. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2013.22. Section 7.4 is modified by changing the reference "NFPA 13" to "Section 2010 of this Chapter."

Justification:
1. Section relocated from Section 2013.0, Sub-section 10.
2. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2013.23. Section 9.3 is modified by changing the reference "NFPA 13" to "Section 2010 of this Chapter" and "NFPA 22" to "Section 2050 of this chapter."

Justification:
1. Section relocated from Section 2013.0, Sub-section 5
2. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2013.24. Section 9.4 is added modified by changing the reference "NFPA 20" to "Section 2030 of this Chapter."

Justification: Editorial change for consistency with Code language

2013.25. Section 9.6 is modified by changing the reference "NFPA 13" to "Section 2010 of this Chapter."

Justification:
1. Section relocated from Section 2013.0, Sub-section 6.
2. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2013.26. Section 10.1.5 is added to read:

10.1.5 Instructions.
The installing contractor shall provide the property owner or the property owner's authorized representative with the following:
(1) All literature and instructions provided by the manufacturer describing proper operation and maintenance of any equipment and devices installed
(2) NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems 2006 California Edition and Title 19, California Code of Regulations, Chapter 5. (3) Once the system is accepted by the authority having jurisdiction a label as prescribed by Title 19, California Code of Regulations, Chapter 5, shall be affixed to each system riser.

Justification: Amended Section by the Office of the State Fire Marshall (SFM).

2013.27. Section 10.2.2 is modified by changing the reference "NFPA 13" to "Section 2010 of this Chapter."

Justification:
1. Section relocated from Section 2013.0, Sub-section 4.
2. Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.
3. Reference to Section 2010 of this Chapter.

Section 20

Section 94.2014.0 of the Los Angeles Municipal Code hereby amended to read:

2014.0 NFPA 13D

94.2014.0. NFPA 13D- ~~2002~~ 2010 is adopted by reference with the following exceptions:

Justification: To reflect the new NFPA Standard adopted by the Office of the State Fire Marshall.

2014.1 Section 3.2 is adopted by reference except that the following sections are not adopted:

3.2.2 Authority Having Jurisdiction
3.2.7 Standard

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2014.2. Section 3.3.9 is adopted by reference, except that the following Section is not adopted.

3.3.9.7 Sprinkler System

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

~~3. Section 4.1.2 is modified to read:~~

~~4.1.2 A compartment enclosure is permitted to have openings in walls to an adjoining space if the openings have a minimum lintel depth of 8 inches from the ceiling and the total of openings do not exceed 8 feet in width. A single opening of 36 inches or less is permitted when there are no other openings to adjoining spaces.~~

Justification: Defined in NFPA Standard

2014.3. ~~**4**~~ **Section 5.1.2** is not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2014.4. ~~**5**~~ **Section 5.1.3** is not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2014.5. ~~**6**~~ **Section 5.1.4** is added to read:

5.1.4 Fire Department Connections. Fire Department connections for one and two family dwellings shall meet the following requirements:

1. A Fire Department connection shall be provided for any system protecting over 10,000 square feet of habitable space.
2. A single Fire Department connection pipe may be as small as the sprinkler riser, provided the riser is three inches or smaller.
3. The hose inlet fitting may be 1-1/2 inches with 1.5-9 N.H. thread of 2.5-7.5 N.H. standard threads.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2014.6. Section 6.2 is added and modified to read:

6.2. Water Supply Sources. When the requirements of 6.2.2 are met, the following water supply sources shall be considered to be acceptable by this standard:

(1) A connection to a reliable waterworks system with or without an automatically operated pump.
(2) An elevated tank.
(3) A pressure tank designed to American Society of Mechanical Engineers (ASME) standards for a pressure vessel with a reliable pressure source.
(4) A stored water source with an automatically operated pump.
(5) A well with a pump of sufficient capacity and pressure to meet the sprinkler demand. The stored water requirement of 6.1.2 or 6.1.3 shall be permitted to be a combination of the water in the well (including the refill rate) plus the water in the holding tank if such tank can supply the sprinkler system.

Justification: Amended Section by the Office of the State Fire Marshall (SFM).

2014.7. Section 6.2.2 is added to read:

6.2.2 Where a well, pump, ~~and~~ tank or combination thereof is the source of supply for a fire sprinkler system, the water supply shall serve both domestic and fire sprinkler systems, and the following shall be met:

1. A test connection shall be provided downstream of the pump that creates a flow of water equal to the smallest sprinkler on the system. The connection shall return water to the tank.

2. Any disconnecting means for the pump shall be approved.

3. A method for refilling the tank shall be piped to the tank.

4. A method of seeing the water level in the tank shall be provided without having to open the tank.

5. The pump shall not be permitted to sit directly on the floor.

Justification: Amended Section by the Office of the State Fire Marshall (SFM).

2014.8. Section 6.2.2.1 is added to read:

6.2.2.1 Where a fire sprinkler system is supplied by a stored water source with an automatically operated means of pressurizing the system other than an electric pump, the water supply may serve the sprinkler system only.

Justification: Amended Section by the Office of the State Fire Marshall (SFM).

2014.9. Section 6.2.4 is added to read:

6.2.4 Where a water supply serves both domestic and fire sprinkler systems, 5 gpm (19 L/min) shall be added to the sprinkler system demand at the point where the systems are connected, to determine the size of common piping and the size of the total water supply requirements where no provision is made to prevent flow into the domestic water system upon operation of a sprinkler.

Justification: Added Section by the Office of the State Fire Marshall (SFM).

2014.10. ~~7~~ **Section 7.5.1** is modified to read:

7.5.1. Listed residential sprinklers shall be used unless another type is permitted by Sections 7.5.3 or 7.5.4.

EXCEPTION: Listed quick response commercial sprinklers may be ~~installed with approval of the authority having jurisdiction, when installed in all areas of the dwelling~~

installed when construction features exist that are outside the scope of residential sprinkler listings and the hydraulic design is in accordance with Section 8.1.2 as set forth in Sub-section 11 of Section 94.2014 of this Chapter.

Justification: Clarification of Code that was previously adopted. Intent of change is to allow enhanced life safety with the use of residential sprinklers in other portions of homes for wall wetting purposes.

