BUILDING STANDARDS COMMISSION
2525 Natomas Park Drive, Suite 130
Sacramento, California 95833-2936
(916) 263-0916 FAX (916) 263-0959

April 7, 2011

Craig George, Division Manager
City of Malibu
23815 Stuart Ranch Road
Malibu, CA 90265-4861

Dear Mr. George:

This letter is to acknowledge receipt on January 31, 2011, of the City of Malibu submittal pertaining to Ordinance No. 354U with findings and is acceptable for filing. Your filing attests to your understanding that according to Health and Safety Code Section 17958.7 no modification or change to the California Building Standards Code shall become effective or operative for any purpose until the finding and the modification or change have been filed with the California Building Standards Commission (the Commission).

This letter attests only to the filing of these local modifications with the Commission, which is not authorized by law to determine the merit of the filing.

As a reminder, local modifications are specific to a particular edition of the Code. They must be readopted and filed with the Commission in order to remain in effect when the next triennial edition of the Code is published. In addition, should you receive Fire Protection District ordinances for ratification, it is required to submit the ratified ordinances to the Department of Housing and Community Development [H&SC Section 13869.7(c)], attention State Housing Law Program Manager, rather than the Commission.

If you have any questions or need any further information, you may contact me at (916) 263-0916.

Sincerely,

Enrique M. Rodriguez
Associate Construction Analyst

cc: Chron
Local Filings

City of Malibu

23815 Stuart Ranch Road · Malibu, California · 90265-4861
Phone (310) 456-2489 · Fax (310) 456-7650 · www.ci.malibu.ca.us

January 27, 2011

California Building Standards Commission
2525 Natomas Park Drive, Suite 130
Sacramento, CA 95833-2936

Re: City of Malibu Code Adoption and Amendments:

Pursuant to Health and Safety Code Section 17958.7(a), the City of Malibu hereby submits to the California Building Standards Commission for processing Ordinance No. 354U, an urgency ordinance of the City of Malibu adopting by reference Title 26 of the Los Angeles County Code, incorporating the California Building Code, 2010 Edition; Title 27 of the Los Angeles County Code, incorporating the California Electrical Code, 2010 Edition; Title 28 of the Los Angeles County Code, incorporating the California Plumbing Code, 2010 Edition, Title 29 of the Los Angeles County Code, incorporating the California Mechanical Code, 2010 Edition; Title 30 of the Los Angeles County Code, incorporating the California Residential Code, 2010 Edition, the California Green Building Standards Code, 2010 Edition and Title 32 of the Los Angeles County Code, incorporating the California Fire Code, 2010 Edition.

Should you have any questions, you may contact me at (310) 456-2489, extension 229.

Sincerely,

for Craig George
Division Manager – Environmental and Building Safety /
Deputy Building Official

City Council Meeting
12-13-10
Item
4.A.

Council Agenda Report

To: Mayor Wagner and the Honorable Members of the City Council

Prepared by: Craig George, Division Manager – Environmental and Building Safety

Reviewed by: Vic Peterson, Community Development Director

Approved by: Jim Thorsen, City Manager

Date prepared: November 22, 2010 Meeting date: December 13, 2010

Subject: California Building Standards Codes (continued from November 8, 2010)

RECOMMENDED ACTION: 1) After the City Attorney reads the title of the ordinance, adopt Ordinance No. 354U, an urgency ordinance of the City of Malibu adopting by reference Title 26 of the Los Angeles County Code, incorporating the California Building Code, 2010 Edition; Title 27 of the Los Angeles County Code, incorporating the California Electrical Code, 2010 Edition; Title 28 of the Los Angeles County Code, incorporating the California Plumbing Code, 2010 Edition, Title 29 of the Los Angeles County Code, incorporating the California Mechanical Code, 2010 Edition; Title 30 of the Los Angeles County Code, incorporating the California Residential Code, 2010 Edition, the California Green Building Standards Code, 2010 Edition and Title 32 of the Los Angeles County Code, incorporating the California Fire Code, 2010 Edition; making amendments to said codes and declaring the urgency thereof; 2) after the City Attorney reads the title of the ordinance, introduce on first reading Ordinance No. 354 adopting by reference various construction codes with amendments and appendices; and 3) direct staff to schedule second reading and adoption of Ordinance No. 354 for the January 10, 2011 City Council meeting. This procedure is in accordance with California Government Code Title 5, Division 1, Part 1, as required by the Building Standards Commission.

FISCAL IMPACT: City Council Resolution No. 10-30 established the Environmental and Building Safety Division Fee Schedule for Plan Check and Permit Fees. The additional cost associated with construction related to these new provisions is negligible or less than one (1) percent of construction cost and this is offset in savings due to mitigating property damage and loss.

DISCUSSION: This item was originally scheduled for the November 8, 2010 City Council Regular meeting; however, it was continued to allow time for Los Angeles County to adopt the Codes since our adoption is predicated on Los Angeles County's adoption.

The State's Health and Safety Code (Section 17958) mandates that the California Building Standards Commission adopt and publish the California Building Standards Code (Title 24 California Code of Regulations) every three (3) years. The 2010 Edition of the California Code of Regulations, Title 24, which incorporates the below-listed model codes, becomes effective statewide on January 1, 2011. If approved, Ordinance No. 354 would amend Malibu Municipal Code Chapters 15.04 Adoption of Building Code; 15.08 Adoption of Electrical Code; 15.12 Adoption of Plumbing Code; 15.16 Adoption of Mechanical Code; and 8.12 Adoption of Fire Code, by repealing references to the prior editions of the Construction Codes.

The list below identifies the model codes upon which the 2010 Title 24 is based:

California Building Standard Code	**Reference Model Code**
2010 California Building Code	2009 International Building Code (ICC)
2010 California Residential Code	2009 International Residential Code (ICC)
2010 California Green Building Standards Code	N/A
2010 California Plumbing Code	2009 Uniform Plumbing Code (IAPMO)
2010 California Mechanical Code	2009 Uniform Mechanical Code (IAPOMO)
2010 California Electrical Code	2009 National Electrical Code (NFPA)
2010 California Fire Code	2009 International Fire Code (ICC)

The construction codes proposed for adoption by reference with amendments include the following:

- 2010 California Building Code as amended by the 2011 Los Angeles County Building Code
- 2010 California Residential Code as amended by the 2011 Los Angeles County Residential Code
- 2010 California Green Building Standards Code
- 2010 California Plumbing Code as amended by the 2011 Los Angeles County Plumbing Code
- 2010 California Mechanical Code as amended by the 2011 Los Angeles County Mechanical Code
- 2010 California Electrical Code as amended by the 2011 Los Angeles County Electrical Code
- 2010 California Fire Code as amended by the 2011 Los Angeles County Fire Code

These related codes are based upon and are consistent with the provisions found in the California Building Code. The benefit of adopting these additional codes is to provide building and fire inspectors / officials and plan examiners with further clarification of the intent and the applicability of the California Building Code when presented with a variety of construction issues.

For the first time, the State has adopted the new 2010 California Green Building Standards Code (CAL Green) mandating new requirements for the planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, environmental quality, and installer and special inspector qualifications. These new requirements in conjunction with the 2010 California Energy Standards requirements will greatly increase the energy efficiency and natural resource conservation of all new buildings submitted for plan check and constructed after January 1, 2011.

In addition, the State adopted for the first time the 2009 International Residential Code. This new code provides for a number of new prescriptive measures for residential construction. These new prescriptive measures allow both the design and construction for one and two family dwellings without requiring additional engineering design if they meet certain conditions. However, the most significant change with the adoption of the International Residential Code is the requirement for all new single-family and multi-family dwellings to have fire sprinklers. This requirement is specific for all new construction in the State of California.

In an effort to provide consistency within other cities of the Los Angeles Basin and to provide the public with locally applicable and efficient codes, Malibu has joined efforts with a majority of city building departments within Los Angeles County to undergo thorough examinations of previous and proposed amendments. These amendments are consistent with the efforts of the building officials that participated in the "Los Angeles Region Uniform Code Program". The goal of these collaborative multi-jurisdictional groups is to minimize differences in Code language and interpretation within the region, thereby assisting the local construction industry by unifying and streamlining the permitting and construction process.

The Environmental and Building Safety Division is recommending that changes and modifications be made to the Codes and are advising that certain changes and modifications to the 2010 Editions of the California Building, Residential, Green Building, Plumbing, Mechanical, Electrical and Fire Codes are reasonably necessary due to local conditions in the City of Malibu. Other modifications are of an administrative or procedural nature and concern themselves with subjects that are not covered by the Codes or are reasonably necessary to safeguard life and property within the City of Malibu.

Pursuant to the California Health and Safety Code, it is necessary for the Council to make required findings as outlined in Attachment No. 3. The findings are in draft form pending adoption by the County Board of Supervisors, scheduled for November 23, 2010.

ALTERNATIVES: No alternatives are recommended. State law mandates that the 2010 California Building Codes will become effective on January 1, 2011.

ATTACHMENTS:

1. Ordinance No. 354U
2. Ordinance No. 354
3. Table of Findings

ORDINANCE NO. 354U

AN ORDINANCE OF THE CITY OF MALIBU ADOPTING BY REFERENCE TITLE 26 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA BUILDING CODE, 2010 EDITION; TITLE 27 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA ELECTRICAL CODE, 2010 EDITION; TITLE 28 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA PLUMBING CODE, 2010 EDITION; TITLE 29 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA MECHANICAL CODE, 2010 EDITION; TITLE 30 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA RESIDENTIAL CODE, 2010 EDITION, THE CALIFORNIA GREEN BUILDING STANDARDS CODE, 2010 EDITION AND TITLE 32 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA FIRE CODE, 2010 EDITION; MAKING AMENDMENTS TO SAID CODES AND DECLARING THE URGENCY THEREOF

The City Council of the City of Malibu does hereby ordain as follows:

Section 1. Findings.

Pursuant to California Health and Safety Code Sections 17958.5, 17958.7 and 18941.5, the City Council hereby makes each finding of reasonable necessity for modifications as stated separately in Attachment No. 3 to the December 13, 2010 City Council Agenda Report for Item No. X.X., for each such modification as identified in Los Angeles County Titles 26, 27, 28, 29, 30, and 32. These modifications to the California Building Standards Code, incorporating the model codes are reasonably necessary due to the local climate, characterized by hot, dry summers and the high potential for seismic activity which make structures particularly vulnerable to rapidly spreading fires and structural damage.

Section 2. Amendments

15.04 Building Code Adopted

Section 15.04.010 of the City of Malibu Municipal Code is amended to read as follows:

15.04.010 Adoption of Building Code.

Except as hereinafter provided, Title 26 Building Code of the Los Angeles County Code , as amended and in effect on January 1, 2011, adopting the California Building Code, 2010 Edition (Part 2 of Title 24 of the California Code of Regulations) is incorporated herein by reference as if fully set forth below and shall be known and may be cited as the Building Code of the city of Malibu.

The provisions of the Building Code applying to dwellings, lodging houses, congregate residences, hotels, motels, apartment houses, convents, monasteries or other uses classified by the building code as a group R occupancy and including Chapters 1, 2, 3, 98 and 99 shall constitute and may be cited as the Housing Code of the City of Malibu.

In the event of any conflict between provisions of the California Building Code, 2010 Edition, Title 26 of the Los Angeles County Building Code, or any amendment to the Building Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 26 of the Los Angeles County Building Code and the California Building Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.04.040 of the Malibu Municipal Code is amended to read as follows:

15.04.040 Violation-Penalty.

Every person violating any provision of the Title 26 Los Angeles County Building Code and appendices, adopted by reference by Section 15.04.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

Section 15.04.050 of the City of Malibu Municipal code is amended to read as follows:

15.04.050 Amendments to Building Code

Notwithstanding the provisions of Section 15.04.010 of this Chapter, Title 26 Los Angeles County Building Code is amended to read as follows:

Section 103.5 is hereby amended to read as follows:

103.5 Costs.

Any person that violates any provision of this code shall be responsible for the costs of any and all code enforcement actions taken by the building official in response to such violations. These costs shall be based on the amounts specified in Table 1-F.

All other fees are as established by the current City of Malibu fee schedule. Where no fee is established by the City of Malibu fee schedule, the Los Angeles County Code fee schedule shall apply.

Section 105.1.1 is amended to read as follows:

105.1.1 General.

Unless otherwise provided for below, in order to conduct the hearings provided for in this code and also to determine the suitability of alternate materials and types of construction and to provide for reasonable interpretations of the provisions of this code, there shall be a building board of appeals consisting of five members who are qualified by experience and training to pass upon matters pertaining to building construction. The building official shall be an *ex officio*-member and shall act as secretary to the board. The members of the building board of appeals shall be appointed by the City Council and shall hold office at its pleasure. The building board of appeals shall adopt reasonable rules and regulations for conducting its investigations. The board shall establish that the approval for alternate materials and the modifications granted for individual cases are in conformity with the intent and purpose of this code and that such alternate material, modification or method of work offered is at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability, safety and sanitation and does not lessen any fire-protection requirements or any degree of structural integrity. The building board of appeals shall document all decisions and findings in writing to the building official with a duplicate copy to the applicant, and the board may recommend to the City Council such new legislation as is consistent therewith.

Section 105.3 is hereby deleted in its entirety.

Section 105.6 is hereby deleted in its entirety.

Section 106.1.1 is hereby added to read as follows

106.1.1 Parking Lots.

A plan review and permit shall be required for the surfacing, resurfacing, replacement, reconfiguration and striping of parking lots and parking structures serving commercial and multifamily occupancies.

Any of the aforementioned activities in or on existing parking lots must comply with current zoning, National Pollution Discharge Elimination Systems (N.P.D.E.S.) and accessibility requirements as required by applicable codes and standards. Fees are determined by the current fee schedule.

Section 106.3 is hereby amended to read as follows:

106.3 Work Exempted.

A building permit shall not be required for the following:

1. One-story detached accessory buildings used as tool and storage sheds, playhouses and similar uses, provided the projected roof area does not exceed 120 square feet and the plate height does not exceed 12 feet (3.69 m) in height above the grade plane at any point and the maximum roof projection does not exceed 24 inches.

2. Fences and walls not over 6 feet (1829 mm) in height.

3. Steel tanks supported on a foundation not more than two feet (610 mm) above grade when the height does not exceed 11/2 times the diameter.

4. Gantry cranes and similar equipment.

5. Retaining walls that retain not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding a Class I, II, or III-A liquids.

6. Motion picture, television and theater stage sets and scenery, except when used as a building.

7. Ground mounted radio and television antennae towers which do not exceed 45 feet (13 716 mm) in height and ground support dish antennas not exceeding 15 feet (4572 mm) in height above finished grade in any position.

8. Light standards which do not exceed 30 feet (9144 mm) in height.

9. Flagpoles not erected upon a building and not more than 15 feet (4572 mm) high.

10. A tree house provided that:

    10.1. It does not exceed 64 square feet (5.94 m^2) in area nor 8 feet (2438 mm) in height from floor to roof.

10.2. The ceiling height as established by door height or plate line does not exceed 6 feet (1829mm).

11. Canopies or awnings attached to a Group R or U Occupancy and extending not more than 54 inches (1372 mm) from the exterior wall of the building.

12. Sheds, office or storage buildings, and other structures incidental to and work authorized by a valid grading or building permit. Such structures must be removed upon expiration of the permit or completion of the work covered by the permit.

13. Oil derricks.

14. Platforms, walks and driveways not more than 30 inches (762 mm) above grade and not over any basement or story below and which are not part of an accessible route.

15. Prefabricated swimming pools accessory to a Group R, Division 3 Occupancy in which the pool walls are entirely above the adjacent grade and if the capacity does not exceed 5,000 gallons (18 927 L). Fences, gates, door alarms, and other protection devices that are accessory to the prefabricated swimming pool are not exempt from the permit requirements.

17. Playground equipment.

Unless otherwise exempted, separate plumbing, electrical and mechanical permits will be required for the above-exempted items.

Exemption from the permit requirements of this Code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of other laws or ordinances.

Section 107.9 is hereby deleted in its entirety.

Section 107.13 is hereby amended to read as follows:

107.13 Investigation Fee for Work without Permit.

Whenever any work has been commenced without a permit as required by the provisions of Section 106.1 of this code, a special investigation shall be made prior to the issuance of the permit. An investigation fee shall be collected for each permit so investigated.

The payment of the investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

Section 108.1.1 is hereby added to read as follows:

108.1.1 Occupancy Inspection.

All existing commercial occupancies are required to apply for an occupancy inspection prior to occupancy of a building or tenant space by a new owner or occupant.

Upon successful completion of the occupancy inspection the Building Official shall issue a new certificate of occupancy to the building or tenant space as required in Section 109 of the California Building Code.

The certificate of occupancy issued will remain valid and in effect until a change of occupant occurs or is revoked for cause by the Building Official or as required by this code.

Fees determined by the current fee schedule.

Section 108.4.2 is amended to read as follows:

108.4.2 Foundation inspection.

Inspection shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. All materials for the foundation shall be on the job site; however, where concrete is ready mixed in accordance with approved nationally recognized standards, the concrete need not be on the job site. Where the foundation is to be constructed of approved treated wood, additional inspections may be required by the building official. Required set back and pad elevations shall be established by survey prior to approval by the Building Official.

Section 108.4.6 is amended to read as follows:

108.4.6 Final inspection.

Inspection shall be made after finish grading is approved and the building is completed and ready for occupancy and all other required agency approvals have been obtained.

15.08 Electrical Code Adopted

Section 15.08.010 of the City of Malibu Municipal Code is amended to read as follows:

15.08.010 Adoption of Electrical Code.

Except as hereinafter provided, Title 27, Electrical Code, of the Los Angeles County Code, as amended and in effect on January 1, 2011, adopting the California Electrical Code, 2010 Edition (Part 3 of Title 24 of the California Code of Regulations) is hereby incorporated herein by reference as if fully set forth below, and shall be known and may be cited as the Building Code of the City of Malibu.

In the event of any conflict between provisions of the California Electrical Code, 2010 Edition, Title 27 of the Los Angeles County Electrical Code, or any amendment to the Building Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 27 of the Los Angeles County Electrical Code and the California Electrical Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.08.030 of the Malibu Municipal Code is amended to read as follows:

15.08.30 Violation-Penalty.

Every person violating any provision of the Title 26 Los Angeles County Electrical Code and appendices, adopted by reference by Section 15.08.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

15.12 Plumbing Code Adopted

Section 15.12.010 the City of Malibu Municipal Code is hereby amended to read as follows:

15.12.010 Adoption of Plumbing Code.

Except as hereinafter provided, Title 28, Plumbing Code, of the Los Angeles County Code, as amended and in effect on January 1, 2011, adopting the California Plumbing Code, 2010 Edition (Part 5 of Title 24 of the California Code of Regulations), is hereby incorporated herein by reference as if fully set forth below, and shall be known and may be cited as the Plumbing Code of the City of Malibu.

In the event of any conflict between provisions of the California Plumbing Code, 2010 Edition, Title 28 of the Los Angeles County Plumbing Code, or any amendment to the Building Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 28 of the Los Angeles County Plumbing Code and the California Plumbing Code, 2010 Edition, has been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.12.030 of the City Malibu Municipal Code is amended to read as follows:

15.12.030 Violation –Penalty.

Every person violating any provision of the Title 28 Los Angeles County Plumbing Code and appendices, adopted by reference by Section 15.12.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

Section 15.12.050 of the Malibu Municipal Code is hereby amended to read as follows:

15.12.050 Amendment to Plumbing Code

Notwithstanding the provisions of section 15.12.010 of this chapter, Title 28 Los Angeles County Plumbing Code is amended to read as follows:

Section 103.1.3 is hereby added to read as follows:

103.1.3 Operating Permits.

As of January 1, 2003, all applicants applying for new construction and residential additions, served by an onsite wastewater treatment system, shall be required to apply for and be issued an Operating Permit in addition to any permits required for the installation of an onsite wastewater treatment system. Operating Permits shall be required in addition to any permits required for the replacement or renovation of existing onsite wastewater treatment systems.

The Operating Permit shall be issued to the owner of the property. In the event of the sale of the property a new Operating Permit shall be applied for by the new owner within 30 days of the finalization of the sale of the property.

Homeowners associations will be considered the owner of the property for condominiums and townhouses for the purpose of enforcement of this code.

Existing commercial and multifamily occupancies shall apply for an Operating Permit through the Malibu Building Safety Department prior to January 1, 2004, or as required by the Building Official due to the proximity of the system to surface waters, history of failure, inadequate groundwater separation, inadequate soil conditions, hazardous geologic conditions or other conditions that may cause the system to negatively impact the health and safety of the community or the environment.

All on site wastewater treatment systems serving commercial and multifamily occupancies are subject to specific or general wastewater discharge requirements/ permits as established and issued by the Los Angeles Regional Water Quality Control Board.

The level of management required by conditions of the Operating Permit will be established by the Building Official based on the type of system and the level of risk to the public health and safety and the environment by the system.

Section 103.1.3.1 is hereby added to read as follows

103.1.3.1 Renewal of Operating Permits.

Operating Permits for commercial and multifamily occupancies shall be required to be renewed every two years from the date of initial issuance or as ordered by the Building Official. Operating Permits for single family residential occupancies utilizing alternative systems shall be renewed every three years or upon the sale of the property. Operating Permits for single family residential occupancies utilizing conventional systems shall be renewed every five years or upon the sale of the property. The Building Official may waive the requirement for renewal of a permit at the sale of a property if an Operating Permit was issued not more than 12 months from the date of property transfer.

Section 103.1.3.2 is hereby added to read as follows:

103.1.3.2 Fees.

Fees for Operating Permits and renewal of Operating Permits shall be as set forth in the current fee schedule as approved by the City Council.

Section 103.1.3.3 is hereby added to read as follows:

103.1.3.3 Revocation of Operating Permit.

After an administrative hearing, the Building Official may revoke or suspend an Operating Permit for failure on the part of the permit holder to meet the conditions of the permit or when the occupant is deemed to be in violation of the requirements of the Los Angeles County Health Department or the Los Angeles Regional Water Quality Control Board or this code.

Section 103.1.3.4 is hereby added to read as follows:

103.1.3.4 Appeals.

The permitee may appeal the revocation or suspension of the Operating Permit by the Building Official to the Building Board of Appeals in conformance with Section 109 of the Building Code.

Section 103.1.3.5 is hereby added to read as follows

103.1.3.5 Approval for Onsite Wastewater Treatment System Inspectors: As of January 1, 2003

1. Onsite wastewater treatment system inspectors who perform inspection in the City of Malibu shall be a California Certified Engineering Geologist, a California Registered Professional Geotechnical Engineer, a California Registered Civil Engineer, a California Registered Environmental Health Specialist, a California Licensed Contractor (with an A or C-42 license), who have attended training provided, or authorized by the City of Malibu; and who have passed an examination prepared, and administered by the City of Malibu, or an agent authorized by the City of Malibu, to qualify as an approved onsite wastewater treatment systems inspector pursuant to this code.

2. The City of Malibu may approve onsite wastewater treatment system inspectors who attend training provided, or authorized by the City of Malibu, and who pass a standard examination prepared, and administered by the City of Malibu, or an agent authorized by the City of Malibu. Said examination shall be designed to establish the fitness of the applicant for certification to assess the condition and function of onsite wastewater treatment systems, and to determine whether maintenance, including repair, or replacement of system components, is necessary.

3. The passing score for the examination shall be 75% correct answers to all questions posed. Any person who is denied approval as an onsite wastewater treatment system inspector based on his, or her failure to pass the examination given by the City of Malibu may request, and is entitled to receive, a written statement of the City of Malibu's basis for denial.

4. The City of Malibu shall maintain a list of all approved onsite wastewater treatment system inspectors. The list shall be available for inspection, or examination by any person. A copy of the list may be obtained by any person upon request.

5. The City of Malibu may revoke, or suspend the approval, and/or registration of an onsite wastewater treatment system inspector after opportunity for an administrative hearing when it determines that the onsite wastewater treatment system inspector has falsified, or fraudulently altered a system inspection report, or misrepresented, or fails to provide a copy of an inspection report to the Building Official of the results of an inspection preformed by the onsite wastewater treatment system inspector.

6. It shall be a violation of this code for any person to falsify, misrepresent or fraudulently alter a system inspection report, or the result of an inspection.

7. Onsite wastewater treatment system inspectors shall submit the results of the inspection on a System Inspection Report form approved by the City of Malibu together with the signed statement at the bottom of the form attesting that the inspection has been performed, and any recommendations regarding upgrade, repair or maintenance of the onsite wastewater treatment system made by the system inspector in the form were made consistent with the system inspector's training, expertise and experience in the maintenance and proper functioning of the onsite wastewater treatment systems and in accordance to the requirements of this code.

Section 103.1.3.6 is hereby added to read as follows:

103.1.3.6 Criteria for Inspection.

The Building Official shall establish reasonable guidelines for the inspection of existing systems to be as non-intrusive as possible, to avoid damage to the system, and any unnecessary disturbance of the surrounding soil area, which is related to the treatment process.

Section 203 is amended by adding the following:

Alternative System – An onsite wastewater treatment system providing enhanced sewage effluent treatment, secondary or better.

Section 206 is amended by adding the following:

Disinfection – To treat by means of a chemical, physical or other process such as chlorination, ozonation, application of ultraviolet light or sterilization designed to eliminate pathogenic organisms and producing an effluent of 200 MPN/100 mL fecal coliform or less and 104 MPN/100 mL enterococcus or less.

Section 221 is amended by adding the following:

Secondary Treatment – The processing of sewage effluent by means of a treatment device which renders a sewage effluent of 30 mg/L biochemical oxygen demand or less, 30 mg/L total suspended solids or less and 15 mg/L oil and grease or less.

Section 222 is amended by adding the following:

Tertiary Treatment – The processing of sewage effluent by means of a treatment device which renders a sewage effluent of 30 mg/L biochemical oxygen demand or less, 30 mg/L total suspended solids or less, 15 mg/L oil and grease or less, 200 MPN/100 mL fecal coliform or less and 104 MPH/100 mL enterococcus or less.

Section 710.9 is hereby amended by adding the following:

All such pumps and receiving tanks shall be automatically discharged. All sumps shall be provided with pumps or ejectors of the duplex type, simplex pumps are prohibited, and shall be so arranged to function alternately with each pump or ejector cycle, and to function independently in case of overload or mechanical failure. The lowest inlet shall have a minimum clearance of two (2) inches for the high water "starting" level of the sump.

All such pumps and receiving tanks shall be equipped with an automatic alarm system. The alarm system shall be activated upon failure of either pumps or ejectors, whether independently or simultaneously. The alarm shall emit an audible alarm, which can be detected from any location within the building and immediately outside the building served by such sumps and receiving tanks. The Building Official may approve other alarm systems, which provide equivalent enunciation of failure of the pumps or ejectors.

Subsection K1 (G) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles County Plumbing Code, is amended to read as follows:

(G) No onsite wastewater treatment system, or part thereof, shall be located in any other property other than the property which is the site of the building or structure served by such onsite wastewater treatment system, nor shall any onsite wastewater treatment system or part thereof be located at any point having less than the minimum distances indicated in Table K-1.

Nothing contained in this Code shall be construed to prohibit the use of all or part of another property for a onsite wastewater treatment system or part thereof, where secondary sewage effluent treatment, or better, is provided, when proper cause, transfer of ownership, or change of boundary not in violation of other requirements has been first established to the satisfaction of the Building Official. The instrument recording such action shall constitute an agreement with the Building Official which shall clearly state and show that the areas so joined or used shall be maintained as a unit during the time they are so used. Such agreement shall be recorded in the office of the County Recorder as part of the conditions of ownership of said properties, and shall be binding on all heirs, successors, and assigns to such properties. A copy of the instrument recording such proceedings shall be filed with the Building Official.

Subsections K1 (K), and (L) are added to Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code to read as follows:

(K) Commercial buildings and multiple family dwellings to be constructed, or remodeled, after the effective date of this section shall have a onsite wastewater treatment system which provides tertiary sewage effluent treatment as defined by the Building Official, prior to final sewage effluent disposal, unless otherwise approved by the Building Official.

(L) Commercial buildings and multiple family dwellings served by an existing onsite wastewater treatment system which is to be replaced, renovated, or repaired, after the effective date of this section shall have a onsite wastewater treatment system which provides tertiary sewage effluent treatment as defined by the Building Official, prior to final sewage effluent disposal, unless otherwise approved by the Building Official.

Section K2 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code, is amended to read as follows:

The liquid capacity of all septic tanks shall conform to Tables K-2 and K-3 as determined by the number of bedrooms or apartment units in dwelling occupancies or the estimated waste/sewage design flow rate or the number of plumbing fixture units as determined from Table 7-3 of this Code, whichever is greater.

Section K3 and Subsection K3 (3), (4), and (5) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code, are amended to read as follows:

The minimum effective absorption area in disposal fields in square feet (m^2), and in seepage pits in square feet (m^2) of side wall, shall be predicated on the required septic tank capacity in gallons (liters) and/or estimated waste/sewage flow rate, which ever is greater, and shall be as follows:

(3) No excavation for a leach line or leach bed shall extend within five (5) feet (1524 mm) of ground water nor to a depth where sewage may contaminate the underground water stratum.

Exception: When approved by the Building Official, this separation distance may be reduced. The applicant shall supply evidence of ground water depth to the satisfaction of the Building Official.

(4) The minimum effective absorption area in any seepage pit shall be calculated as the excavation sidewall area below the inlet exclusive of any hardpan, rock, clay, or other impervious formations. The minimum required area of porous formation should be provided in one or more seepage pits. No excavation shall extend within ten (10) feet (3038 mm) of ground water, nor to a depth where sewage may contaminate underground water stratum.

Exception: When approved by the Building Official, this separation distance may be reduced. The applicant shall supply evidence of ground water depth to the satisfaction of the Building Official.

(5) Leaching chambers shall be sized on the bottom absorption area (nominal until width) in square feet.

Subsection K4 (A) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code, is amended to read as follows:

(A) The construction dimensions of the subsurface sewage effluent disposal area of an onsite wastewater treatment system shall be based on soils analysis and/or percolation tests. Soils analysis shall be conducted by a licensed soils engineer and the results expressed in United States Department of Agriculture classification terminology. Percolation tests shall be conducted by a licensed geologist, a licensed soils engineer, a licensed civil engineer, or a California Registered Environmental Health Specialist.

Subsections K5 (E) and (L) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles Plumbing Code are amended to read as follows:

(E) Access to each septic tank shall be provided by at least two (2) manholes twenty (20) inches (508 mm) in minimum diameter. One (1) access manhole shall be located over the inlet and one (1) access manhole shall be located over the outlet. Wherever a first compartment exceeds twelve (12) feet (3658 mm) in length, an additional manhole shall be provided over the baffle wall.

(L) Septic tanks shall have the required manholes accessible by extending the manhole openings to grade in a manner acceptable to the Building Official.

Subsection K5 (M)(2) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles Plumbing Code is hereby deleted.

Building OfficialSubsections K6 (A), (B), (C), (D), and (I) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles Plumbing Code are amended to read as follows:

(A) Distribution lines shall be constructed of perforated ABS pipe, perforated PVC pipe, or other materials approved by the Building Official, provided that sufficient openings are available for distribution of the effluent into the trench area.

(B) Before placing filter material or drain lines in a prepared excavation, all smeared or compacted surfaces shall be removed by raking to a depth of one (1) inch (25.4 mm) and the loose material removed. Clean stone, gravel, slag, or similar material acceptable to the Building Official, varying in size from three fourths (3/4) inch to two and one-half (2-1/2) inches (19.1 mm to 64 mm) shall be placed in the trench to the depth and grade required by this section. Drain pipe shall be placed on the filter material in an approved manner. The drain lines shall then be covered with filter material to the minimum depth required by this section and this covered with material approved by the Building Official to prevent closure of voids with earth backfill. No earth backfill shall be placed over the filter material until after inspection and acceptance.

Exception: Listed or approved plastic leaching chambers may be used in lieu of pipe and filter material. Chamber installations shall follow the rules for disposal fields, where applicable, and shall conform to manufacturer's installation instructions.

(C) A grade board staked in the trench to the depth of filter material shall be utilized when the distribution line is constructed of material which will not maintain alignment without continuous support.

(D) When seepage pits are used in combination with disposal fields, the filter material in the trenches shall terminate at least five (5) feet (1524 mm) from the seepage pit excavation.

(I) Disposal fields shall be constructed as follows:

	Minimum	Maximum
Number of drain lines per field	1	---
Length of each line	---	100 ft. (30480 mm)
Bottom width of trench	18 in. (457 mm)	36 in. (914) mm
Spacing of lines, center-to-center		6 ft. (1829 mm)
Depth of earth cover of lines (preferred - 18 in. (457 mm)	12 in. (305 mm)	---
Grade of lines	level	3 in./100 ft. (25 mm/m)
Filter material under drain lines	12 in. (305 mm)	36 in. (914 mm)
Filter material over drain lines	2 in. (51 mm)	---

Minimum spacing between trenches or leaching beds shall be four (4) feet (1219 mm) plus two (2) feet (610 mm) for each additional foot (305 mm) of depth in excess of one (1) foot (305 mm) below the bottom of the drain line. Distribution drain lines in leaching beds shall not be more than six (6) feet (1829 mm) apart on centers, and no part of the perimeter of the leaching bed shall be more than three (3) feet (914 mm) from a distribution drain line. The terminal ends of all disposal fields and trenches shall have an inspection riser constructed of minimum eight (8) inch white PVC. The rise is to be extended to grade and shall terminate in an approved, accessible screw type cover approved by Building Official. The riser shall also extend to the bottom of the disposal field, and shall have one half (1/2) inch holes spaced at four (4) inches on center within the disposal area. Disposal fields, trenches, and leaching beds shall not be paved over or covered by concrete or any material that can reduce or inhibit any possible evaporation of sewer effluent accept as approved by the Building Official.