2014.11 ~~8~~ **Section 8.1.2** is modified to read:

Section 8.1.2. Number of Design Sprinklers. The number of design sprinklers shall include all sprinklers within a compartment, up to a maximum of two sprinklers, under a flat, smooth, horizontal ceiling. For compartments containing two or more sprinklers, calculations shall be provided to verify the single operating criteria and the two operating sprinkler criteria.

Exceptions:
1. Single family dwellings having more than 10,000 square feet of habitable space shall follow the design requirements of Section 2013 of this chapter.
2. Attached private garages greater than 1500 square feet shall follow the design requirements of Section 2010 of this chapter.
3. When listed quick response sprinklers are utilized within a dwelling, the hydraulic design shall follow the requirements of Section 2010 of this chapter.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

2014.12. Section 8.1.3.1.2 is not adopted

Justification: Code is addressed in Section.2014.9 of this Chapter.

2014.13. ~~9~~ **Section 8.6.**4 of NFPA 13D is not adopted

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-13 Standards.

Section 21

Section 94.2020.0 of the Los Angeles Municipal Code is hereby amended to read:

94.2020.0 NFPA 14

NFPA 14-~~2003~~ 2007 is adopted by reference with the following exceptions, modifications, and additions:

Justification: To reflect the latest NFPA 14 Edition adopted by the SFM

2020.1. Sections 1.3. through **1.3.3** are not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.2. Chapter 2 is not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.3. Sections 3.2 is adopted by reference, except that the following section is not adopted:

3.2.2 Authority Having Jurisdiction.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.4. Section ~~3.3.6 through 3.3.6.2~~ **3.3.3 through 3.3.3.2** are not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.5. Section 4.1.3 is not adopted.

Justification: This Code is addressed in Section 2004.0 of this Chapter.

~~5. Section 4.4 is modified to read:~~

~~4.4. Joining of Pipe and Fittings. Joining, hanging, and bracing of pipe and fittings shall be in accordance with Section 94.2010 of this division.~~

Justification: Requirements are now part of the NFPA 14 Standard.

2020.6. Section 4.5.1.3 is not adopted.

Justification: This Code is addressed in Section 2010.4

2020.7. 6 **Section 4.6.4** is modified to read:

4.6.4 Nozzles. Nozzles provided for class II standpipe outlets shall be listed variable fog nozzles.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.8. ~~7~~ **Section 4.8.2** including the exception is modified to read:

4.8.2 Each Fire Department connection shall have at least two 2-1/2 inch internal threaded swivel fittings having NH standard threads as specified in NFPA 1963, Standard for Screw Threads and Gaskets for Fire Hose Connections.

The number of Fire Department hose inlets shall be at least as required in Table No. 4.8.2 of this chapter. Fire Department connections shall be equipped with caps to protect against entry of debris into the system.

TABLE 4.8.2
NUMBER OF FIRE DEPARTMENT CONNECTIONS

HEIGHT OF HIGHEST OUTLET ABOVE FIRE DEPARTMENT CONNECTION, FEET	NUMBER OF FIRE DEPARTMENT CONNECTIONS	
	1 or 2 Risers	3 or more Risers
Less than 50	2	2
50 and over	4	6

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.9. ~~8~~ **Section 5.1.3** is modified to read:

5.1.3 The spacing and location of standpipes and hose connections shall be in accordance with Section 905 of the Building Code.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.10. ~~9~~ **Section 5.1.4** is not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.11. ~~10~~ **Section 5.3.3** is modified to read:

5.3.3 Class III Systems. Class III is a standpipe system directly connected to a water supply and equipped with 2-1/2 inch outlets or 2-1/2 inch and 1-1/2 inch outlets when a 1-1/2 inch hose is required. Hose connections for Class III systems may be made through 2-1/2 hose valves with easily removable 2-1/2 inch by 1-1/2 inch reducers.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.12. ~~11~~ **Section** ~~5.6.2~~ **5.5.2** is modified to read:

~~5.6.2~~ **5.5.2** A valved outlet for a pressure gauge shall be installed on the upstream and downstream sides of every pressure regulating device.

EXCEPTION: Class I and Class III hose outlets.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.13. ~~12~~ **Section 6.1.2.5** is modified to read:

6.1.2.5 To minimize or prevent pipe breakage where subject to earthquakes, standpipe systems shall be protected in accordance with Section 2010 of this chapter.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.14. ~~13~~ **Section** ~~6.2.4.1~~ **6.3.4.1** is added to read:

~~6.2.4.1~~ **6.3.4.1** Valves shall be within six feet six inches of the floor or shall be operable from fixed ladders or clamped tread ladders on risers, or use chains within six feet six inches of the floor connected to valve hand wheels or other suitable means.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

~~14 **Section 6.3.5.3** is modified to read:~~

~~**6.3.5.3** Fire Department inlets shall supply all Class I and Class III standpipes except for buildings with multiple zones.~~

~~In buildings which have multiple zones, each zone shall be provided with separate inlet connections.~~

~~Where the Fire Department inlet connection does not serve the entire building, the portions served shall be suitably identified~~

~~The Fire Department connection shall be adequate to supply the required flow and pressure.~~

~~**Exception:** When the risers are at least six-inch size and there are at least six Fire Department inlets, the supply shall be considered adequate.~~

Justification: This Section has been relocated to Section 2020.16

2020. 15. Section 6.3.7.1 is modified to read:

6.3.7.1 System water supply valves, isolation control valves, and other valves in fire mains shall be supervised in an approved manner in the open position by one of the following methods:

1. Where a building has a fire alarm system or a sprinkler monitoring system installed, the valve shall be supervised by:
a. A central station, proprietary, or remote supervising station, or
b. A local signaling service that initiates an audible signal at a constantly attended location.
2. Where a building does not have a fire alarm system or a sprinkler monitoring system installed, the valve shall be supervised by:
a. Locking the valves in the open position, or
b. Sealing of valves and a approved weekly recorded inspection where valves are located within fenced enclosures under the control of the owner.

Justification: Amended Section by the Office of the State Fire Marshall (SFM).

2020.16. Section 6.4.5.3 is added to read:

6.4.5.3 Fire Department inlets shall supply all Class I and Class III standpipes except for buildings with multiple zones.

In buildings which have multiple zones, each zone shall be provided with separate inlet connections.

Where the Fire Department inlet connection does not serve the entire building, the portions served shall be suitably identified

The Fire Department connection shall be adequate to supply the required flow and pressure.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards. Superseded by Section 7.8.2 and Table 7.8.2.1 of NFPA 14 2007.

2020. 17. Section **7.2.2** is added and modified to read:

7.2.2. When system pressure-regulating device(s) are used in lieu of providing separate pumps, multiple zones shall be permitted to be supplied by a single pumping system and pressure-regulating device(s) under the following conditions.

(1) Pressure-regulating device(s) shall be permitted to control pressure in the lower division.
(2) A method to isolate the pressure-regulating device(s) shall be provided for maintenance and repair.
(3) Regulating devices shall be arranged so that the failure of any single device does not allow pressure in excess of 175 psi (12.1 bar) to more than two hose connections.
(4) An equally sized bypass around the pressure-regulating device(s), with a normally closed control valve, shall be installed.
(5) Pressure-regulating device(s) shall be installed not more than 7 ft 6 in (2.31 m) above the floor.
(6) The pressure-regulating device shall be provided with inlet and outlet pressure gauges.
(7) The fire department connection(s) shall be connected to the system side of the outlet isolation valve.
(8) The pressure-regulating device shall be provided with a pressure relief valve in accordance with the manufacturers recommendations.
(9) Remote monitoring and supervision for detecting high pressure failure of the pressure-regulating device shall be provided in accordance with NFPA 72, National Fire Alarm Code.
(10) The pumping system shall be adequate when three pumps are out of operation.

Justification: Clarification of Section 94.2020.21, Sub-section 7.9.3 Alternate 1 of this Chapter.

2020.18. ~~15~~ Section ~~7.3.1~~ 7.3.1.1 is modified to read:

~~7.3.1~~ **7.3.1.1 Fire Department Outlets.** Fire Department outlets shall be installed so as to be easily accessible for use by the Fire Department. Hose connections and hose stations shall be located not less than three feet or more than five feet above the floor. A wrench clearance on all sides of the outlet shall be provided to insure that a 12-inch long wrench can be used to connect hose to outlet. There shall be at least one-inch clearance around the hose valve handle.

Outlets shall be provided with a listed hose valve protected by a 2-1/2 inch by 1-1/2 inch reducer and 1-1/2 inch cap and attachment chain.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.19. ~~16~~ Section 7.3.2 is added and modified to read:

7.3.2 Class I Systems. Class I systems shall be provided with 2 ½ in. (65mm) hose connections in the following locations:

1. At the main floor landing in exit stairways.
2. On each side of the wall adjacent to the exit openings of horizontal exits.

3. In other than covered mall buildings, in each exit passageway at the entrance from the building areas to the passageway.
4. In covered mall buildings, at the entrance to each exit passageway or exit corridor, and at the interior side of public entrances from the exterior to the mall.
5. At the highest landing of stairways with stairway access to a roof, or on roofs with a slope of less than 4 in 12 where stairways do not access the roof.

Justification: This is mandated by the Los Angeles Fire Department (LAFD) to properly operate their fire hose apparatus. This Section is from the 2010 NFPA14. Item Number #1 listed above is the primary change to this Code as mandated by LAFD.

2020.20. ~~17~~ **Section 7.9** is modified to read:

7.9. System Zoning Requirements.

7.9.2. Height Limit. Buildings shall be zoned so that standpipe system risers do not exceed 275 feet in height unless control of the nozzle pressure under both flow and static conditions is attained at each standpipe outlet by the installation of a listed pressure-regulating device and provided further that all of the following three limitations are met:

1. The pressure on the listed pressure-regulating device inlet side is not in excess of the rated working pressure of the listed pressure-regulating device and the remaining portions of the standpipe system are rated for not less than the maximum system pressure.

2. The hose valve outlet pressure is limited as required in Section7.2.1.2 of NFPA-14.

3. The zone height does not exceed 400 feet.

7.9.3. Zoned systems shall comply with Alternate 1 or 2, below:

1. Alternate 1. The pumping system shall be adequate when three pumps are out of operation.

2. Alternate 2. Design shall comply with the following:
When fire pumps are required, separate fire pumps shall be required to serve each zone. Fire pumps that individually serve separate zones and which are located at the same level may be installed in series. Fire pumps installed in series shall serve each zone independently.

Justification: Clarification and Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

~~7.9.3.1 and 7.9.3.1.1~~ **7.9.3.1 and 7.9.3.2** are not adopted

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

7.9.4. Direct supply piping from the higher-zone fire pump to the higher-zone system piping shall be provided when the fire pump for the higher zone is on the same level as the fire pump serving the lower zone. Two direct supply lines shall be provided to each zone with two or more standpipes. The size of the direct supply piping to each zone shall be not less than the size of the largest standpipe riser served.

Lower-zone standpipe piping may be used to supply the higher zone and shall not be less than the size of the largest standpipe riser of the higher-zone system that is being supplied. The two zones shall be connected by a minimum of two supply pipes of which one shall be automatically providing water to the higher zone from the lower zone. A secondary method of supply is required when a residual pressure of 100 psi cannot be provided.

7.9.4.1 is not adopted.

2020.21. ~~18~~ Section 7.10.1.3.1.1 is modified to read:

7.10.1.3.1.1 Where the sprinkler system water supply requirement, including the water stream allowance as determined in accordance with Section 2010 of this chapter, exceeds the system demand established by Sections 7.7 and 7.10.1 of NFPA-14, the larger of the two values shall be provided.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.22. ~~19~~ Subsections (3) and (5) of Section ~~9.1.4~~ 9.1.5 are not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.23. ~~20~~ Section 9.2.1 s added to read:

9.2.1 Buildings Over 150 Feet High.

1. Redundancy. The system shall be adequate when either one pump, one pump driver, one riser or zone pressure regulator is out of operation.

2. Power. Pumps shall be either diesel engine or electric motor driven. Electric fire pump motors shall be supplied from normal and the emergency standby power system. At least 750 g.p.m. shall be supplied by an electric motor driven pump.

If water flow requirements call for more than one pump to start, the normal and emergency power shall be sized to run all pumps at the same time. The normal and emergency power system shall have adequate capacity and rating for all loads, including the redundant pump(s) to be operated simultaneously. The controller for each unit of multiple pumps shall incorporate a sequential timing device to prevent any one driver from starting simultaneously with any other. Failure of a leading driver to start shall not prevent subsequent drivers from starting. Locking out of motors is prohibited.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.24. ~~21~~ **Section 11.2.3** is added to read:

11.2.3 Flushing the System Risers. Water shall flow from the topmost outlet of each riser until the system is clear of all debris.