Subsections K7 (B), (C), and (D) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code are amended to read as follows:

(B) Multiple seepage pits installations shall be served through an approved distribution box. Distribution boxes shall have their locations permanently marked with a steel post, concrete marker or other durable material. Additionally, each distribution box shall have an inspection riser of white PVC or concrete of at least eight (8) inches in diameter. The inspection riser shall allow inspection access to the distribution box. Each riser shall terminate with an approved screw type cap.

(C) Each seepage pit shall be circular in shape and shall have an excavated diameter of not less than four (4) feet (1219 mm). Approval shall be obtained prior to construction for any pit having an excavated diameter greater than six (6) feet (1829).

(D) Seepage pits may be constructed in one of two ways:

(1) An eight (8) inch (204 mm) white, or other similar approved color, sewer pipe of approved material shall be installed true and plumb in the center of the seepage pit excavation extending from the bottom of the seepage pit excavation to the inlet depth. The sewer pipe shall have one (1) inch (25.5 mm) holes drill each 120 degrees of the sewer pipe circumference at twelve (12) inch (306 mm) intervals on center minimum for the entire length of the sewer pipe to the inlet depth. The sewer pipe shall then extend watertight to grade and shall be capped with an approved screw type, accessible cap. The void between the sewer pipe and the seepage pit excavation shall then be filled with clean stone, gravel, or similar filter material acceptable to the Building Official, varying in size from the three-fourths (3/4) inch to two and one-half (2-1/2) inches (19.1 mm to 64 mm).

(2) Pre-cast concrete circular sections approved by the Building Official may be used. The void between the pre-cast circular sections and the seepage pit excavation shall have a minimum of six (6) inches (152 mm) of clean three-fourths (3/4) inch (19.1) gravel or rock filter material. An approved type one or two piece reinforced concrete slab cover shall be installed on top of the pre-cast concrete circular sections. Each such cover shall have twenty-five hundred (2500) pounds per square inch (17238 kPa) minimum compressive strength shall be not less than five (5) inches (127 mm) thick and shall be designed to support an earth load of not less than four hundred (400) pounds per square foot (19.2 kPa). Each such cover shall be provided with an eight (8) inch (204 mm) minimum inspection hole and shall be coated on the underside with an approved bituminous or other nonpermeable protective compound. An eight (8) inch (204 mm) white, or similar approved color, sewer pipe of approved material shall be installed true and plumb extending watertight from the cover inspection hole to grade and shall be capped with an approved accessible cap.

Subsection K7 (E) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code is hereby deleted in its entirety and the subsequent sections renumbered.

Section K8 of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code is deleted in its entirety.

Section K9 of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code is hereby added to read as follows:

K9 Commercial or Industrial Special Liquid Waste Disposal

(A) When liquid wastes contain excessive amounts of grease, garbage, flammable wastes, sand, or other ingredients that may affect the operation of a private sewage disposal system, an interceptor for such wastes shall be installed.

(B) Installation of such interceptors shall comply with Section 1009.0 of this code, and their locations shall be in accordance with Table K-1 of this appendix. The Building Official may require and approve additional more restrictive standards.

(C) A sampling box shall be installed when required by the Building Official.

(D) Interceptors shall be of approved design and be of not less than two (2) compartments unless otherwise approved by the Building Official. Structural requirements shall be in compliance with the applicable subparts of Section K 5 of this appendix.

(E) Interceptors shall be located as close to the source as possible and be accessible for servicing. All necessary manholes for servicing shall be at grade level and be gastight.

(F) Waste discharge from interceptors may be connected to a septic tank or other primary system or be disposed into a separate disposal system.

(G) Recommended Design Criteria. (Formula may be adapted to other types of occupancies with similar wastes.) See charts on this page.

Subsection K10 (A) (3) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is amended to read as follows:

(A) Inspection

(3) Septic tanks and other primary systems shall be installed as required by the Building Official.

Subsection K11 (D) of Appendix K of the 2010 California Plumbing Code, is amended to read as follows:

(D) No person owning or controlling any cesspool, septic tank, or seepage pit on the premises or private property of such person or in any public street, alley, or other public property shall fail, refuse, or neglect to comply with the provisions of this section.

Section K12 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is amended to read as follows:

The Building Official may require any or all of the following information before a permit is issued for an onsite wastewater treatment system, or at any time during the construction thereof.

Subsections K12 (A), (B), and (C) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code shall be retained unamended following the above amendment.

Section K13 is added to Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code to read as follows:

The Building Official shall require the following before a permit is issued for any new or reconstructed onsite wastewater treatment system on any parcel adjacent to the Pacific Ocean:

(a) Buildings permitted to be constructed, or remodeled, on beachfront property shall have adequate and properly designed bulkheads, or other approved structural protection from wave action for all portions of the onsite wastewater treatment system. All approved Coastal Engineering Reports shall also be required to determine the need and extent of this protection.

(b) Owners or possessors of real property with buildings constructed on beachfront property with an existing onsite wastewater treatment system to be renovated, or repaired, shall have adequate and properly designed bulkheads, or other approved structural protection from wave action, as provided by the Building Official, for all portions of the onsite wastewater treatment system. An approved Coastal Engineering Report shall also be required to determine the need and extent of this protection.

(c) Owners or possessors of real property with buildings constructed on beachfront property with an existing onsite wastewater treatment system damaged by storm, tide, or wave action shall have adequate and properly designed bulkheads, or other approved structural protection from wave action for all portions of the onsite wastewater treatment system. An approved Coastal Engineering Report shall also be required to determine the need and extent of this protection.

(d) Issuance of Permit. Upon review of the application and compliance with all of the requirements contained in this section and all other applicable laws, rules, and regulations, the Building Official shall issue a permit for the installation of bulkheads, or other protective structures required, imposing those conditions and restrictions necessary, and setting a time limit for the completion of the installation of bulkheads, or other protective structures required.

(e) Noncompliance and Right of Entry

(1) Upon expiration of the time limit established in the permit, including such additional time as may have been granted by the Building Official upon further application, if the installation of the bulkheads, or other protective

structures required, has not been accomplished, the Building Official may take all reasonable actions to install the bulkheads, or other protective structures required, upon the real property for which the permit was issued. The Building Official shall have the right of entry upon the owner's or possessor's real property to the extent necessary to effect the installation. A failure, refusal, or neglect of the owner or possessor of the real property to comply with the provisions of the permit for the installation of the bulkhead, or other protective structures required, within the period of time set by the Building Official shall be considered a violation of this section, subjecting the owner or possessor of the real property to the penalties and remedies provided in this Code.

(2) The actual cost incurred by the Building Official in taking the above action, including the cost of equipment, labor (including the cost of City of Malibu consultants and employees), administrative, and other indirect costs shall be charge assessed against the real property benefited, and shall by added to the annual property taxes next levied upon the real property and shall constitute a lien upon the real property in the same manner and to the same extent as does the tax lien securing the annual real property taxes, and may be collected and enforced in the same manner as secured ad valorem property taxes.

Table K-1 of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code is amended to read as follows:

TABLE K-1

Location of Sewage Disposal System

Minimum Horizontal Distance In Clear Required From:	Building Sewer	Septic Tank	Disposal Field	Seepage Pit or Cesspool
Buildings or structures[1]	2 feet (610 mm)	5 feet (1524 mm)	8 feet (2438mm)	8 feet (2438 mm)
Property line adjoining private property	Clear[2]	5 feet (1524 mm)	5 feet (1524 mm)	8 feet (2438 mm)
Water supply wells	50 feet[3] (15240 mm)	50 feet (15240 mm)	100 feet (30.5 m)	150 feet (45.7 m)
Streams and Lakes	50 feet (15240 mm)	50 feet (15240 mm)	50 feet (15240 mm)	100 feet (30.5 m)
Trees	--	10 feet (3048 mm)	--	10 feet (3048 mm)
Seepage pits or cesspools	--	5 feet (1524 mm)	5 feet (1524 mm)	12 feet (3658 mm)
Disposal field	--	5 feet (1524 mm)	4 feet[4] (1219 mm)	5 feet (1524 mm)

On site domestic water service line	1 foot[5] (305 mm)	5 feet (1524 mm)	5 feet (1524 mm)	5 feet (1524 mm)
Distribution box	--	--	5 feet (1524 mm)	5 feet (1524 mm)
Pressure public water main	10 feet[6] (3048 mm)	10 feet (3048 mm)	10 feet (3048 mm)	10 feet (3048 mm)

Note:

When disposal fields and/or seepage pits are installed in sloping ground, the minimum horizontal distance between any part of the leaching system and ground surface shall be fifteen (15) feet (4572 mm).

1. Including porches and steps, whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, covered walks, covered driveways and similar structures or appurtenances.
2. See also Section 313.3 of the Uniform Plumbing Code.
3. All drainage piping shall clear domestic water supply wells by at least fifty (50) feet (15240 mm). This distance may be reduced to not less than twenty-five (25) feet (7620 mm) when the drainage piping is constructed of materials approved for use within a building.
4. Plus two (2) feet (610 mm) for each additional (f) foot (305 mm) of depth in excess of one (1) foot (305 mm) below the bottom of the drain line. (See also Section K6).
5. See Section 720.0 of the Uniform Plumbing Code.
6. For parallel construction - For crossings, approval by the Health Department shall be required.
7. Where special hazards are involved, the distance required shall be increased as may be directed by the Authority Having Juridisction.

Table K-2 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is amended to read as follows:

TABLE K-2

Capacity of Septic Tanks *

Single Family Dwellings ** Number of Bedrooms	Multiple Dwelling Units or Apartments B One Bedroom Each	Maximum Fixture Units Served per Table 7-3	Minimum Septic Tank Capacity in Gallons	(liters)
		15	750	(2838)
		20	1000	(3785)
4		25	1200	(4542)
1 to 6	2 or 3 units	33	1500	(5678)

4	45	2000	(7570)
5	55	2250	(8516)
6	60	2500	(9463)
7	70	2750	(10,409)
8	80	3000	(11,355)
9	90	3250	(12,301)
10	100	3500	(13,248)

* Note:
Extra bedroom, 150 gallons (568 liters) each.
Extra dwelling units over 10, 250 gallons (946 liters) each.
Extra fixture units over 100, 25 gallons (95 liters) per fixture unit.
Septic tank sizes in this table include sludge storage capacity and the connection of domestic food waste disposal units without further volume increase.
** Applies to mobile homes not installed in a mobile home park.

Table K-3 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is amended to read as follows:

TABLE K-3

Estimated Waste/Sewage Flow Rates

Because of the many variable encountered, it is not possible to set absolute values for waste/sewage flow rates for all situations. The designer should evaluate each situation and, if figures in this table need modification, they should be made with the concurrence of the Building Official.

Type of Occupancy	Unit Gallons (liters) Per Day
1. Airport	15 (56.8) per employee 5 (18.9) per passenger
2. Auto Washers	Check with equipment manufacturer
3. Bowling Alleys (snack bar only)	75 (283.9) per lane
4. Camps:	
Campground with central comfort station	35 (132.5) per person
Campground with flush toilets, no showers	25 (94.6) per person
Day camps (no meals served)	15 (56.8) per person
Summer and seasonal	50 (189.3) per person

Type of Occupancy	Unit Gallons (liters) Per Day
5. Churches (Sanctuary)	5 (18.9) per seat
with kitchen waste	7 (26.5) per seat
6. Dance Halls	5 (18.9) per person
7. Factories	
No showers	25 (94.6) per employee
With showers	35 (132.5) per employee
Cafeteria, add	5 (18.9) per employee
8. Hospitals	250 (946.3) per bed
Kitchen waste only	25 (94.6) per bed
Laundry waste only	40 (151.4) per bed
9. Hotels (no kitchen waste)	60 (227.1) per bed (2 person)
10. Institutions (Resident)	75 (283.9) per person
Nursing Home	125 (473.1) per person
Rest Home	125 (473.1) per person
11. Laundries, self-service	300 per machine
Commercial	Per manufacturer=s specifications
12. Motel	50 (189.3) per bed space
with kitchen	60 (227.1) per bed space
13. Office	20 (75.7) per employee
14. Parks B mobile homes	
Picnic parks (toilets only)	20 (75.7) per parking space
Recreational vehicles -	
without water hookup	75 (283.9) per space
with water and sewer hookup	100 (378.5) per space
15. Restaurants - Cafeterias	50 (189.3) per seat
Toilet	
16. Schools B Staff and office	20 (75.7) per person
Elementary students	15 (56.8) per person
Intermediate and High	20 (75.7) per student

with gym and showers, add	5 (18.9) per student
with cafeteria, add	3 (11.4) per student
Boarding, total waste	100 (378.5) per person
17. Service stations, toilets	1000 (378.5) for 1st bay 500 (1892.5) for each additional bay
Recreational vehicle dump station	750
18. Stores	20 (75.7) per employee
Public restrooms, add	1 per 10 sq. ft. (4.1/m^2) of floor space
19. Swimming pools, public	10 (37.9) per person
Theaters, auditoriums	5(18.9) per seat
Drive-in	10 (37.9) per space

(a) Recommended Design Criteria. Sewage Disposal Systems sized using the estimated waste/sewage flow rates should be calculated as follows:

(1) Waste/sewage flow, up to 1500 gallons/day (5677.5 L/day
Flow x 1.5=septic tank size
(2) Waste/sewage flow, over 1500 gallons/day (5677.5 L/day
Flow x 0.75 + 1125= septic tank size
(3) Secondary system shall be sized for total flow per 24 hours.
(b) Also see Section K2 of this appendix.

Table K-5 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is deleted in its entirety.

15.16 Mechanical Code Adopted

Section 15.16.010 of the City of Malibu Municipal Code is amended to read as follows:

15.16.010 Adoption of Mechanical Code.

Except as hereinafter provided, Title 29, Mechanical Code, of the Los Angeles County Code, as amended and in effect on January 1, 2011, adopting the California Mechanical Code, 2010 Edition (Part 4 of Title 24 of the California Code of Regulations) is hereby incorporated by reference as if fully set forth below, and shall be known and may be cited as the Mechanical Code of the City of Malibu.

In the event of any conflict between provisions of the California Mechanical Code, 2010 Edition, Title 29 of the Los Angeles County Mechanical Code, or any amendment to the Mechanical

Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 29 of the Los Angeles County Mechanical Code and the California Mechanical Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.16.030 of the City of Malibu Municipal Code is hereby amended to read as follows:

Section 15.16.030 Violations- Penalty.

Every person violating any provision of the Title 29 Los Angeles County Mechanical Code and appendices, adopted by reference by Section 15.16.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

CHAPTER 15.24 Green Building Standards Code is hereby added to read as follows:

15.24 Green Building Standards Code Adopted

Section 15.24.010 Adoption of Green Building Standards Code.

Except as hereinafter provided, the California Green Building Standards Code 2010 Edition (Part 11 of Title 24 of the California Code of Regulations) is herby incorporated herein by reference as if fully set forth below, and shall be known and may be cited as the Green Building Code of the city of Malibu.

In the event of any conflict between provisions of the California Green Building Standards Code, 2010 Edition, or any amendment to the Green Building Standards Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

Section 15.24.020 Definitions.

This section intentionally left blank.

Section 15.24.030 Green Building Standards Code Fees.

Fees are as established by the current City of Malibu fee schedule.

Section 15.24.040 Violations - Penalties.

Every person violating any provision of the Title 31 Los Angeles County Green Building Code and appendices, adopted by reference by Section 15.28.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

Section 15.24.050 Amendment to Green Building Code

Notwithstanding the provisions of section 15.24.010 of this chapter, the California Green Building Standards Code is amended to read as follows:

4.403.1 Irrigation Controllers.

Automatic irrigation system controllers for landscaping provided and installed at the time of final inspection and shall comply with the following:

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plant' needs as weather conditions change.
2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-base controllers are not required to have rain sensor input.

CHAPTER 15.28 Residential Code is hereby added to read as follows:

15.28 Residential Code Adopted

Section 15.28.010 Adoption of Residential Code.