11.2.3.1 Roof Outlets. Standpipe systems shall be designed so that all risers can be flushed through outlets located on the roof.

11.2.3.2 Flow. All standpipe risers shall be flushed individually through the roof at residual pressure of at least of at least 65 psi until the system is clear of debris. The flow for Class I and Class III standpipes shall be at least 500 g.p.m. through each riser.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

2020.25. ~~22~~ **Section 11.5.6.3** is added to read:

11.5.6.3 Pressure Regulator Valve Test.

11.5.6.3.1 Test Required. When required by the Department, 2-1/2 inch pressure regulator valves installed on standpipe outlets shall be tested for proper operation at a flow of 300 g.p.m. with a residual pressure of 125psi in the presence of a representative of the Department.

Justification: Climatic due to the City of Los Angeles's dry climate and constant threat of fire danger, this Section is mandated by LAFD to properly operate their fire hose apparatus

11.5.6.3.2 Safety. Test nozzles and other equipment shall be adequately secured so as to eliminate danger to personnel.

11.5.6.3.3. Opening. An accessible 2-1/2 inch capped or plugged test opening shall be installed adjacent to each pressure regulator valve.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

11.5.6.3.4 Drain. The test openings shall drain to a minimum 3-inch drain line constructed and installed as required for fire sprinkler drains. The drains shall not discharge where they may cause damage. Where available, drains shall terminate to the fire water storage tank.

Justification: Clarification of an approved drainage location, and to enhance the State and the City Los Angeles's efforts to conserve water.

11.5.6.3.5 Interconnection. The test drain shall either be separate or connect to a fire sprinkler drain to a fire protection tank.

2020.26. ~~23~~ Chapter 12 is modified to read:

Chapter 12. Buildings Under Construction.

12.1. General. During the construction of a building and until the permanent fire-extinguishing system has been installed and is in service, fire protection shall be provided in accordance with this section.

12.2. Where required. Every building four stories or more in height shall be provided with at least one standpipe for use during construction. The standpipes shall be installed when the progress of construction is not more than ~~35~~ 40 feet (~~10668mm~~ 12.19 m) in height above the lowest level of Fire Department access. The standpipe shall be provided with Fire Department hose connections at accessible locations adjacent to usable stairs and the standpipe outlets shall be located adjacent to those usable stairs. The standpipe systems shall be extended as construction progresses to within one floor of the highest point of construction having secured decking or flooring.

In each floor there shall be provided a 2½ inch (63.5 mm) valve outlet for Fire Department use. Where construction height requires installation of a Class III standpipe, fire pumps and water main connections shall be provided to serve the standpipe.

Justification: New Building Code relative to height requirement for Standpipe System in buildings under construction.

12.3 Temporary Standpipes. Temporary Standpipes may be provided in place of permanent systems if they are designed to furnish a minimum of 500 gallons (1893 L) of water per minute at 50 pounds per square inch (345 kPa) pressure with a standpipe size of at least four inches (102 mm). All pumping equipment sufficient to provide this pressure and volume shall be available at all times when a Class III standpipe system is required.

12.4 Detailed Requirements. Standpipe Systems for buildings under construction shall be installed as required for permanent Standpipe Systems

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA-14 Standards.

Section 22

Section 94.2030.0 of the Los Angeles Municipal Code is hereby amended to read:

94.2030.0 FIRE PUMP AND DRIVERS

FIRE PUMPS AND DRIVERS. Fire pumps, their drivers and associated piping and equipment shall conform to the requirements set forth in NFPA 20-~~2003~~ 2007 with the following exceptions and modifications:

Justification: Editorial change to reflect the latest Edition of NFPA 20, adopted by SFM.

2030.1 Sections 1.4 through 1.4.3 are not adopted

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2030.2 Sections 5.7.1 is modified to read:

5.7.1 Fire pumps, equipment used with fire pumping systems, devices and attachments shall be listed. A copy of the manufacturer's certified pump test characteristic curve shall be available for comparison of results of field acceptance tests. The fire pump as installed shall equal the performance as indicated on the manufacturer's certified shop test characteristic curve within the accuracy limits of the test equipment.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2030.3 Sections 5.11.1.4 is modified to read:

5.11.1.4 The relief valve shall discharge to an approved location.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2030.4 Sections 5.14.2.1 is added to read:

5.14.2.1 General. Installation of above-ground suction piping shall conform to the requirements for fire sprinkler piping.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2030.5 **Sections 5.14.4.1** is modified to read:

5.14.4.1 Pump Bypass. A full-way pump bypass with check valve shall be connected downstream of the fire pump shutoff valve when available pressure will supply useful protection with the pump off. There shall be two control valves to isolate check valves in each bypass.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2030.6 **Sections 5.14.11** is added to read:

5.14.11 Fire Department Connections. Fire Department connections shall not be connected on the suction side of the fire pump.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2030.7 **Section 5.17** is modified to read:

5.17. Protection of Piping against Damage Due to Movement. Clearance for the piping shall conform to the requirements of Section 9.3.4 of NFPA 13-~~2002~~ 2010.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2030.8 ~~8~~ **Sections 5.19.2** through **5.19.2.3.3** are not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2030.9. **Section 5.19.3.1.4** is added to read:

5.19.3.1.4 The discharge from the test header shall terminate to the fire water storage tank where available.

Justification: Clarification of an approved drainage location, and to enhance the State and the City Los Angeles's efforts to conserve water.

2030.10 9 **Sections 5.19.3.5** is added to read:

5.19.3.5 Label. Test headers hose valves shall be labeled "TEST CONNECTIONS"
Exception: Temporary Fire Pumps and Outlets.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2030.11 ~~10~~ **Sections 5.24.8** is added to read:

5.24.8 Pressure Maintenance (Jockey or Makeup) pumps. A pressure maintenance pump shall be installed with each fire pump system.

Exception: Fire pump serving class II standpipes, temporary standpipes and fire pumps serving fire systems in one-and-two-dwelling family dwellings.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2030.12. Section 5.30.1 (1) is not adopted.

Justification: Backflow prevention is required by DWP rule 16D for all fire water storage tanks.

2030.13. ~~11~~ **Chapter 9 of NFPA 20** is not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2030.14. ~~12~~ **Sections 10.1** through **10.4.8** are not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2030.15. ~~13~~ **Sections 10.6** through ~~10.9.5~~ **10.10.11** are not adopted.

Justification: Editorial change for consistency with Code Sections numbering and to reflect the appropriate Section in NFPA 20

2030.16. ~~14~~ **Section 11.4** is modified to read:

11.4 Fuel Supply and Arrangement. Fuel supply and arrangement shall be installed as required by the Los Angeles Fire Code.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2030.17. ~~15~~ **Sections 11.4.1** through **11.4.8** are not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

Section 23

Section 94.2040.0 of the Los Angeles Municipal Code is adopted and amended to read:

94.2040.0. UNDERGROUND FIRE PROTECTION PIPING.

This section regulates underground fire protection piping between the City main or other sources of supply and fire hydrants, fire sprinkler risers, and monitor nozzles. Above ground standpipe piping and water spray systems shall conform to applicable code requirements for fire sprinkler piping and to the requirements set forth in NFPA 24-~~2002~~ 2010 with following exceptions and modifications:

Justification: For consistency with the latest NFPA Edition, adopted by the SFM.

2040.1 Chapter 2 is not adopted.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

~~2 **Section 5.9.1** is modified to read:~~

~~**5.9.1 General.** Fire Department connections shall comply with the applicable requirements for fire sprinkler systems~~.

Justification: This Section has been relocated to Section 2040.7

~~3 **Section 5.9.1.5** is added to read:~~

~~**5.9.1.5 Control Valve.** A control valve shall be installed between the City check valve and the point of connection to the fire department connection to the underground piping.~~

Justification: This Section has been relocated to Section 2040.9

~~4 **Section 7.1.1.1** is modified to read:~~

~~**7.1.1.1 Hydrant Valves.** Each fire hydrant shall be isolated by a listed key type gate valve located at least four feet and not more than ten feet from the fire hydrant. The valve shall not be located in a parking space. No fire sprinkler riser valve shall control any fire hydrant.~~

Justification: This Section has been relocated to Section 2040.18

~~**5 Section 7.1.5** is modified to read:~~

~~**7.1.5 Water Supplies.** Water supplies for fire hydrant, monitoring nozzle and water spray systems shall be approved by the Fire Department.~~

Justification: This Section has been relocated to Section 2040.19

2040.2 Section 4.2.1 is added to read.

4.2.1. Installation work shall be done by fully experienced and responsible persons contractors. Contractors shall be appropriately licensed in the State of California to install private fire service mains and their appurtenances.

Justification: Amended Section by the Office of the State Fire Marshall (SFM).

2040.3 Section4.2.2 is added to read:

4.2.2. Installation or modification of private fire service mains shall not begin until plans are approved and appropriate permits secured from the authority having jurisdiction.

Justification: Amended Section by the Office of the State Fire Marshall (SFM).

2040.4 Section 4.2.2.1 is added to read:

4.2.2.1 As approved by the authority having jurisdiction, emergency repair of existing system may start immediately, with plans being submitted to the authority having jurisdiction within 96 hours from the start of the repair work.

Justification: Added Section by the Office of the State Fire Marshall (SFM).

2040.5 Section 5.6. is modified to read:

5.6 Pumps. A single automatically controlled fire pump installed in accordance with Section 94.2030 of this chapter shall be an acceptable water supply source.

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2040.6 Section 5.7 is added and modified to read:

5.7 Tanks shall be installed in accordance with "Section 94.2050 of this chapter

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2040.7 Section 5.9.1 is modified to read:

5.9.1 General. Fire Department connections shall comply with the applicable requirements for fire sprinkler systems.

Justification: Section relocated from Section 2040.0, Sub-section 2.

2040.8 Section 5.9.1.2. is added to read:

5.9.1.2. Fire department connections shall be properly supported and protected from mechanical damage.

Justification: Amended Section by the Office of the State Fire Marshall (SFM).

2040.9 ~~3~~ Section 5.9.1.5 Control Valve. A control valve shall be installed between the City check valve and the point of connection to the fire department connection to the underground piping.

Justification: Section relocated from section 2040.0, Sub-section 3.

2040.10. Section **5.9.5.1** is added to read.

5.9.5.1. Fire department connections shall be on the street side of buildings and as approved by the authority having jurisdiction.

Justification: Amended Section by the Office of the State Fire Marshall (SFM).

2040.11. Section **6.1.5** is modified to read.

6.1.5 A non indicating valve such as an underground gate valve with approved roadway, complete with T wrench, and accepted by the authority having jurisdiction shall be permitted to be used as sectional isolation valves in private service mains that do not supply fire sprinklers.

Justification: To avoid conflict with Section 6.7.1.3 of NFPA 13 which requires all valves controlling sprinklers to be indicating valves.

2040.12. Section **6.2.11 (5)** is not adopted.

Justification: To avoid conflict with Section 6.7.1.3 of NFPA 13 which requires all valves controlling sprinklers to be indicating valves.

2040.13. Section **6.3.3.1** is not adopted

Justification: This code is in conflict with Section 6.3.1 which addresses arrangement of post indicating valves.

2040.14. Section 6.4.1 is modified by changing the reference "NFPA 13" to "Section 94.2050 of this Chapter."

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2040.15. Section 6.6.2.is added to read.

6.6.2. A sectional valve shall be provided at the following locations:

(1)On each bank where a main crosses a body of water.

(2)Outside the building foundation(s) where a main or a section of a main runs under a building.

Justification: Section added by the Office of the State Fire Marshall (SFM).

2040.16. Section **6.6.2.1** through **6.6.2.4** are added to read.

6.6.2.1. Sectional control valves are not required when the fire service main system serves less than six fire appurtenances.

6.6.2.2. Sectional control valves shall be indicating valves in accordance with Section 94.2010 of this chapter

6.6.2.3 Sectional control valves on looped systems shall be located so that no more than five fire appurtenances are affected by shut-down of any single portion of the fire service main. Each fire hydrant, fire sprinkler system riser, and standpipe riser shall be considered a separate fire appurtenance. In-rack sprinkler systems shall not be considered as a separate appurtenance.

6.6.2.4. The number of fire appurtenances between sectional control valves is allowed to be modified by the authority having jurisdiction.

Justification: Added Sections by the Office of the State Fire Marshall (SFM).