Except as hereinafter changed or modified, Sections 102 through 119 of Chapter 1, Section 1207 of Chapter 12, Chapter 34,67, 69, 98, 99 and Appendix J of the Title 26 of the Los Angeles County Code and Chapters 2 through 10, Chapter 44, and Appendix H of that certain code known as

and designated as the 2010 California Residential Code as published by the California Building Standards Commission are collectively adopted by reference and incorporated in this Title 30 as if fully set forth below, and shall be known the Residential Code of the City of Malibu.

In the event of any conflict between provisions of the California Building Code, 2010 Edition, Title 30 of the Los Angeles County Residential Code, or any amendment to the Residential Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 30 of the Los Angeles County Residential Code and the California Building Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.28.020 Definitions.

"Building and Safety Division of the Department of County Engineer-facilities" means the Environmental and Building Safety Division of the City of Malibu.

"County," "County of Los Angeles" or "unincorporataed areas of the county of Los Angeles" means the City of Malibu.

Section 15.28.030 Residential Code Fees.

Fees area as established by the current City of Malibu fee schedule.

Section 15.28.040 Violations - Penalties.

Every person violating any provision of the Title 30 Los Angeles County Residential Code and appendices, adopted by reference by Section 15.28.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

8.12 Fire Code

Section 8.12.010 of the City of Malibu Municipal Code is amended to read as follows:

Section 8.12.010 Adoption of Fire Code.

Except as hereinafter provided, Title 32, Fire Code, of the Los Angeles County Code, as amended and in effect on January 1, 2011, adopting the California Fire Code, 2010 Edition (Part 9 of Title 24 of the California Code of Regulations) is hereby incorporated herein by reference as if fully set forth below, and shall be known and may be cited as the Fire Code of the City of Malibu.

In the event of any conflict between provisions of the California Fire Code, 2010 Edition, Title 32 of the Los Angeles County Fire Code, or any amendment to the Fire Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 32 of the Los Angeles County Fire Code and the California Fire Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 8.12.020 of the Malibu Municipal Code is hereby amended to read as follows:

Section 8.12.020 Violation – Penalty.

Every person violating any provision of the Title 32 Los Angeles County Fire Code and appendices, adopted by reference by Section 8.12.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

Section 3. Severability.

Should any section, subsection, clause, or provision of this Ordinance for any reason be held to be invalid or unconstitutional, such invalidity or unconstitutionality shall not affect the validity or constitutionality of the remaining portions of this Ordinance; it being hereby expressly declared that this Ordinance, and each section, subsection, sentence, clause, and phrase hereof would have been prepared, proposed, approved, and ratified irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared invalid or unconstitutional.

Section 4. Effective Date.

This Ordinance shall take effect on January 1, 2011, and shall apply to all projects submitted for plan check and / or permit application on or after that date.

Section 5. California Environmental Quality Act.

This Ordinance has been determined to be exempt from the California Environmental Quality Act pursuant to State Guidelines Section 15061 (b)(3) as a project that has no potential for causing a significant effect on the environment.

Section 6. Certification.

The City Clerk shall certify the adoption of this Ordinance.

The City Clerk shall file a certified copy of this Ordinance with the California Building Standards Commission.

Section 7. Urgency Findings.

State law requires localities to adopt the 2010 California Building, Plumbing, Mechanical, Electrical, Green Building, Residential, and Fire Codes and any modifications there to, by January 1, 2011. It is essential that the City adopt the above stated Codes and modifications necessitated by local topographical, geological, and climatic conditions by that date. In the absence of legislation effective by that date, technical codes adequate to meet the City's special circumstances will not be in effect and hazards will be posed which would immediately threaten the public peace, health, and safety. Accordingly, this ordinance shall be an Urgency Ordinance and shall take effect immediately and become operative January 1, 2011.

PASSED, APPROVED AND ADOPTED this _____ day of _____, 2010.

JEFFERSON WAGNER, Mayor

ATTEST:

LISA POPE, City clerk
(seal)

APPROVED AS TO FORM:

CHRISTI HOGIN, City Attorney

ORDINANCE NO. 354

AN ORDINANCE OF THE CITY OF MALIBU ADOPTING BY REFERENCE TITLE 26 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA BUILDING CODE, 2010 EDITION; TITLE 27 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA ELECTRICAL CODE, 2010 EDITION; TITLE 28 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA PLUMBING CODE, 2010 EDITION; TITLE 29 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA MECHANICAL CODE, 2010 EDITION; TITLE 30 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA RESIDENTIAL CODE, 2010 EDITION, THE CALIFORNIA GREEN BUILDING STANDARDS CODE, 2010 EDITION AND TITLE 32 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA FIRE CODE, 2010 EDITION; MAKING AMENDMENTS TO SAID CODES

The City Council of the City of Malibu does hereby ordain as follows:

Section 1. Findings.

Pursuant to California Health and Safety Code Sections 17958.5, 17958.7 and 18941.5, the City Council hereby makes each finding of reasonable necessity for modifications as stated separately in Attachment No. 3 to the December 13, 2010 City Council Agenda Report for Item No. X.X., for each such modification as identified in Los Angeles County Titles 26, 27, 28, 29, 30, and 32. These modifications to the California Building Standards Code, incorporating the model codes are reasonably necessary due to the local climate, characterized by hot, dry summers and the high potential for seismic activity which make structures particularly vulnerable to rapidly spreading fires and structural damage.

Section 2. Amendments

15.04 Building Code Adopted

Section 15.04.010 of the City of Malibu Municipal Code is amended to read as follows:

15.04.010 Adoption of Building Code.

Except as hereinafter provided, Title 26 Building Code of the Los Angeles County Code , as amended and in effect on January 1, 2011, adopting the California Building Code, 2010 Edition (Part 2 of Title 24 of the California Code of Regulations) is incorporated herein by reference as if fully set forth below and shall be known and may be cited as the Building Code of the city of Malibu.

The provisions of the Building Code applying to dwellings, lodging houses, congregate residences, hotels, motels, apartment houses, convents, monasteries or other uses classified by the

building code as a group R occupancy and including Chapters 1, 2, 3, 98 and 99 shall constitute and may be cited as the Housing Code of the City of Malibu.

In the event of any conflict between provisions of the California Building Code, 2010 Edition, Title 26 of the Los Angeles County Building Code, or any amendment to the Building Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 26 of the Los Angeles County Building Code and the California Building Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.04.040 of the Malibu Municipal Code is amended to read as follows:

15.04.040 Violation-Penalty.

Every person violating any provision of the Title 26 Los Angeles County Building Code and appendices, adopted by reference by Section 15.04.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

Section 15.04.050 of the City of Malibu Municipal code is amended to read as follows:

15.04.050 Amendments to Building Code

Notwithstanding the provisions of Section 15.04.010 of this Chapter, Title 26 Los Angeles County Building Code is amended to read as follows:

Section 103.5 is hereby amended to read as follows:

103.5 Costs.

Any person that violates any provision of this code shall be responsible for the costs of any and all code enforcement actions taken by the building official in response to such violations. These costs shall be based on the amounts specified in Table 1-F.

All other fees are as established by the current City of Malibu fee schedule. Where no fee is established by the City of Malibu fee schedule, the Los Angeles County Code fee schedule shall apply.

Section 105.1.1 is amended to read as follows:

105.1.1 General.

Unless otherwise provided for below, in order to conduct the hearings provided for in this code and also to determine the suitability of alternate materials and types of construction and to provide for reasonable interpretations of the provisions of this code, there shall be a building board of appeals consisting of five members who are qualified by experience and training to pass upon matters pertaining to building construction. The building official shall be an *ex officio*-member and shall act as secretary to the board. The members of the building board of appeals shall be appointed by the City Council and shall hold office at its pleasure. The building board of appeals shall adopt reasonable rules and regulations for conducting its investigations. The board shall establish that the approval for alternate materials and the modifications granted for individual cases are in conformity with the intent and purpose of this code and that such alternate material, modification or method of work offered is at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability, safety and sanitation and does not lessen any fire-protection requirements or any degree of structural integrity. The building board of appeals shall document all decisions and findings in writing to the building official with a duplicate copy to the applicant, and the board may recommend to the City Council such new legislation as is consistent therewith.

Section 105.3 is hereby deleted in its entirety.

Section 105.6 is hereby deleted in its entirety.

Section 106.1.1 is hereby added to read as follows

106.1.1 Parking Lots.

A plan review and permit shall be required for the surfacing, resurfacing, replacement, reconfiguration and striping of parking lots and parking structures serving commercial and multifamily occupancies.

Any of the aforementioned activities in or on existing parking lots must comply with current zoning, National Pollution Discharge Elimination Systems (N.P.D.E.S.) and accessibility requirements as required by applicable codes and standards. Fees are determined by the current fee schedule.

Section 106.3 is hereby amended to read as follows:

106.3 Work Exempted.

A building permit shall not be required for the following:

1. One-story detached accessory buildings used as tool and storage sheds, playhouses and similar uses, provided the projected roof area does not exceed 120 square feet and the plate height does not exceed 12 feet (3.69 m) in height above the grade plane at any point and the maximum roof projection does not exceed 24 inches.

2. Fences and walls not over 6 feet (1829 mm) in height.

3. Steel tanks supported on a foundation not more than two feet (610 mm) above grade when the height does not exceed 11/2 times the diameter.

4. Gantry cranes and similar equipment.

5. Retaining walls that retain not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding a Class I, II, or III-A liquids.

6. Motion picture, television and theater stage sets and scenery, except when used as a building.

7. Ground mounted radio and television antennae towers which do not exceed 45 feet (13 716 mm) in height and ground support dish antennas not exceeding 15 feet (4572 mm) in height above finished grade in any position.

8. Light standards which do not exceed 30 feet (9144 mm) in height.

9. Flagpoles not erected upon a building and not more than 15 feet (4572 mm) high.

10. A tree house provided that:

    10.1. It does not exceed 64 square feet (5.94 m^2) in area nor 8 feet (2438 mm) in height from floor to roof.

    10.2. The ceiling height as established by door height or plate line does not exceed 6 feet (1829mm).

11. Canopies or awnings attached to a Group R or U Occupancy and extending not more than 54 inches (1372 mm) from the exterior wall of the building.

12. Sheds, office or storage buildings, and other structures incidental to and work authorized by a valid grading or building permit. Such structures must be removed upon expiration of the permit or completion of the work covered by the permit.

13. Oil derricks.

14. Platforms, walks and driveways not more than 30 inches (762 mm) above grade and not over any basement or story below and which are not part of an accessible route.

15. Prefabricated swimming pools accessory to a Group R, Division 3 Occupancy in which the pool walls are entirely above the adjacent grade and if the capacity does not exceed 5,000 gallons (18 927 L). Fences, gates, door alarms, and other protection devices that are accessory to the prefabricated swimming pool are not exempt from the permit requirements.

17. Playground equipment.

Unless otherwise exempted, separate plumbing, electrical and mechanical permits will be required for the above-exempted items.

Exemption from the permit requirements of this Code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of other laws or ordinances.

Section 107.9 is hereby deleted in its entirety.

Section 107.13 is hereby amended to read as follows:

107.13 Investigation Fee for Work without Permit.

Whenever any work has been commenced without a permit as required by the provisions of Section 106.1 of this code, a special investigation shall be made prior to the issuance of the permit. An investigation fee shall be collected for each permit so investigated.

The payment of the investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

Section 108.1.1 is hereby added to read as follows:

108.1.1 Occupancy Inspection.

All existing commercial occupancies are required to apply for an occupancy inspection prior to occupancy of a building or tenant space by a new owner or occupant.

Upon successful completion of the occupancy inspection the Building Official shall issue a new certificate of occupancy to the building or tenant space as required in Section 109 of the California Building Code.

The certificate of occupancy issued will remain valid and in effect until a change of occupant occurs or is revoked for cause by the Building Official or as required by this code.

Fees determined by the current fee schedule.

Section 108.4.2 is amended to read as follows:

108.4.2 Foundation inspection.

Inspection shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. All materials for the foundation shall be on the job site; however, where concrete is ready mixed in accordance with approved nationally recognized standards, the concrete need not be on the job site. Where the foundation is to be constructed of approved treated wood, additional inspections may be required by the building official. Required set back and pad elevations shall be established by survey prior to approval by the Building Official.

Section 108.4.6 is amended to read as follows:

108.4.6 Final inspection.

Inspection shall be made after finish grading is approved and the building is completed and ready for occupancy and all other required agency approvals have been obtained.

15.08 Electrical Code Adopted

Section 15.08.010 of the City of Malibu Municipal Code is amended to read as follows:

15.08.010 Adoption of Electrical Code.

Except as hereinafter provided, Title 27, Electrical Code, of the Los Angeles County Code, as amended and in effect on January 1, 2011, adopting the California Electrical Code, 2010 Edition (Part 3 of Title 24 of the California Code of Regulations) is hereby incorporated herein by reference as if fully set forth below, and shall be known and may be cited as the Building Code of the City of Malibu.

In the event of any conflict between provisions of the California Electrical Code, 2010 Edition, Title 27 of the Los Angeles County Electrical Code, or any amendment to the Building Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 27 of the Los Angeles County Electrical Code and the California Electrical Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.08.030 of the Malibu Municipal Code is amended to read as follows:

15.08.30 Violation-Penalty.

Every person violating any provision of the Title 27 Los Angeles County Electrical Code and appendices, adopted by reference by Section 15.08.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

15.12 Plumbing Code Adopted

Section 15.12.010 the City of Malibu Municipal Code is hereby amended to read as follows:

15.12.010 Adoption of Plumbing Code.

Except as hereinafter provided, Title 28, Plumbing Code, of the Los Angeles County Code, as amended and in effect on January 1, 2011, adopting the California Plumbing Code, 2010 Edition (Part 5 of Title 24 of the California Code of Regulations), is hereby incorporated herein by reference as if fully set forth below, and shall be known and may be cited as the Plumbing Code of the City of Malibu.

In the event of any conflict between provisions of the California Plumbing Code, 2010 Edition, Title 28 of the Los Angeles County Plumbing Code, or any amendment to the Building Code contained in the Malibu Municipal Code, the provision contained in the later listed document

shall control.

A copy of Title 28 of the Los Angeles County Plumbing Code and the California Plumbing Code, 2010 Edition, has been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.12.030 of the City Malibu Municipal Code is amended to read as follows:

15.12.030 Violation –Penalty.

Every person violating any provision of the Title 28 Los Angeles County Plumbing Code and appendices, adopted by reference by Section 15.12.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

Section 15.12.050 of the Malibu Municipal Code is hereby amended to read as follows:

15.12.050 Amendment to Plumbing Code

Notwithstanding the provisions of section 15.12.010 of this chapter, Title 28 Los Angeles County Plumbing Code is amended to read as follows:

Section 103.1.3 is hereby added to read as follows:

103.1.3 Operating Permits.

As of January 1, 2003, all applicants applying for new construction and residential additions, served by an onsite wastewater treatment system, shall be required to apply for and be issued an Operating Permit in addition to any permits required for the installation of an onsite wastewater treatment system. Operating Permits shall be required in addition to any permits required for the replacement or renovation of existing onsite wastewater treatment systems.

The Operating Permit shall be issued to the owner of the property. In the event of the sale of the property a new Operating Permit shall be applied for by the new owner within 30 days of the finalization of the sale of the property.

Homeowners associations will be considered the owner of the property for condominiums and townhouses for the purpose of enforcement of this code.

Existing commercial and multifamily occupancies shall apply for an Operating Permit

through the Malibu Building Safety Department prior to January 1, 2004, or as required by the Building Official due to the proximity of the system to surface waters, history of failure, inadequate groundwater separation, inadequate soil conditions, hazardous geologic conditions or other conditions that may cause the system to negatively impact the health and safety of the community or the environment.

All on site wastewater treatment systems serving commercial and multifamily occupancies are subject to specific or general wastewater discharge requirements/ permits as established and issued by the Los Angeles Regional Water Quality Control Board.

The level of management required by conditions of the Operating Permit will be established by the Building Official based on the type of system and the level of risk to the public health and safety and the environment by the system.

Section 103.1.3.1 is hereby added to read as follows

103.1.3.1 Renewal of Operating Permits.

Operating Permits for commercial and multifamily occupancies shall be required to be renewed every two years from the date of initial issuance or as ordered by the Building Official. Operating Permits for single family residential occupancies utilizing alternative systems shall be renewed every three years or upon the sale of the property. Operating Permits for single family residential occupancies utilizing conventional systems shall be renewed every five years or upon the sale of the property. The Building Official may waive the requirement for renewal of a permit at the sale of a property if an Operating Permit was issued not more than 12 months from the date of property transfer.

Section 103.1.3.2 is hereby added to read as follows:

103.1.3.2 Fees.

Fees for Operating Permits and renewal of Operating Permits shall be as set forth in the current fee schedule as approved by the City Council.