2040.17. Section 6.6.2.5 is added to read

6.6.2.5 Looped underground systems shall be provided with sectional valves regardless of the number of appurtenances

Justification: Clarification of 6.6.2.4 (geological) in a seismic event, this enables isolation of portions of a system to provide fire protection to areas not affected.

2040.18. Section 7.1.1.1 is modified to read:

7.1.1.1 Hydrant Valves. Each fire hydrant shall be isolated by a listed key-type gate valve located at least four feet and not more than ten feet from the fire hydrant. The valve shall not be located in a parking space. No fire sprinkler riser valve shall control any fire hydrant.

Justification: Section relocated from Section 2040.0, Sub-section 4.

2040.19. Section 7.1.5 is modified to read:

7.1.5 Water Supplies. Water supplies for fire hydrant, monitoring nozzle and water spray systems shall be approved by the Fire Department.

Justification: Section relocated from section 2040.0, Sub-section 5.

2040.20. Section 10.6.5.is added to read:

10.6.5. Pipe joints shall not be located under foundation footings. The pipe under the building or building foundation shall not contain mechanical joints.
EXCEPTIONS:

I. Where allowed in accordance with 10.6.2
II. Alternate designs may be utilized where designed by a registered professional engineer and approved by the enforcing agency.

Justification: Amended Section by the Office of the State Fire Marshall (SFM).

2040.21. Section 10.9.1 is added to read:

10.9.1. Backfill shall be well tamped in layers or puddled under and around pipes to prevent settlement or lateral movement. Backfill shall consist of clean fill sand or pea gravel to a minimum of 6" below and to a minimum of 12" above the pipe and shall contain no ashes cinders, refuse, organic matter, or other corrosive materials. Other backfill materials and methods are permitted where designed by a registered professional engineer and approved by the enforcing agency.

Justification: Amended Section by the Office of the State Fire Marshall (SFM).

2040.22. Section **10.10.2.2.5** is added to read:

10.10.2.2.5 When permitted by the authority having jurisdiction and required for safety measures presented by the hazards of open trenches, the pipe and joints shall be permitted to be backfilled, provided the ~~installing contractor~~ owner takes the responsibility for locating and correcting leakage.

Justification: Language has been added for clarification. (Geological) to ensure that only listed and approved products are installed.

2040.23. Section **12.1** is added to read:

12.1 **General** Above ground pipe and fittings shall comply with the applicable Section 2010 of this chapter that address pipe, fittings, joining methods, hangers and installation

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2040.24. Section **12.2.5** is added to read:

12.2.5 To minimize or prevent breakage where subject to earthquakes, above ground pipe shall be protected in accordance with the seismic requirements of Section 2010 of this chapter
Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

2040.25. Section **12.2.6** is added to read:

12.2.6. Mains that pass through walls, floors, and ceilings shall be provided with clearances in accordance with Section 2010 of this chapter

Justification: Editorial change to maintain the proper sequence of numbers in accordance with Sections of the Plumbing Code and NFPA Standards.

Section 24

Section **94.2060.1.3** of the Los Angeles Municipal Code is hereby amended to read:

94.2060.1.3. The tank shall be supplied from the City water main via a fill line. The fill line shall be sized to replenish the water in the tank at a rate equal to, or greater than, the required fire pump capacity. The fill line shall be a minimum of two inches in diameter and ~~may have~~ shall not exceed ~~multiple~~ a maximum of four inlets into the tank. Each fill line inlet shall be provided with a manual shut off valve in the open position as well as an automatic valve. The fill line bypass shall be provided around all fill lines with a shut off valve that is normally closed. Means shall be provided to flow test the automatic fill lines.

An approved tank-fill line connected to the Fire Department connection shall also be installed. These fill lines shall have listed shutoff valves that are normally closed. The tank need not be on the roof.

For systems with multiple fill lines, the over flow system may be designed based on the failure of the largest fill valve serving the tank.

Justification: Clarification to minimize number of devices where potential failure could occur.

ORDINANCE NO. _____

An ordinance amending the Los Angeles Municipal Code and incorporating by reference the 2010 Edition of the California Mechanical Code and further adopt all the current amendments of the Article 5 of Chapter IX of the Los Angeles Municipal Code except for the following changes.

THE PEOPLE OF THE CITY OF LOS ANGELES

DO ORDAIN AS FOLLOWS:

CHAPTER 1 - ADMINISTRATION

PART 1 - GENERAL

Section 1. Section 95.112.0 of the Los Angeles Municipal Code is amended to read:

PART III - PERMITS AND INSPECTIONS

112.0 PERMITS.

112.1. GENERAL. No person shall install or alter, repair, relocate, replace or add to any installed heating, ventilating, air-conditioning, or refrigeration equipment or other miscellaneous heat-producing appliances unless a permit for the work has been obtained from the Department, except as provided in this Code.

EXCEPTION:
1. A separate permit shall not be required for installation of any heating, ventilating, air-conditioning, or refrigeration equipment or other miscellaneous heat-producing appliances for which a combined building/mechanical permit has been obtained pursuant to Section 91.107.2 of the Los Angeles Municipal Code.

2. No person shall be subject to a fine or payment of an investigation fee for starting and doing any emergency repair work without a permit being first obtained, if a permit for work is obtained on or before 12:00 noon on the third day the office of the Department is open for public business after the work was started. (See Section 98.0402 of the Los Angeles Municipal Code).

3. No permit shall be required for:

A. Any portable ventilating equipment.

B. Any portable comfort-cooling unit.

C. Any steam, hot or chilled water piping within any comfort- heating or cooling system regulated by this Code.

D. Any portable evaporative cooler.

E. Any unit refrigeration system.

F. Any cooking range, broiler unit or domestic-type clothes dryer.

G. Any replacement or repairing of a compressor provided the compressor replaced or repaired is of the same horsepower rating and is installed in the same location.

H. Any replacement or repair of controls, motors and components which are not part of, or used for, any emergency smoke-control system required by the Building Code or the Fire Code.

I. Any replacement or repair of any component part of listed factory-assembled comfort-heating or comfort-cooling equipment which does not alter its original approval and complies with all other applicable requirements of this Code.

J. Any repair of equipment not specified here, if the total value of the repair is less than $500.00 for labor and material. For the purpose of this requirement, no permit shall be required where the work is performed on more than one piece of equipment or duct system that is located in the same building, provided the total value of material and labor for any separate and individual repair does not exceed $500.00.

K. The replacement of defective forced-air units with one of equivalent size, Btu/hr (~~L~~/W) rating and vent capacity when the vent does not require replacement or relocation in a detached single-family dwelling and the replacement is performed by a contractor with a valid Certificate of Registration pursuant to Section 91.1716 of the Building Code. A Certificate of Compliance pursuant to Section 91.108.12 of the Building Code must be filed with the City in lieu of a permit.

L. The replacement of defective air-conditioning units when they are replaced with one of equivalent size and Btu/hr (~~L~~/W) rating by a contractor with a valid Certificate of Registration pursuant to Section 91.1705 of the Building Code. A Certificate of Compliance pursuant to Section 91.108.12 of the Building Code must be filed with the City in lieu of a permit.

The foregoing exemptions for permit requirements shall not apply where the equipment is regulated by the California Energy Commission, or the equipment is used to provide the required heating capacity for any residential occupancy, or the equipment is used as part of an emergency smoke-control system.

The foregoing exemptions from permit requirements shall not be deemed to allow any equipment regulated by this Code to be installed in a manner contrary to other provisions of this Code.
Justification: The units where wrong.

112.2. PERMIT REQUIRED. A permit shall be obtained for all heating, ventilating, air-conditioning or refrigeration equipment or other miscellaneous heat-producing appliances moved with, or installed in, a relocated building in the City.

112.3. SEPARATE PERMIT. A separate permit shall be obtained for the equipment installed in each separate building or structure and for the work required by each building permit.

112.4. INCIDENTAL GAS. Any qualified installer as specified in Section 95.113.4 of this Code may install incidental gas piping to connect any heating appliance or absorption unit to the existing gas piping system, provided:

1. The incidental piping installation complies with the requirements as set forth in the Los Angeles Plumbing Code; and

2. There is an existing gas supply meter on the premises serving the gas piping system.

Section 2. Section 95.113.0 of the Los Angeles Municipal Code is amended to read:

113.0 APPLICATION FOR PERMIT.

113.1. APPLICATIONS.

1. To obtain a permit, the applicant shall file an application on forms furnished by the Department. The application shall contain all information necessary to the lawful enforcement of the provisions of this Code.

2. The application shall be accompanied by approved plans and specifications when required by this Code.
3. When the Department determines that the information on the application is in conformance with this Code, the Department shall issue a permit upon receipt of the total fees.

113.2. PLANS AND SPECIFICATIONS.

1. Except for minor installations satisfactory to the Department, plans and specifications for the complete installation of comfort-heating systems, comfort-cooling systems, absorption units, ventilation systems and hoods shall be filed with the Department and approved before the issuance of any permit for the following:

A. Comfort- Heating, Comfort-Cooling, Absorption Unit and Ventilation Systems:

1. ~~Commercial Applications:~~ Installations where the aggregate Btu/h input capacity is 500,000 Btu/h (~~2299.3 L/W~~ 146,500W) and over for comfort heating, or for comfort cooling, or for absorption units.

Justification: 500,000btu/h are 146,500W

EXCEPTIONS:

1. Duct alterations.
2. Addition of air conditioning equipment having a rating of 5 tons or less.
3. Addition of general ventilation exhaust fans having a rating of 2000 cfm or less.
4. Replacing air conditioning equipment with the same size and type.

~~**2. Residential Applications:** Installations where the aggregate Btu/h capacity is 500,000 Btu/h (2299.3 L/W) and over for comfort heating, or for comfort cooling, or for absorption units.~~

~~**EXCEPTIONS:**~~

~~1. Duct alterations.~~
~~2. Replacement of air conditioning equipment with the same size and type.~~
~~3. Systems within individual dwelling units or guest rooms.~~

Justification: There is no difference between commercial and residential applications from a code point of view.

B. Smoke-control systems.

C. Any comfort-cooling compressor or refrigeration compressor for any system which ~~contains any Group B refrigerant~~ requires a machinery room.

Justification: the code has changed the denominations of the refrigerant and has become more specific on the amount of refrigerant before the system is dimmed dangerous enough to require a machinery room.

D. Any commercial cooking hood and ventilation system, except for approved vent-less hoods that are installed in accordance with the manufacturer's installations and other conditions of approval as determined by the Los Angeles City Testing Laboratory.

E. Product conveying ventilation systems.

2. One complete set of plans and specifications shall be filed for checking before approval is given by the Department. After approval, the plans shall be returned to the applicant. The approved set of plans shall be on the job site for availability during construction and inspection.

3. When the plans and specifications do not comply with provisions of this Code, the necessary changes or revisions shall be made.

4. The information contained on the plans shall be clearly legible and specifically indicated. No plan shall be of a scale smaller than 1/8 inch per foot.

5. Specifications, when submitted, shall be legible and definitively stated, and be included either on the plans or on separate sheets.

6. The approval of any plans or specifications shall not be construed to sanction any violation of this Code.

7. No person shall materially deviate from approved plans or specifications or fail, neglect or refuse to comply with those plans or specifications unless permission to do so has first been obtained from the Department.

8. Plans and specifications shall be prepared by and bear the signature and registration number of a professional engineer in an appropriate discipline who is duly registered by the State of California Board of Registration for Professional Engineers and Land Surveyors, except as provided by the State of California Business and Professions Code.

113.3. INFORMATION ON PLANS AND SPECIFICATIONS.
1. The plans or specifications shall show all of the following:

A. The layout for each floor with dimensions of all working spaces and a legend of all symbols used;
B. The location, size and materials of all air ducts, air inlets and air outlets;
C. The location of all fans, warm-air furnaces, boilers, absorption units, refrigerant compressors and condensers;
D. The rated capacity or horsepower of all boilers, warm-air furnaces, heat exchangers, blower fans, refrigerant compressors and absorption units;
E. The location, size and materials of all combustion products, vents and chimneys;
F. The location and area of all ventilation and combustion-air openings and ducts;
G. The location of all air dampers, fire dampers, smoke- control dampers and combustion-products-type smoke detectors;
H. The information necessary to show compliance of the mechanical equipment with the state energy standards;
I. The occupancy of each area served by any heating, air- conditioning or ventilation system;
J. The location of all required fire-resistive separations that are penetrated by ducts or openings of any heating, air-conditioning or ventilation system;
K. The complete drawings of all commercial hoods and ventilation systems, including the cooking appliances served by the hoods, and verify:
1. The interconnection of the fire-extinguishing system and fuel shutoff devices;
2. Compliance with Health Department requirements; and
3. Compliance with South Coast Air Quality Management District requirements.
L. The weight of ~~any~~ the equipment ~~weighing more than that specified in Chapter 13 of ASCE 7~~

Justification: Los Angeles is a highly seismic area and it is important to know the weight of the equipment.