Section 103.1.3.3 is hereby added to read as follows:

103.1.3.3 Revocation of Operating Permit.

After an administrative hearing, the Building Official may revoke or suspend an Operating Permit for failure on the part of the permit holder to meet the conditions of the permit or when the occupant is deemed to be in violation of the requirements of the Los Angeles County Health Department or the Los Angeles Regional Water Quality Control Board or this code.

Section 103.1.3.4 is hereby added to read as follows:

103.1.3.4 Appeals.

The permitee may appeal the revocation or suspension of the Operating Permit by the Building Official to the Building Board of Appeals in conformance with Section 109 of the Building Code.

Section 103.1.3.5 is hereby added to read as follows

103.1.3.5 Approval for Onsite Wastewater Treatment System Inspectors: As of January 1, 2003

1. Onsite wastewater treatment system inspectors who perform inspection in the City of Malibu shall be a California Certified Engineering Geologist, a California Registered Professional Geotechnical Engineer, a California Registered Civil Engineer, a California Registered Environmental Health Specialist, a California Licensed Contractor (with an A or C-42 license), who have attended training provided, or authorized by the City of Malibu; and who have passed an examination prepared, and administered by the City of Malibu, or an agent authorized by the City of Malibu, to qualify as an approved onsite wastewater treatment systems inspector pursuant to this code.

2. The City of Malibu may approve onsite wastewater treatment system inspectors who attend training provided, or authorized by the City of Malibu, and who pass a standard examination prepared, and administered by the City of Malibu, or an agent authorized by the City of Malibu. Said examination shall be designed to establish the fitness of the applicant for certification to assess the condition and function of onsite wastewater treatment systems, and to determine whether maintenance, including repair, or replacement of system components, is necessary.

3. The passing score for the examination shall be 75% correct answers to all questions posed. Any person who is denied approval as an onsite wastewater treatment system inspector based on his, or her failure to pass the examination given by the City of Malibu may request, and is entitled to receive, a written statement of the City of Malibu's basis for denial.

4. The City of Malibu shall maintain a list of all approved onsite wastewater treatment system inspectors. The list shall be available for inspection, or examination by any person. A copy of the list may be obtained by any person upon request.

5. The City of Malibu may revoke, or suspend the approval, and/or registration of an onsite wastewater treatment system inspector after opportunity for an administrative hearing when it determines that the onsite wastewater treatment system inspector has falsified, or fraudulently altered a system inspection report, or misrepresented, or fails to provide a copy of an inspection report to the Building Official of the results of an inspection preformed by the onsite wastewater treatment system inspector.

6. It shall be a violation of this code for any person to falsify, misrepresent or fraudulently alter a system inspection report, or the result of an inspection.

7. Onsite wastewater treatment system inspectors shall submit the results of the inspection on a System Inspection Report form approved by the City of Malibu together with the signed statement at the bottom of the form attesting that the inspection has been performed, and any recommendations regarding upgrade, repair or maintenance of the onsite wastewater treatment system made by the system inspector in the form were made consistent with the system inspector's training, expertise and experience in the maintenance and proper functioning of the onsite wastewater treatment systems and in accordance to the requirements of this code.

Section 103.1.3.6 is hereby added to read as follows:

103.1.3.6 Criteria for Inspection.

The Building Official shall establish reasonable guidelines for the inspection of existing systems to be as non-intrusive as possible, to avoid damage to the system, and any unnecessary disturbance of the surrounding soil area, which is related to the treatment process.

Section 203 is amended by adding the following:

Alternative System – An onsite wastewater treatment system providing enhanced sewage effluent treatment, secondary or better.

Section 206 is amended by adding the following:

Disinfection – To treat by means of a chemical, physical or other process such as chlorination, ozonation, application of ultraviolet light or sterilization designed to eliminate pathogenic organisms and producing an effluent of 200 MPN/100 mL fecal coliform or less and 104 MPN/100 mL enterococcus or less.

Section 221 is amended by adding the following:

Secondary Treatment – The processing of sewage effluent by means of a treatment device which renders a sewage effluent of 30 mg/L biochemical oxygen demand or less, 30 mg/L total suspended solids or less and 15 mg/L oil and grease or less.

Section 222 is amended by adding the following:

Tertiary Treatment – The processing of sewage effluent by means of a treatment device which renders a sewage effluent of 30 mg/L biochemical oxygen demand or less, 30 mg/L total suspended solids or less, 15 mg/L oil and grease or less, 200 MPN/100 mL fecal coliform or less and 104 MPH/100 mL enterococcus or less.

Section 710.9 is hereby amended by adding the following:

All such pumps and receiving tanks shall be automatically discharged. All sumps shall be provided with pumps or ejectors of the duplex type, simplex pumps are prohibited, and shall be so arranged to function alternately with each pump or ejector cycle, and to function independently in case of overload or mechanical failure. The lowest inlet shall have a minimum clearance of two (2) inches for the high water "starting" level of the sump.

All such pumps and receiving tanks shall be equipped with an automatic alarm system. The alarm system shall be activated upon failure of either pumps or ejectors, whether independently or simultaneously. The alarm shall emit an audible alarm, which can be detected from any location within the building and immediately outside the building served by such sumps and receiving tanks. The Building Official may approve other alarm systems, which provide equivalent enunciation of failure of the pumps or ejectors.

Subsection K1 (G) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles County Plumbing Code, is amended to read as follows:

(G) No onsite wastewater treatment system, or part thereof, shall be located in any <u>other property</u> other than the property which is the site of the building or structure served by such onsite wastewater treatment system, nor shall any onsite wastewater treatment system or part thereof be located at any point having less than the minimum distances indicated in Table K-1.

Nothing contained in this Code shall be construed to prohibit the use of all or part of another property for a onsite wastewater treatment system or part thereof, where secondary sewage effluent treatment, or better, is provided, when proper cause, transfer of ownership, or change of boundary not in violation of other requirements has been first established to the satisfaction of the Building Official. The instrument recording such action shall constitute an agreement with the Building Official which shall clearly state and show that the areas so joined or used shall be maintained as a unit during the time they are so used. Such agreement shall be recorded in the office of the County Recorder as part of the conditions of ownership of said properties, and shall be binding on all heirs, successors, and assigns to such properties. A copy of the instrument recording such proceedings

shall be filed with the Building Official.

Subsections K1 (K), and (L) are added to Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code to read as follows:

(K) Commercial buildings and multiple family dwellings to be constructed, or remodeled, after the effective date of this section shall have a onsite wastewater treatment system which provides tertiary sewage effluent treatment as defined by the Building Official, prior to final sewage effluent disposal, unless otherwise approved by the Building Official.

(L) Commercial buildings and multiple family dwellings served by an existing onsite wastewater treatment system which is to be replaced, renovated, or repaired, after the effective date of this section shall have a onsite wastewater treatment system which provides tertiary sewage effluent treatment as defined by the Building Official, prior to final sewage effluent disposal, unless otherwise approved by the Building Official.

Section K2 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code, is amended to read as follows:

The liquid capacity of all septic tanks shall conform to Tables K-2 and K-3 as determined by the number of bedrooms or apartment units in dwelling occupancies or the estimated waste/sewage design flow rate or the number of plumbing fixture units as determined from Table 7-3 of this Code, whichever is greater.

Section K3 and Subsection K3 (3), (4), and (5) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code, are amended to read as follows:

The minimum effective absorption area in disposal fields in square feet (m^2), and in seepage pits in square feet (m^2) of side wall, shall be predicated on the required septic tank capacity in gallons (liters) and/or estimated waste/sewage flow rate, which ever is greater, and shall be as follows:

(3) No excavation for a leach line or leach bed shall extend within five (5) feet (1524 mm) of ground water nor to a depth where sewage may contaminate the underground water stratum.

Exception: When approved by the Building Official, this separation distance may be reduced. The applicant shall supply evidence of ground water depth to the satisfaction of the Building Official.

(4) The minimum effective absorption area in any seepage pit shall be calculated as the excavation sidewall area below the inlet exclusive of any hardpan, rock, clay, or other impervious formations. The minimum required area of porous formation should be provided in one or more seepage pits. No excavation shall extend within ten (10) feet

(3038 mm) of ground water, nor to a depth where sewage may contaminate underground water stratum.

Exception: When approved by the Building Official, this separation distance may be reduced. The applicant shall supply evidence of ground water depth to the satisfaction of the Building Official.

(5) Leaching chambers shall be sized on the bottom absorption area (nominal until width) in square feet.

Subsection K4 (A) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code, is amended to read as follows:

(A) The construction dimensions of the subsurface sewage effluent disposal area of an onsite wastewater treatment system shall be based on soils analysis and/or percolation tests. Soils analysis shall be conducted by a licensed soils engineer and the results expressed in United States Department of Agriculture classification terminology. Percolation tests shall be conducted by a licensed geologist, a licensed soils engineer, a licensed civil engineer, or a California Registered Environmental Health Specialist.

Subsections K5 (E) and (L) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles Plumbing Code are amended to read as follows:

(E) Access to each septic tank shall be provided by at least two (2) manholes twenty (20) inches (508 mm) in minimum diameter. One (1) access manhole shall be located over the inlet and one (1) access manhole shall be located over the outlet. Wherever a first compartment exceeds twelve (12) feet (3658 mm) in length, an additional manhole shall be provided over the baffle wall.

(L) Septic tanks shall have the required manholes accessible by extending the manhole openings to grade in a manner acceptable to the Building Official.

Subsection K5 (M)(2) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles Plumbing Code is hereby deleted.

Building OfficialSubsections K6 (A), (B), (C), (D), and (I) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles Plumbing Code are amended to read as follows:

(A) Distribution lines shall be constructed of perforated ABS pipe, perforated PVC pipe, or other materials approved by the Building Official, provided that sufficient openings are available for distribution of the effluent into the trench area.

(B) Before placing filter material or drain lines in a prepared excavation, all smeared or compacted surfaces shall be removed by raking to a depth of one (1) inch (25.4 mm) and the loose

material removed. Clean stone, gravel, slag, or similar material acceptable to the Building Official, varying in size from three fourths (3/4) inch to two and one-half (2-1/2) inches (19.1 mm to 64 mm) shall be placed in the trench to the depth and grade required by this section. Drain pipe shall be placed on the filter material in an approved manner. The drain lines shall then be covered with filter material to the minimum depth required by this section and this covered with material approved by the Building Official to prevent closure of voids with earth backfill. No earth backfill shall be placed over the filter material until after inspection and acceptance.

Exception: Listed or approved plastic leaching chambers may be used in lieu of pipe and filter material. Chamber installations shall follow the rules for disposal fields, where applicable, and shall conform to manufacturer's installation instructions.

(C) A grade board staked in the trench to the depth of filter material shall be utilized when the distribution line is constructed of material which will not maintain alignment without continuous support.

(D) When seepage pits are used in combination with disposal fields, the filter material in the trenches shall terminate at least five (5) feet (1524 mm) from the seepage pit excavation.

(I) Disposal fields shall be constructed as follows:

	Minimum	Maximum
Number of drain lines per field	1	---
Length of each line	---	100 ft. (30480 mm)
Bottom width of trench	18 in. (457 mm)	36 in. (914) mm
Spacing of lines, center-to-center		6 ft. (1829 mm)
Depth of earth cover of lines (preferred - 18 in. (457 mm)	12 in. (305 mm)	---
Grade of lines	level	3 in./100 ft. (25 mm/m)
Filter material under drain lines	12 in. (305 mm)	36 in. (914 mm)
Filter material over drain lines	2 in. (51 mm)	---

Minimum spacing between trenches or leaching beds shall be four (4) feet (1219 mm) plus two (2) feet (610 mm) for each additional foot (305 mm) of depth in excess of one (1) foot (305 mm) below the bottom of the drain line. Distribution drain lines in leaching beds shall not be more than six (6) feet (1829 mm) apart on centers, and no part of the perimeter of the leaching bed shall be more than three (3) feet (914 mm) from a distribution drain line. The terminal ends of all disposal fields and trenches shall have an inspection riser constructed of minimum eight (8) inch white PVC. The rise is to be extended to grade and shall terminate in an approved, accessible screw type cover approved by Building Official. The riser shall also extend to the bottom of the disposal field, and shall have one half (1/2) inch holes spaced at four (4) inches on center within the disposal area. Disposal fields, trenches, and leaching beds shall not be paved over or covered by concrete or any

material that can reduce or inhibit any possible evaporation of sewer effluent accept as approved by the Building Official.

Subsections K7 (B), (C), and (D) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code are amended to read as follows:

(B) Multiple seepage pits installations shall be served through an approved distribution box. Distribution boxes shall have their locations permanently marked with a steel post, concrete marker or other durable material. Additionally, each distribution box shall have an inspection riser of white PVC or concrete of at least eight (8) inches in diameter. The inspection riser shall allow inspection access to the distribution box. Each riser shall terminate with an approved screw type cap.

(C) Each seepage pit shall be circular in shape and shall have an excavated diameter of not less than four (4) feet (1219 mm). Approval shall be obtained prior to construction for any pit having an excavated diameter greater than six (6) feet (1829).

(D) Seepage pits may be constructed in one of two ways:

(1) An eight (8) inch (204 mm) white, or other similar approved color, sewer pipe of approved material shall be installed true and plumb in the center of the seepage pit excavation extending from the bottom of the seepage pit excavation to the inlet depth. The sewer pipe shall have one (1) inch (25.5 mm) holes drill each 120 degrees of the sewer pipe circumference at twelve (12) inch (306 mm) intervals on center minimum for the entire length of the sewer pipe to the inlet depth. The sewer pipe shall then extend watertight to grade and shall be capped with an approved screw type, accessible cap. The void between the sewer pipe and the seepage pit excavation shall then be filled with clean stone, gravel, or similar filter material acceptable to the Building Official, varying in size from the three-fourths (3/4) inch to two and one-half (2-1/2) inches (19.1 mm to 64 mm).

(2) Pre-cast concrete circular sections approved by the Building Official may be used. The void between the pre-cast circular sections and the seepage pit excavation shall have a minimum of six (6) inches (152 mm) of clean three-fourths (3/4) inch (19.1) gravel or rock filter material. An approved type one or two piece reinforced concrete slab cover shall be installed on top of the pre-cast concrete circular sections. Each such cover shall have twenty-five hundred (2500) pounds per square inch (17238 kPa) minimum compressive strength shall be not less than five (5) inches (127 mm) thick and shall be designed to support an earth load of not less than four hundred (400) pounds per square foot (19.2 kPa). Each such cover shall be provided with an eight (8) inch (204 mm) minimum inspection hole and shall be coated on the underside with an approved bituminous or other nonpermeable protective compound. An eight (8) inch (204 mm) white, or similar approved color, sewer pipe of approved material shall be installed true and plumb extending watertight from the cover

inspection hole to grade and shall be capped with an approved accessible cap.

Subsection K7 (E) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code is hereby deleted in its entirety and the subsequent sections renumbered.

Section K8 of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code is deleted in its entirety.

Section K9 of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code is hereby added to read as follows:

K9 Commercial or Industrial Special Liquid Waste Disposal

(A) When liquid wastes contain excessive amounts of grease, garbage, flammable wastes, sand, or other ingredients that may affect the operation of a private sewage disposal system, an interceptor for such wastes shall be installed.

(B) Installation of such interceptors shall comply with Section 1009.0 of this code, and their locations shall be in accordance with Table K-1 of this appendix. The Building Official may require and approve additional more restrictive standards.

(C) A sampling box shall be installed when required by the Building Official.

(D) Interceptors shall be of approved design and be of not less than two (2) compartments unless otherwise approved by the Building Official. Structural requirements shall be in compliance with the applicable subparts of Section K 5 of this appendix.

(E) Interceptors shall be located as close to the source as possible and be accessible for servicing. All necessary manholes for servicing shall be at grade level and be gastight.

(F) Waste discharge from interceptors may be connected to a septic tank or other primary system or be disposed into a separate disposal system.

(G) Recommended Design Criteria. (Formula may be adapted to other types of occupancies with similar wastes.) See charts on this page.

Subsection K10 (A) (3) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is amended to read as follows:

(A) Inspection

(3) Septic tanks and other primary systems shall be installed as required by the Building Official.

Subsection K11 (D) of Appendix K of the 2010 California Plumbing Code, is amended to read as follows:

(D) No person owning or controlling any cesspool, septic tank, or seepage pit on the premises or private property of such person or in any public street, alley, or other public property shall fail, refuse, or neglect to comply with the provisions of this section.

Section K12 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is amended to read as follows:

The Building Official may require any or all of the following information before a permit is issued for an onsite wastewater treatment system, or at any time during the construction thereof.

Subsections K12 (A), (B), and (C) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code shall be retained unamended following the above amendment.

Section K13 is added to Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code to read as follows:

The Building Official shall require the following before a permit is issued for any new or reconstructed onsite wastewater treatment system on any parcel adjacent to the Pacific Ocean:

(a) Buildings permitted to be constructed, or remodeled, on beachfront property shall have adequate and properly designed bulkheads, or other approved structural protection from wave action for all portions of the onsite wastewater treatment system. All approved Coastal Engineering Reports shall also be required to determine the need and extent of this protection.

(b) Owners or possessors of real property with buildings constructed on beachfront property with an existing onsite wastewater treatment system to be renovated, or repaired, shall have adequate and properly designed bulkheads, or other approved structural protection from wave action, as provided by the Building Official, for all portions of the onsite wastewater treatment system. An approved Coastal Engineering Report shall also be required to determine the need and extent of this protection.

(c) Owners or possessors of real property with buildings constructed on beachfront property with an existing onsite wastewater treatment system damaged by storm, tide, or wave action shall have adequate and properly designed bulkheads, or other approved structural protection from wave action for all portions of the onsite wastewater treatment system. An approved Coastal Engineering Report shall also be required to determine the need and extent of this protection.

(d) Issuance of Permit. Upon review of the application and compliance with all of the requirements contained in this section and all other applicable laws, rules, and regulations, the Building Official shall issue a permit for the installation of bulkheads, or other protective structures required, imposing those conditions and restrictions necessary, and setting a time limit for the completion of the installation of bulkheads, or other protective structures required.

(e) Noncompliance and Right of Entry

(1) Upon expiration of the time limit established in the permit, including such additional time as may have been granted by the Building Official upon further application, if the installation of the bulkheads, or other protective structures required, has not been accomplished, the Building Official may take all reasonable actions to install the bulkheads, or other protective structures required, upon the real property for which the permit was issued. The Building Official shall have the right of entry upon the owner's or possessor's real property to the extent necessary to effect the installation. A failure, refusal, or neglect of the owner or possessor of the real property to comply with the provisions of the permit for the installation of the bulkhead, or other protective structures required, within the period of time set by the Building Official shall be considered a violation of this section, subjecting the owner or possessor of the real property to the penalties and remedies provided in this Code.

(2) The actual cost incurred by the Building Official in taking the above action, including the cost of equipment, labor (including the cost of City of Malibu consultants and employees), administrative, and other indirect costs shall be charge assessed against the real property benefited, and shall by added to the annual property taxes next levied upon the real property and shall constitute a lien upon the real property in the same manner and to the same extent as does the tax lien securing the annual real property taxes, and may be collected and enforced in the same manner as secured ad valorem property taxes.

Table K-1 of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code is amended to read as follows:

TABLE K-1

Location of Sewage Disposal System

Minimum Horizontal Distance In Clear Required	Building Sewer	Septic Tank	Disposal Field	Seepage Pit or Cesspool

From:				
Buildings or structures[1]	2 feet (610 mm)	5 feet (1524 mm)	8 feet (2438mm)	8 feet (2438 mm)
Property line adjoining private property	Clear[2]	5 feet (1524 mm)	5 feet (1524 mm)	8 feet (2438 mm)
Water supply wells	50 feet[3] (15240 mm)	50 feet (15240 mm)	100 feet (30.5 m)	150 feet (45.7 m)
Streams and Lakes	50 feet (15240 mm)	50 feet (15240 mm)	50 feet (15240 mm)	100 feet (30.5 m)
Trees	--	10 feet (3048 mm)	--	10 feet (3048 mm)
Seepage pits or cesspools	--	5 feet (1524 mm)	5 feet (1524 mm)	12 feet (3658 mm)
Disposal field	--	5 feet (1524 mm)	4 feet[4] (1219 mm)	5 feet (1524 mm)
On site domestic water service line	1 foot[5] (305 mm)	5 feet (1524 mm)	5 feet (1524 mm)	5 feet (1524 mm)
Distribution box	--	--	5 feet (1524 mm)	5 feet (1524 mm)
Pressure public water main	10 feet[6] (3048 mm)	10 feet (3048 mm)	10 feet (3048 mm)	10 feet (3048 mm)

Note:

When disposal fields and/or seepage pits are installed in sloping ground, the minimum horizontal distance between any part of the leaching system and ground surface shall be fifteen (15) feet (4572 mm).

1. Including porches and steps, whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, covered walks, covered driveways and similar structures or appurtenances.
2. See also Section 313.3 of the Uniform Plumbing Code.
3. All drainage piping shall clear domestic water supply wells by at least fifty (50) feet (15240 mm). This distance may be reduced to not less than twenty-five (25) feet (7620 mm) when the drainage piping is constructed of materials approved for use within a building.
4. Plus two (2) feet (610 mm) for each additional (f) foot (305 mm) of depth in excess of one (1) foot (305 mm) below the bottom of the drain line. (See also Section K6).
5. See Section 720.0 of the Uniform Plumbing Code.
6. For parallel construction - For crossings, approval by the Health Department shall be required.
7. Where special hazards are involved, the distance required shall be increased as may be directed by the Authority Having Juridisction.

Table K-2 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is amended to read as follows:

TABLE K-2

Capacity of Septic Tanks *

Single Family Dwellings ** Number of Bedrooms	Multiple Dwelling Units or Apartments B One Bedroom Each	Maximum Fixture Units Served per Table 7-3	Minimum Septic Tank Capacity in Gallons	(liters)
		15	750	(2838)
		20	1000	(3785)
4		25	1200	(4542)
1 to 6	2 or 3 units	33	1500	(5678)
	4	45	2000	(7570)
	5	55	2250	(8516)
	6	60	2500	(9463)
	7	70	2750	(10,409)
	8	80	3000	(11,355)
	9	90	3250	(12,301)
	10	100	3500	(13,248)

* Note:
Extra bedroom, 150 gallons (568 liters) each.
Extra dwelling units over 10, 250 gallons (946 liters) each.
Extra fixture units over 100, 25 gallons (95 liters) per fixture unit.
Septic tank sizes in this table include sludge storage capacity and the connection of domestic food waste disposal units without further volume increase.
** Applies to mobile homes not installed in a mobile home park.

Table K-3 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is amended to read as follows:

TABLE K-3

Estimated Waste/Sewage Flow Rates

Because of the many variable encountered, it is not possible to set absolute values for waste/sewage flow rates for all situations. The designer should evaluate each situation and, if figures in this table need modification, they should be made with the concurrence of the Building Official.

Type of Occupancy	Unit Gallons (liters) Per Day
1. Airport	15 (56.8) per employee 5 (18.9) per passenger

Type of Occupancy	Unit Gallons (liters) Per Day
2. Auto Washers	Check with equipment manufacturer
3. Bowling Alleys (snack bar only)	75 (283.9) per lane
4. Camps:	
Campground with central comfort station	35 (132.5) per person
Campground with flush toilets, no showers	25 (94.6) per person
Day camps (no meals served)	15 (56.8) per person
Summer and seasonal	50 (189.3) per person
5. Churches (Sanctuary)	5 (18.9) per seat
with kitchen waste	7 (26.5) per seat
6. Dance Halls	5 (18.9) per person
7. Factories	
No showers	25 (94.6) per employee
With showers	35 (132.5) per employee
Cafeteria, add	5 (18.9) per employee
8. Hospitals	250 (946.3) per bed
Kitchen waste only	25 (94.6) per bed
Laundry waste only	40 (151.4) per bed
9. Hotels (no kitchen waste)	60 (227.1) per bed (2 person)
10. Institutions (Resident)	75 (283.9) per person
Nursing Home	125 (473.1) per person
Rest Home	125 (473.1) per person
11. Laundries, self-service	300 per machine
Commercial	Per manufacturer=s specifications
12. Motel	50 (189.3) per bed space
with kitchen	60 (227.1) per bed space
13. Office	20 (75.7) per employee
14. Parks B mobile homes	

Type of Occupancy	Unit Gallons (liters) Per Day
Picnic parks (toilets only)	20 (75.7) per parking space
Recreational vehicles -	
without water hookup	75 (283.9) per space
with water and sewer hookup	100 (378.5) per space
15. Restaurants - Cafeterias	50 (189.3) per seat
Toilet	
16. Schools B Staff and office	20 (75.7) per person
Elementary students	15 (56.8) per person
Intermediate and High	20 (75.7) per student
with gym and showers, add	5 (18.9) per student
with cafeteria, add	3 (11.4) per student
Boarding, total waste	100 (378.5) per person
17. Service stations, toilets	1000 (378.5) for 1st bay
	500 (1892.5) for each additional bay
Recreational vehicle dump station	750
18. Stores	20 (75.7) per employee
Public restrooms, add	1 per 10 sq. ft. (4.1/m^2) of floor space
19. Swimming pools, public	10 (37.9) per person
Theaters, auditoriums	5(18.9) per seat
Drive-in	10 (37.9) per space

(a) Recommended Design Criteria. Sewage Disposal Systems sized using the estimated waste/sewage flow rates should be calculated as follows:

(1) Waste/sewage flow, up to 1500 gallons/day (5677.5 L/day
Flow x 1.5=septic tank size

(2) Waste/sewage flow, over 1500 gallons/day (5677.5 L/day
Flow x 0.75 + 1125= septic tank size

(3) Secondary system shall be sized for total flow per 24 hours.
(b) Also see Section K2 of this appendix.

Table K-5 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is deleted in its entirety.

15.16 Mechanical Code Adopted

Section 15.16.010 of the City of Malibu Municipal Code is amended to read as follows:

15.16.010 Adoption of Mechanical Code.

Except as hereinafter provided, Title 29, Mechanical Code, of the Los Angeles County Code, as amended and in effect on January 1, 2011, adopting the California Mechanical Code, 2010 Edition (Part 4 of Title 24 of the California Code of Regulations) is hereby incorporated by reference as if fully set forth below, and shall be known and may be cited as the Mechanical Code of the City of Malibu.

In the event of any conflict between provisions of the California Mechanical Code, 2010 Edition, Title 29 of the Los Angeles County Mechanical Code, or any amendment to the Mechanical Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 29 of the Los Angeles County Mechanical Code and the California Mechanical Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.16.030 of the City of Malibu Municipal Code is hereby amended to read as follows:

Section 15.16.030 Violations- Penalty.

Every person violating any provision of the Title 29 Los Angeles County Mechanical Code and appendices, adopted by reference by Section 15.16.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

CHAPTER 15.24 Green Building Standards Code is hereby added to read as follows:

15.24 Green Building Standards Code Adopted

Section 15.24.010 Adoption of Green Building Standards Code.

Except as hereinafter provided, the California Green Building Standards Code 2010 Edition (Part 11 of Title 24 of the California Code of Regulations) is herby incorporated herein by reference as if fully set forth below, and shall be known and may be cited as the Green Building Code of the city of Malibu.

In the event of any conflict between provisions of the California Green Building Standards Code, 2010 Edition, or any amendment to the Green Building Standards Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

Section 15.24.020 Definitions.

This section intentionally left blank.

Section 15.24.030 Green Building Standards Code Fees.

Fees are as established by the current City of Malibu fee schedule.

Section 15.24.040 Violations - Penalties.

Every person violating any provision of the Title 31 Los Angeles County Green Building Code and appendices, adopted by reference by Section 15.28.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

Section 15.24.050 Amendment to Green Building Code

Notwithstanding the provisions of section 15.24.010 of this chapter, the California Green Building Standards Code is amended to read as follows:

4.403.1 Irrigation Controllers.

Automatic irrigation system controllers for landscaping provided and installed at the time of final inspection and shall comply with the following:

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plant' needs as weather conditions change.
2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-base controllers are not required to have rain sensor input.

CHAPTER 15.28 Residential Code is hereby added to read as follows:

15.28 Residential Code Adopted

Section 15.28.010 Adoption of Residential Code.

Except as hereinafter changed or modified, Sections 102 through 119 of Chapter 1, Section 1207 of Chapter 12, Chapter 34,67, 69, 98, 99 and Appendix J of the Title 26 of the Los Angeles County Code and Chapters 2 through 10, Chapter 44, and Appendix H of that certain code known as and designated as the 2010 California Residential Code as published by the California Building Standards Commission are collectively adopted by reference and incorporated in this Title 30 as if fully set forth below, and shall be known the Residential Code of the City of Malibu.

In the event of any conflict between provisions of the California Building Code, 2010 Edition, Title 30 of the Los Angeles County Residential Code, or any amendment to the Residential Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 30 of the Los Angeles County Residential Code and the California Building Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.28.020 Definitions.

"Building and Safety Division of the Department of County Engineer-facilities" means the Environmental and Building Safety Division of the City of Malibu.

"County," "County of Los Angeles" or "unincorporataed areas of the county of Los Angeles" means the City of Malibu.

Section 15.28.030 Residential Code Fees.

Fees area as established by the current City of Malibu fee schedule.

Section 15.28.040 Violations - Penalties.

Every person violating any provision of the Title 30 Los Angeles County Residential Code and appendices, adopted by reference by Section 15.28.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

8.12 Fire Code

Section 8.12.010 of the City of Malibu Municipal Code is amended to read as follows:

Section 8.12.010 Adoption of Fire Code.

Except as hereinafter provided, Title 32, Fire Code, of the Los Angeles County Code, as amended and in effect on January 1, 2011, adopting the California Fire Code, 2010 Edition (Part 9 of Title 24 of the California Code of Regulations) is hereby incorporated herein by reference as if fully set forth below, and shall be known and may be cited as the Fire Code of the City of Malibu.

In the event of any conflict between provisions of the California Fire Code, 2010 Edition, Title 32 of the Los Angeles County Fire Code, or any amendment to the Fire Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 32 of the Los Angeles County Fire Code and the California Fire Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 8.12.020 of the Malibu Municipal Code is hereby amended to read as follows:

Section 8.12.020 Violation – Penalty.

Every person violating any provision of the Title 32 Los Angeles County Fire Code and appendices, adopted by reference by Section 8.12.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

Section 3. Severability.

Should any section, subsection, clause, or provision of this Ordinance for any reason be held to be invalid or unconstitutional, such invalidity or unconstitutionality shall not affect the validity or constitutionality of the remaining portions of this Ordinance; it being hereby expressly declared that this Ordinance, and each section, subsection, sentence, clause, and phrase hereof would have been prepared, proposed, approved, and ratified irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared invalid or unconstitutional.

Section 4. Effective Date.

This Ordinance shall take effect on January 1, 2011, and shall apply to all projects submitted for plan check and / or permit application on or after that date.

Section 5. California Environmental Quality Act.

This Ordinance has been determined to be exempt from the California Environmental Quality Act pursuant to State Guidelines Section 15061 (b)(3) as a project that has no potential for causing a significant effect on the environment.

Section 6. Certification.

The City Clerk shall certify the adoption of this Ordinance.

The City Clerk shall file a certified copy of this Ordinance with the California Building Standards Commission.

PASSED, APPROVED AND ADOPTED this _____ day of _____, 2010.