2. All plans and specifications required by this section shall be drawn with indelible pencil or drawn or printed in ink, or made by reproduction process which produces a permanent print. Every sheet of each set of plans and specifications shall show the address of the proposed work and the name and address of the owner or lessee of the premises.

The plans and specifications shall be of sufficient clarity to show that the proposed installation will conform to the provisions of this Code and of all applicable laws, ordinances, rules, regulations and orders.

113.4. QUALIFIED INSTALLER. It is unlawful for any person who is not a qualified installer to install, alter, reconstruct or repair any equipment regulated by this Code unless the person is under the direct supervision of a qualified installer.

A qualified installer is:

1. A person who holds a valid contractor's license in the proper classification issued by the State of California; or

2. A person who holds a valid Maintenance Certificate of Registration issued pursuant to the provisions of this Code; or

3. A person who is the owner of a single-family dwelling and has demonstrated to the satisfaction of the Department his or her qualifications to satisfactorily perform mechanical work in the dwelling which is occupied by the owner, and their accessory buildings, provided that all of the following conditions are met:

A. The work is performed prior to sale of the dwelling.
B. The home owner has actually resided in the residence for the 12 months prior to completion of the work.
C. The homeowner has not availed himself or herself of this exemption on more than two structures during any three year period.

4. A person who is employed by a governmental agency that is required to comply with the provisions of this Code, and who is qualified, as determined by the Department, to supervise or control any work regulated by this Code.

Chapter 2 of the C.M.C. is hereby adopted by reference with the following exceptions:

CHAPTER 2 – DEFINITIONS

Section 3. Section 217.0 of the CMC is amended to read:

217.0. O.

Occupancy. The purpose for which a building or part thereof is intended to be used,

Occupancy Classification. Classifications are defined in the ~~California~~ Los Angeles Building Code

Occupied space. An enclosed space intended primarily for other purposes such as storage rooms that are only occupied occasionally and for short periods of time.

Justification: Editorial change to refer to the LABC.

Chapter 3 of the C.M.C. is hereby adopted by reference with the following exceptions:

CHAPTER 3 - GENERAL REQUIREMENTS

Section 4. Section 312.0 of the CMC is amended to read

312.0 Water Supply. Water supplies and backflow protection shall be as required by the Los Angeles Plumbing Code.

Justification: For consistency with the Los Angeles Plumbing Code.

Chapter 4 of the C.M.C. is hereby adopted by reference

CHAPTER 4 - VENTILATION AIR SUPPLY

Chapter 5 of the C.M.C. is hereby adopted by reference with the following exceptions:

CHAPTER 5 - EXHAUST SYSTEMS

Section 5. Section 507.1.1 of CMC is amended to read:

Section507.1.1 Electric ~~C~~cooking equipment that has been listed in accordance with UL 197 and provided with integral recirculation system (also referred to as ductless hoods) or non integral recalculating system listed in accordance with UL 710B ~~or an equivalent standard for reduced emissions~~ shall not be required to be provided with an exhaust system.[NFPA 96:4.1.1.1*]

Justification: The original code section refers to the wrong UL standard

Chapter 6 of the C.M.C. is hereby adopted by reference

CHAPTER 6 - DUCT SYSTEMS

Chapter 7 of the C.M.C. is hereby adopted by reference

CHAPTER 7 - COMBUSTION AIR

. Chapter 8 of the C.M.C. is hereby adopted by reference

CHAPTER 8 - CHIMNEYS AND VENTS

CHAPTER 9 – INSTALLATION OF SPECIFIC EQUIPMENT

Chapter 9 of the C.M.C. is hereby adopted by reference

900.0 BASIC PROVISIONS.

Chapter 9 of the C.M.C. is hereby adopted by reference.

Chapter 10 of the C.M.C. is hereby adopted by reference

CHAPTER 10 - STEAM AND HOT WATER BOILERS

Chapter 11 of the C.M.C. is hereby adopted by reference

CHAPTER 11 - REFRIGERATION

Chapter 12 of the C.M.C. is hereby adopted by reference

CHAPTER 12 - HYDRONICS

Chapter 13 of the C.M.C. is hereby adopted by reference

CHAPTER 13 - FUEL GAS PIPING

Chapter 14 of the C.M.C. is hereby adopted by reference

CHAPTER 14 – PROCESS PIPING

Chapter 15 of the C.M.C. is hereby adopted by reference

CHAPTER 15 – SOLAR SYSTEMS

Chapter 16 of the C.M.C. is hereby adopted by reference

CHAPTER 16 – STATIONARY FUEL CELL POWER PLANTS

Chapter 17 of the C.M.C. is hereby adopted by reference

CHAPTER 17 - STANDARDS

Chapter 18 of the C.M.C. is hereby adopted by reference

CHAPTER 18 – APPENDICES

ORDINANCE NO. _____

An ordinance amending Article V to Chapter XII, section 125.06 of the Los Angeles Municipal Code relating to water efficiency requirements in the City of Los Angeles.

THE PEOPLE OF THE CITY OF LOS ANGELES

DO ORDAIN AS FOLLOWS:

Section 1. Article V of Chapter XII SEC. 125.06 of the Los Angeles Municipal Code is amended to read:

SEC. 125.06. EXEMPTIONS.

Buildings for which plans were accepted by the Department of Building and Safety and a fee paid prior to the effective date of this Article are exempt from this article.

Any exemption from the requirements of this Article requires written approval from the Department of Building and Safety, except that exemptions from section 125.03 subsections (f) and (g) require approval from the Department of Water and Power. Such exemption will only be granted for existing buildings where use of High Efficiency fixtures is infeasible because their installation will compromise public health, safety, or welfare. Any petition for exemption must be accompanied by a registered engineer's report documenting the need for such exemption and such exemption must be approved in writing by the Department of Building and Safety. Exemptions regarding section 125.03 subsections (f) and (g) shall be approved by the Department of Water and Power.