JEFFERSON WAGNER, Mayor

ATTEST:

LISA POPE, City clerk
(seal)

APPROVED AS TO FORM:

CHRISTI HOGIN, City Attorney

BUILDING CODE AMENDMENTS

Code Section	Condition	Explanation of Amendment
Chapter 7A	Climatic	States that Chapter 7 A requirements are applicable to all occupancy groups as wildfire exposure impacts all types of buildings and structures. This amendment is needed due to the high fire severity zones caused by low humidity, strong winds and dry vegetation.
701A.1	Climatic	Clarifies the application of Chapter 7 A to include additions, alterations and/or relocated buildings. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.
701A.3	Climatic	Clarifies the application of Chapter 7 A to include additions, alterations and/or relocated buildings. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.
701A.3.1	Climatic	Clarifies the application of Chapter 7 A to include additions, alterations and/or relocated buildings. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.
703A.5.2 & 703A.5.2.2	Climatic	Due to low humidity, strong winds and dry vegetation in high fire severity zones, the Fire Department could not find sufficient evidence to allow the use of wood-shingle / wood-shake roof.
704A.3	Climatic	Due to low humidity, strong winds and dry vegetation in high fire severity zones, the Fire Department could not find sufficient evidence to allow the use of wood-shingle / wood-shake roof.
705A.2	Climatic	Due to low humidity, strong winds and dry vegetation in high fire severity zones, the Fire Department could not find sufficient evidence to allow the use of wood-shingle / wood-shake roof and would require the use of Class A roof covering.
1207.1, 1207.11, 1207.12	Climatic and Topographic	Sound Transmission – "Soundproofing" buildings adjacent to Airport (LAX). The purpose of this section is to establish uniform minimum noise insulation performance standards to protect persons from the effects of excessive noise (sound), hearing loss or impairment and interference with speech and sleep. The amendment requires other types of buildings, such as, long-term care facilities, single-family dwellings, private schools and places of worship to be "soundproofed." Based on the local topographic conditions in the Los Angeles Basin, which includes the surrounding hills and mountains, such as, the Santa Monica Mountains and the climatic conditions of local wind blowing off shore, such as, the Santa Ana winds that causes many planes to land and take off near the airports (LAX) to fly over areas where there are buildings including single family home, long-term care facilities, private schools and places of worship and other residential buildings, apartment houses, hotels...etc. The noise from these planes creates a hardship for the citizens, therefore, requiring the buildings to be "soundproofed."
1403.3	Climatic Geological	Section amended to limit the deflection of lateral support of veneer and prohibit its usage as part of the structural design strength of walls. The Structural Engineers Association of Southern California (SEAOSC) and LA City Post Northridge Earthquake committee discovered significant loss of veneer from buildings due to inadequate design and construction. As deflection limitation in out-of-plane direction is not covered in this code, this

Code Section	Condition	Explanation of Amendment
		amendment will prevent loosening and spalling of veneer.
1405.7 through 1405.7.2	Geological	Section amended to require proper anchorage of masonry or stone veneer. Investigations following the Northridge earthquake discovered numerous cases where veneer pulled away from wood stud framing. Most of it was due to corrosion and weakness in the anchor ties and mesh connections to the framing. Where sheathing was beneath the veneer, nail attachments were often not attached to the wall framing below. SEAOSC/LA City Post Northridge Earthquake committee findings indicated significant loss of veneer from buildings due to inadequate design and construction. Therefore, additional reinforcement for heavy veneer, stone and masonry veneer is needed.
1507.3.1	Geological	Section amended to require concrete and clay tiles to be installed over solid structural sheathing boards only. The changes in Section 1507.3.1 is needed, because there were numerous observations of tile roofs pulling away from wood framed buildings following the 1994 Northridge Earthquake. Where sheathing beneath the tile roofs was not nailed adequately or the nails were not attached on each side of each tile or the nail just pulled out over a period of time because the shank of the nails were smooth. Northridge SEAOSC/LA City Post Northridge Earthquake committee findings indicated significant problems with tile roof due to inadequate design and/or construction.
Table 1507.3.7	Geological	Table amended to require proper anchorage for clay or concrete tiles from sliding or rotating due to the effect of earthquakes. Design provisions developed based on detailed study of the 1994 Northridge and the 1971 Sylmar earthquakes need to be incorporated into the local building code.
1613.6.7	Geological	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. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1613.8.1 through 1613.8.1	Geological	The steel Buckling Restrained Braced Frame (BRBF) system was first approved for use in the 2003 NEHRP Provisions. The values for the approximate period perimeters C_t and x were also approved as part of that original BSSC Proposal 6-6R (2003). It was an oversight that these parameters were not carried forward into the 2005 Edition of the ASCE 7. Currently, these two factors can be found in Appendix R of AISC 341-05. There, they function only as a placeholder that will be removed in the next version upon approval by ASCE 7 Task Committee on Seismic. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1613.8.2	Geological	Observed damages to one and two family dwellings of light frame construction after the Northridge Earthquake may have been partially attributed to vertical irregularities common to this type of occupancy and construction. In an effort to improve quality of construction and incorporate lesson learned from studies after the Northridge Earthquake, the proposed modification to ASCE 7-05 Section 12.2.3.1 by limiting the number of stories and height of the structure to two stories will significantly minimize the impact of vertical irregularities and

Code Section	Condition	Explanation of Amendment
		concentration of inelastic behavior from mixed structural systems. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1613.8.3	Geological	The importance factor, I, was dropped from equation 12.8-16 by mistake while transcribing it from NEHRP Recommended Provisions (2003) equation 5.2-16. For buildings with importance factor, I, higher than 1.0, stability coefficient should include the importance factor. The proposed modification is consistent with the provisions adopted by OSPHD and DSA-SS as reflected in Section 1615.10.7 of the 2010 California Building Code. SEAOSC Steel Committee had supported the proposed modification during the 2007 code adoption process. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1613.8.4	Geological	A joint Structural Engineers Association of Southern California (SEAOSC), Los Angeles County and Los Angeles City Task Force investigated the performance of concrete and masonry construction with flexible wood diaphragm failures after the Northridge earthquake. It was concluded at that time that continuous ties are needed at specified spacing to control cross grain tension in the interior of the diaphragm. Additionally, subdiaphragm shears need to be limited to control combined orthogonal stresses within the diaphragm. Recognizing the importance and need to continue the recommendation made by the task force, but also taking into consideration the improve performance and standards for diaphragm construction today, a proposal to increase the continuous tie spacing limit to 40 ft in lieu of 25 ft and to use 75% of the allowable code diaphragm shear to determine the depth of the sub-diaphragm in lieu of the 300 plf is deemed appropriate and acceptable. The Los Angeles region is within a very active geological location. The various jurisdictions within this region have taken additional steps to prevent roof or floor diaphragms from pulling away from concrete or masonry walls. This decision was made due to the frequency of this type of failure during the past significant earthquakes. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1613.9 through 1613.9.10.5	Geological Topographical	Section is added to improve seismic safety of buildings constructed on or into hillsides. Due to the local topographical and geological conditions of the sites within the Los Angeles region and their probabilities for earthquakes, this technical amendment is required to address and clarify special needs for buildings constructed on hillside locations. A joint Structural Engineers Association of Southern California (SEAOSC) and both the 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 both the City and County of Los Angeles for several years with much success. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1704.1	Geological Topographical	Section amended to remove the exemption of Group U from special inspection requirements. One of the significant problems discovered from the studies after the Northridge Earthquake was the extent of poor quality in construction, especially for residential wood frame accessory structures. The provisions to require that special inspectors be provided for work listed under Section 1704

Code Section	Condition	Explanation of Amendment
		to observe the actual construction will ensure that acceptable standards of workmanship are provided.
1704.4	Geological	*Results from studies after the 1994 Northridge Earthquake indicated that a lot of the damages were attributed to lack of quality control during construction resulting in poor performance of the building or structure. Therefore, the proposed amendment modifies the type of exceptions from requiring special inspection. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.*
1704.8	Geological	Studies after the Northridge Earthquake revealed that great confusion exist in the field over what is required by the code in the way of special inspection beyond just piles and caissons. Connecting grade beams used in driven deep foundations will generally act like concrete beams and should not be treated like typical footings. Section 1704.4 requires concrete beams to have special inspection, but exempts the footings of buildings three stories or less in height. This amendment clarifies that the grade beams that connect driven deep foundations are not exempt from special inspection even if they are used as part of the foundation system. They are an essential part of the driven deep foundation system and should receive the same level of inspection, particularly since this type of system must resist the higher demand of seismic loads in this region.
1704.9	Geological	Studies after the Northridge Earthquake revealed that great confusion exist in the field over what is required by the code in the way of special inspection beyond just piles and caissons. Connecting grade beams used in cast-in-place deep foundations will generally act like concrete beams and should not be treated like typical footings. Section 1704.4 requires concrete beams to have special inspection, but exempts the footings of buildings three stories or less in height. This amendment clarifies that the grade beams that connect cast-in-place deep foundations are not exempt from special inspection even if they are used as part of the foundation system. They are an essential part of the cast-in-place deep foundation system and should receive the same level of inspection, particularly since this type of system must resist the higher demand of seismic loads in this region.
1705.3	Geological	In southern California, very few detached one- or two-family dwellings not exceeding two stories above grade plane are built as "box-type" structures, specially for those in hillside areas and near the oceanfront. Many with steel moment frames or braced frames, and or cantilevered columns can still be shown as "regular" structures by calculations. With the higher seismic demand placed on buildings and structures in this region, the language in Sections 1705.3 Item 3 of the California Building Code would permit many detached one- or two-family dwellings not exceeding two stories above grade plane with complex structural elements to be constructed without the benefit of special inspections. By requiring special inspections, the quality of major structural elements and connections that affect the vertical and lateral load resisting systems of the structure will greatly be increased. The exception should only be allowed for detached one- or two-family dwellings not exceeding two stories above grade plane assigned to Seismic Design category A, B and C
1710.1	Geological	The language in Sections 1710.1 of the California Building Code permits the

Code Section	Condition	Explanation of Amendment
		owner to employ any registered design professional to perform structural observations with minimum guideline. However, it is important to recognize that the registered design professional responsible for the structural design has thorough knowledge of the building he/she designed. By requiring the registered design professional responsible for the structural design or their designee who were involved with the design to observe the construction, the quality of the observation for major structural elements and connections that affect the vertical and lateral load resisting systems of the structure will greatly be increased. Additional requirements are provided to help clarify the role and duties of the structural observer and the method of reporting and correcting observed deficiencies to the building official. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1710.2	Geological	With the higher seismic demand placed on buildings and structures in this region, the language in Sections 1710.2 Item 3 of the California Building Code would permit many low-rise buildings and structures with complex structural elements to be constructed without the benefit of a structural observation. By requiring a registered design professional to observe the construction, the quality of the observation for major structural elements and connections that affect the vertical and lateral load resisting systems of the structure will greatly be increased. An exception is provided to permit simple structures and buildings to be excluded. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1807.1.4	Climatic Geological	No substantiating data has been provided to show that wood foundation is effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Wood retaining walls, 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 and temperate 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. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems that may result by using wood foundation that experience relatively rapid decay due to the face that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1807.1.6	Geological	With the higher seismic demand placed on buildings and structures in this region, it is deemed necessary to take precautionary steps to reduce or eliminate potential problems that may result by following prescriptive design provisions that does not take into consideration the surrounding environment. Plain concrete performs poorly in withstanding the cyclic forces resulting from seismic events. In addition, no substantiating data has been provided to show that under-reinforced foundation walls are effective in resisting seismic loads and may potentially lead to a higher risk of failure. It is important that the benefit and expertise of a registered design professional be obtained to properly analyze the structure and take these issues into consideration. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.

Code Section	Condition	Explanation of Amendment
1809.3	Geological	With the higher seismic demand placed on buildings and structures in this region, it is deemed necessary to take precautionary steps to reduce or eliminate potential problems that may result for under reinforced footings located on sloped surfaces. Requiring minimum reinforcement for stepped footings is intended to address the problem of poor performance of plain or under-reinforced footings during a seismic event. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1809.7 and Table 1809.7	Geological	No substantiating data has been provided to show that under-reinforced footings are effective in resisting seismic loads and may potentially lead to a higher risk of failure. Therefore, this proposed amendment is requiring minimum reinforcement in continuous footings to address the problem of poor performance of plain or under-reinforced footings during a seismic event. With the higher seismic demand placed on buildings and structures in this region, it is deemed necessary to take precautionary steps to reduce or eliminate potential problems that may result by following prescriptive design provisions for footing that does not take into consideration the surrounding environment. It was important that the benefit and expertise of a registered design professional be obtained to properly analysis the structure and takes these issues into consideration. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City 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.
1809.12	Climatic Geological	No substantiating data has been provided to show that timber footings is effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Timber footings, when they are not properly treated and protected against deterioration, have performed very poorly. Most contractors are typically accustomed to construction in dry and temperate 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. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems that may result by using timber footings that experience relatively rapid decay due to the face that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1908.1 and 1908.1.11 through 1908.1.14	Geological	This amendment is intended to carry over critical provisions for the design of concrete columns in moment frames from the UBC. Increased confinement is critical to the integrity of such columns and these modifications ensure that it is provided when certain thresholds are exceeded. In addition, this amendment carries over from the UBC a critical provision for the design of concrete shear walls. It essentially limits the use of very highly gravity-loaded walls in being included in the seismic load resisting system, since their failure could have catastrophic effect on the building. Furthermore, this amendment was incorporated in the code based on observations from the 1994 Northridge Earthquake. Rebar placed in very thin concrete topping slabs have been observed in some instances to have popped

Code Section	Condition	Explanation of Amendment
		out of the slab due to insufficient concrete coverage. This modification ensures that critical boundary and collector rebars are placed in sufficiently thick slab to prevent buckling of such reinforcements. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1908.1.2	Geological	By virtue of ACI 318 Section 21.1.1.7(d), intermediate precast structural walls designed under Section 21.4, material requirements intended under provisions 21.1.4, 21.1.5, 21.1.6, and 21.1.7 would be excluded for structures assigned to Seismic Design Category D, E or F. Clarification of ACI 318 Chapter 21 is needed to ensure that structural walls designed under ASCE 7 Table 12.2-1 using the intermediate wall panel category would conform to ductility requirements comparable to special structural wall; and conformance to the long standing practice of ACI 318 to impose special requirements for high seismic design regions. This amendment gives explicit requirement under which design and detailing need to conform to special structural wall system provision in ACI-318 Section 21.9, which covers both cast-in-place as well as precast. This amendment further gives building officials the tools to enforce minimum life safety building performance under earthquake forces in Seismic Design Category D, E or F. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
1908.1.3	Geological	The design provision for wall pier detailing was originally introduced by SEAOC in 1987 to legacy Uniform Building Code (UBC) and was included in the 1988 UBC through the 1997 UBC (2002 CBC). The wall pier detailing provision prescribed under Section 1908.1.4 was intended for high seismic zones equivalent to current Seismic Design Category D, E or F. Section 1908.1.3 was added as a complement of wall pier detailing in Seismic Design Category C (formerly seismic zones 2A and 2B under the legacy model code). ACI 318 Commentary R 21.1.1 emphasized "it is essential that structures assigned to higher Seismic Design Categories possess a higher degree of toughness", and further encourages practitioners to use special structural wall system in regions of high seismic risk. ASCE 7 Table 12.2-1 permits intermediate precast structural wall system in Seismic Design Category D, E or F. Current Section 1908.1.3 does not limit to just structures assigned to Seismic Design Category C. The required shear strength under 21.3.3, referenced in current Section 21.4.5, is based on V_u under either nominal moment strength or two times the code prescribed earthquake force. The required shear strength in 21.6.5.1, referenced in Section 21.9.10.2 (IBC 1908.1.4), is based on the probable shear strength, V_e under the probable moment strength, M_{pr}. In addition, the spacing of required shear reinforcement is 8 inches on center under current Section 21.4.5 instead of 6 inches on center with seismic hooks at both ends under Section 21.9.10.2. Requirement of wall pier under Section 21.9.10.2 would enhance better ductility. Current practice in commercial buildings constructed using precast panels wall system have large window and door openings and/or narrow wall piers. Wall panels varying up to three stories high with openings resembles wall frame which is not currently recognized under any of the defined seismic-force resisting systems other than consideration of structural wall system. Conformance to special structural wall system design and detailing of wall piers ensures minimum life safety performance in resisting earthquake forces

<table>
<tr><th>Code Section</th><th>Condition</th><th>Explanation of Amendment</th></tr>
<tr><td></td><td></td><td>for structures in Seismic Design Category D, E or F. Proposed modification separates wall piers designed for structures assigned to Seismic Design Category C from those assigned to Seismic Design Category D, E or F.

This modification is consistent with the amendment adopted by DSA-SS as reflected in Section 1916.4.4 of the 2010 Edition of the California Building Code. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.</td></tr>
<tr><td>1908.1.8</td><td>Geological</td><td>This proposed amendment requires minimum reinforcement in continuous 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.</td></tr>
<tr><td>1909.4</td><td>Geological</td><td>With the higher seismic demand placed on buildings and structures in this region, it is deemed necessary to take precautionary steps to reduce or eliminate potential problems that may result by permitting a reduced edge thickness of the footing that support walls without taking into consideration the surrounding environment. In addition, no substantiating data has been provided to show that the reduced edge thickness is effective in resisting seismic loads and may potentially lead to a higher risk of failure. It is important that the benefit and expertise of a registered design professional be obtained to properly analyze the structure and take these issues into consideration. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.</td></tr>
<tr><td>2204.1.1</td><td>Geological</td><td>Mechanical Properties for Demand Critical Welds
<table><tr><th rowspan="2">Property</th><th colspan="2">Classification</th></tr><tr><th>70 ksi (480 MPa)</th><th>80 ksi (550 MPa)</th></tr><tr><td>Yield Strength, ksi (MPa)</td><td>58 (400) min.</td><td>68 (470) min.</td></tr><tr><td>Tensile Strength, ksi (MPa)</td><td>70 (480) min.</td><td>80 (550) min.</td></tr><tr><td>Elongation (%)</td><td>22 min.</td><td>19 min.</td></tr><tr><td>CVN Toughness, ft-lbf (J)</td><td colspan="2">40 (54) min. @ 70 °F (20 °C) [b, c]</td></tr></table>[b] For LAST of +50 °F (+10 °C). For LAST less than + 50 °F (+10 °C), see AWS D1.8/D1.8M Clause 6.3.6.
[c] Tests conducted in accordance to AWS D1.8/D1.8M Annex A meeting 40 ft-lbf (54 J) min. at a temperature lower than +70 °F (20 °C) also meet this requirement.</td></tr>
<tr><td>2304.9.1</td><td>Geological</td><td>Due to the high geologic activities in the Southern California area and the expected higher level of performance on buildings and structures, this</td></tr>
</table>

Code Section	Condition	Explanation of Amendment
		proposed local amendment limit the use of staple fasteners in resisting or transferring seismic forces. 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. 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 to resist or transfer seismic forces shall not be permitted without being substantiated by cyclic testing. This proposed amendment is a continuation of a similar amendment adopted during previous code adoption cycles.
2304.11.7	Climatic Geological	No substantiating data has been provided to show that wood used in retaining or crib walls are effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Wood used in retaining or crib walls, when they are not properly treated and protected against deterioration, have performed very poorly. Most contractors are typically accustomed to construction in dry and temperate 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. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems that may result by using wood in retaining or crib walls that experience relatively rapid decay due to the face that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
2305.4	Geological	The overdriving of nails into the structural wood panel still remains a concern when pneumatic nail guns are used for wood structural panel shear wall nailing. Box nails were observed to cause massive and multiple failures of the typical 3/8-inch thick plywood during the 1994 Northridge Earthquake. The use of clipped head nails continues to be restricted from being used in wood structural panel shear walls where the minimum nail head size must be maintained in order to minimize nails from pulling through sheathing materials. Clipped or mechanically driven nails used in wood structural panel shear wall construction were found to perform much less in previous wood structural panel shear wall testing done at the University of California Irvine. The existing test results indicated that, under cyclic loading, the wood structural panel shear walls were less energy absorbent and less ductile. The panels reached ultimate load capacity and failed at substantially less lateral deflection than those using same size hand-driven nails. 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.
2305.5	Geological	Many of the hold-down connectors currently in use do not have any acceptance report based on dynamic testing protocol. This proposed amendment continues to limit the allowable capacity to 75% of the acceptance report value to provide an additional factor of safety for statically tested

Code Section	Condition	Explanation of Amendment
		anchorage devices. Cyclic forces imparted on buildings and structures by seismic activity cause more damage than equivalent forces which are applied in a static manner. Steel plate washers will reduce the additional damage which can result when hold-down connectors are fastened to wood framing members. 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.
2306.2.1 and Tables 2306.2.1(3) through 2306.2.1(4)	Geological	**The Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the damages to buildings and structures during the 1994 Northridge Earthquake recommended reducing allowable shear values in wood structural panel shear walls or diaphragms that were not substantiated by cyclic testing. That recommendation was consistent with a report to the Governor from the Seismic Safety Commission of the State of California recommending that code requirements be "more thoroughly substantiated with testing." The allowable shear values for wood structural panel shear walls or diaphragms fastened with staples are based on monotonic testing and does not take into consideration that earthquake forces load shear wall or diaphragm in a repeating and fully reversible manner.** In September 2007, limited cyclic testing was conducted by a private engineering firm to determine if wood structural panels fastened with staples would exhibit the same behavior as the wood structural panels fastened with common nails. The test result revealed that wood structural panel fastened with staples appeared to be much lower in strength and stiffness than wood structural panels fastened with common nails. It was recommended that the use of staples as fasteners for wood structural panel shear walls or diaphragms not be permitted to resist seismic forces in structures assigned to Seismic Design Category D, E and F unless it can be substantiated by cyclic testing. Furthermore, the cities and county within the Los Angeles region has taken extra measures to maintain the structural integrity of the framing of shear walls and diaphragms designed for high levels of seismic forces by requiring wood sheathing be applied directly over the framing members and prohibiting the use of panels placed over gypsum sheathing. This proposed amendment is intended to prevent the undesirable performance of nails when gypsum board softens due to cyclic earthquake displacements and the nail ultimately does not have any engagement in a solid material within the thickness of the gypsum board. This proposed amendment continues the previous amendment adopted during the 2007 code adoption cycle.
2306.3 and Tables 2306.3 through 2306.3(2)	Geological	The Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the damages to buildings and structures during the 1994 Northridge Earthquake recommended reducing allowable shear values in wood structural panel shear walls or diaphragms that were not substantiated by cyclic testing. That recommendation was consistent with a report to the Governor from the Seismic Safety Commission of the State of California recommending that code requirements be "more thoroughly substantiated with testing." The allowable

Code Section	Condition	Explanation of Amendment
		shear values for wood structural panel shear walls or diaphragms fastened with stapled nails are based on monotonic testing and does not take into consideration that earthquake forces load shear wall or diaphragm in a repeating and fully reversible manner. In September 2007, limited cyclic testing was conducted by a private engineering firm to determine if wood structural panels fastened with stapled nails would exhibit the same behavior as the wood structural panels fastened with common nails. The test result revealed that wood structural panel fastened with stapled nails appeared to be much lower in strength and stiffness than wood structural panels fastened with common nails. It was recommended that the use of stapled nail as fasteners for wood structural panel shear walls or diaphragms not be permitted to resist seismic forces in structures assigned to Seismic Design Category D, E and F unless it can be substantiated by cyclic testing. Furthermore, the cities and county within the Los Angeles region has taken extra measures to maintain the structural integrity of the framing of shear walls and diaphragms designed for high levels of seismic forces by requiring wood sheathing be applied directly over the framing members and prohibiting the use of panels placed over gypsum sheathing. This proposed amendment is intended to prevent the undesirable performance of nails when gypsum board softens due to cyclic earthquake displacements and the nail ultimately does not have any engagement in a solid material within the thickness of the gypsum board. This proposed amendment continues the previous amendment adopted during the 2007 code adoption cycle.
2306.7	Geological	Due to the high geologic activities in the Southern California area and the expected higher level of performance on buildings and structures, this proposed local amendment limits the location where shear walls sheathed with lath, plaster or gypsum board are used in multi-level buildings. 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 and formed the basis for this proposed amendment. Considering that shear walls sheathed with lath, plaster or gypsum board are less ductile than steel moment frames or wood structural panel shear walls, the cities and county of the Los Angeles region has taken the necessary measures to limit the potential structural damage that may be caused by the use of such walls at the lower level of multi-level building that are subject to higher levels of seismic loads. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
2308.3.4	Geological	With the higher seismic demand placed on buildings and structures in this region, 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. The proposed change is to limit the use of the exception to structures assigned to Seismic Design Category A, B or C where lower seismic demands are expected. Requiring interior braced walls be supported by continuous foundations is intended to reduce or eliminate the poor performance of buildings or structures. This proposed amendment is a

Code Section	Condition	Explanation of Amendment
		continuation of an amendment adopted during previous code adoption cycles.
2308.12.2	Geological	Additional weight attributed to the use of heavy veneer substantially increases loads to conventionally braced walls in an earthquake. Moreover, normal to wall loads that occur in an earthquake can seriously overstress wood bearing walls in combined seismic/gravity load combinations. Numerous conventionally framed veneer covered structures sustained serious damages in the Northridge Earthquake as a result of the heavy weight of the veneer. This proposed amendment is a continuation of an amendment adopted during previous code adoption cycles.
2308.12.4 and Table 2308.12.4	Geological	This proposed amendment specifies minimum 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.
2308.12.5	Geological	Due to the high geologic activities in the Southern California area and the expected higher level of performance on buildings and structures, this proposed local amendment limit the use of staple fasteners in resisting or transferring seismic forces. 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. 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 to resist or transfer seismic forces shall not be permitted without being substantiated by cyclic testing. This proposed amendment is a continuation of a similar amendment adopted during previous code adoption cycles.
3401.8.1 to 3401.8.3	Geological	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 amendments are to prevent inadequate construction or bracing to resist horizontal forces, thus becoming a hazard to life or property in the event of an earthquake.
3401.9	Geological	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 amendment is to save lives in the event of an earthquake when panics occur and glasses shatter.
J101.1	Geological Topographical Climate	Subsection revised to include erosion and sediment control measures to address the complex and diverse set of soil types and geologic conditions that exist in the Los Angeles County region.
J103.1 – J103.2	Geological Topographical Climate	Subsection revised to provide adequate control of grading operations typical to the Los Angeles County region due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County

Code Section	Condition	Explanation of Amendment
		region.
J104.2.1 – J104.4	Geological Topographical Climate	Subsection revised or added to provide adequate control of grading operations typical to the Los Angeles County region due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.
J105.1- J105.14	Geological Topographical Climate	Subsections revised or added to provide adequate control of grading operations typical to the Los Angeles County region due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.
J106.1	Geological Topographical Climate	Subsection revised to require more stringent cut slope ratios to address the complex and diverse set of soil types and geologic conditions that exist in the Los Angeles County region.
J106.2	Geological Topographical Climate	Subsection added to require drainage terraces to address the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J107.1- J107.7	Geological Topographical Climate	Subsections revised to provide more stringent fill requirements for slope stability, and settlement due to the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J107.8 – J107.9	Geological Topographical Climate	Subsections revised to provide more stringent inspection and testing requirements for fill slope stability due to the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J108.1 – J108.4	Geological Topographical Climate	Subsections revised to provide more stringent slope setback requirements to address the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J109.1 – J109.3	Geological Topographical Climate	Subsections revised to provide more stringent drainage and terracing requirements to address the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J109.5	Geological Topographical Climate	Subsection added to provide for adequate outlet of drainage flows due to the diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J110 - J110.8.5	Geological Topographical Climate	Subsections revised or added to provide for State requirements of storm water pollution prevention and more stringent slope planting, and slope stability requirements to control erosion due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.
J111	Geological Topographical Climate	Section revised to reference additional standards for soils testing due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.

RESIDENTIAL CODE AMENDMENTS

Code Section	Condition	Explanation of Amendment
R301.1.3.2	Geological	After the 1994 Northridge Earthquake, the Wood Frame Construction Joint Task Force recommended that the quality of wood frame construction needs 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.
R301.1.4	Geological Topographical	This technical amendment is for buildings constructed on hillsides. Due to the local topographical and geological conditions of the sites within the greater Los Angeles region and their susceptibility to earthquakes, this amendment is required to address and clarify special needs for buildings constructed on 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

Code Section	Condition	Explanation of Amendment
		millions of dollars in damage. These criteria were developed to minimize the damage to these structures and have been in use by the City and County of Los Angeles for several years.
R301.2.2.2.5	Geological	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 in the 2010 California Residential Code. Such limitations are recommended to reduce structural damages in the event of an earthquake. The cities and county of the Los Angeles region have 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.
R301.2.2.3.5.1	Geological	The term "one" in AISI S230, Section B1 conflicts with Table B1-1, whereas in the table it states the "thinnest connected steel sheet." The term "one" in the AISI S230, Section B1 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. For example, in a steel-to-steel connection consisting of a 33 mils and 44 mils, and if in any part of the code it is required to provide (4) No. 8 screws, according to Table B1-1 the factor 1.0 would apply to the required number of screws and thus a reduction of screws would not be allowed.
R322.1.4.1	Geological Topographical	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.
R327	Climatic	States that Chapter R327 requirements are applicable to all occupancy groups as wildfire exposure impacts all types of buildings and structures. This amendment is needed due to the high-fire severity zones caused by low humidity, strong winds and dry vegetation.
R327.1.1	Climatic	Clarifies the application of Chapter R327 to include additions, alterations, and/or relocated buildings. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.

Code Section	Condition	Explanation of Amendment
R327.1.3	Climatic	Clarifies the application of Chapter R327 to include additions, alterations, and/or relocated buildings. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.
R327.1.3.1	Climatic	Clarifies the application of Chapter R327 to include additions, alterations, and/or relocated buildings. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.
R327.3.5.2	Climatic	Due to low humidity, strong winds, and dry vegetation in high-fire severity zones, the Fire Department could not find sufficient evidence to allow the use of wood-shingle/wood-shake roof.
R327.3.5.2.2	Climatic	Due to low humidity, strong winds and dry vegetation in high-fire severity zones, the Fire Department could not find sufficient evidence to allow the use of wood-shingle/wood-shake roof.
R327.4.3	Climatic	Due to low humidity, strong winds, and dry vegetation in high-fire severity zones, the Fire Department could not find sufficient evidence to allow the use of wood-shingle/wood-shake roof.
R327.5.2	Climatic	Due to low humidity, strong winds, and dry vegetation in high-fire severity zones, the Fire Department could not find sufficient evidence to allow the use of wood-shingle/wood-shake roof and would require the use of Class A roof covering.
R401.1	Geological	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 necessary 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 the wood foundation guidelines specified in this Chapter.
R403.1.2 R403.1.3 R403.1.5	Climatic Geological	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

Code Section	Condition	Explanation of Amendment
		Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance observed in the 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.
R404.2	Climatic Geological	No substantiating data has been provided to show that wood foundations are 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 events 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.
R501.1	Geological	There is no limitation for weight of mechanical and plumbing fixtures and equipment in the CRC Code. Requirements of ASCE 7-05 and CBC are necessary that limits equipment weight up to 400 pounds, mounted at 4 feet or less above the floor or attic level without engineering design.

Code Section	Condition	Explanation of Amendment
R503.2.4	Geological	Section R502.10 of the Code does not provide any prescriptive criteria to limit the maximum floor opening size nor does Section R503 provide any details to address the issue of shear transfer near larger floor openings. With the higher seismic demand placed on buildings and structures in this region, it is important to ensure that a complete load path is provided to reduce or eliminate potential damages caused by seismic forces. Requiring blocking with metal ties around larger floor openings and limiting opening size is consistent with the requirements of Section R301.2.2.2.5.
602.3.2	Geological	The cities and county of the Los Angeles region have taken extra measures to maintain the structural integrity of the framing of the shear walls when designed for high levels of seismic loads by eliminating single top plate construction. 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.
Table R602.3(1)	Geological	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.
Table R602.3(2)	Geological	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

Code Section	Condition	Explanation of Amendment
		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.
Table R602.10.1.2(2)	Geological	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 have 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 2010 California Building Code.
Table R602.10.2	Geological	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

Code Section	Condition	Explanation of Amendment
		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.
Figure R602.10.3.2	Geological	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 ply-plywood during the Northridge Earthquake. The cities and county of the Los Angeles region have 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.
R602.10.3.3	Geological	The proposal to change the minimum lap splice requirement is consistent with Section 12.16.1 of ACI 318-05.
Figure R602.10.3.3	Geological	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 have 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.

Code Section	Condition	Explanation of Amendment
Table R602.10.4.1	Geological	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 have 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.
Figure R602.10.4.1.1	Geological	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 have 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 2010 California Residential Code and Section

Code Section	Condition	Explanation of Amendment
		2308.12.8 of the 2010 California Building Code.
R602.10.7.1	Geological	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 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.
R606.2.4	Geological	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.
Table R802.5.1(9)	Geological	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).
R802.8	Geological	This proposed amendment provides provisions to ensure that the ends of wood members and the points of bearing have adequate lateral support to prevent rotation and to help stabilize the members during construction. This proposed amendment is consistent with and similar to requirements contained in the NDS.
R802.10.2	Geological	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.
R803.2.4	Geological	Section R802 of the Code does not provide any prescriptive criteria to limit the maximum size of roof openings, nor does Section R803 provide any details to address the issue of shear transfer near larger roof openings. With the higher seismic demand placed on buildings and structures in this region, it is important to ensure that a complete load path is provided to reduce or eliminate potential damage caused by seismic forces. Requiring blocking with metal ties around larger roof openings and limiting the size of openings is consistent

Code Section	Condition	Explanation of Amendment
		with the requirements of Section R301.2.2.2.5.
R1001.3.1	Geological	The performance of fireplaces/chimneys 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.

Plumbing Code Amendments

CODE SECTION	CONDITION	EXPLANATION
K3.0	Geological, Topographical,	To establish more restrictive requirements for protection of local groundwater.
K4.0(C)	Geological, Topographical	To establish more restrictive requirements for protection of local groundwater due to local soil conditions.
K6.0(E)	Geological, Topographical	To establish more restrictive requirements for protection of local groundwater due to local soil conditions.
K6.0(H)	Geological, Topographical	To establish more restrictive requirements for protection of local groundwater due to local soil conditions.
K7.0(B)	Geological, Topographical	To establish more restrictive requirements for protection of local groundwater due to local soil conditions.
K10.0(A)(5)	Geological	To establish more restrictive requirements to prevent earth movement based on local soil and seismic conditions.
K11.0(F)	Geological	To establish more restrictive requirements to prevent earth movement based on local soil and seismic conditions.
Table K-3	Geological, Topographical	To establish more restrictive requirements for protection of local groundwater due to local soil conditions, sewer capacity and sewage treatment.
Table K-4	Geological, Topographical	To establish consistency with requirements of the County Health Department for local soil conditions, sewer capacity and sewage treatment.
Table K-5	Geological, Topographical	To establish consistency with requirements of the County Health Department for local soil conditions, sewer capacity and sewage treatment.

MECHANICAL CODE AMENDMENTS		
CODE SECTION	CONDITION	EXPLANATION
501	Climatic	Additional Health Department requirements are necessary due to local air quality concerns.
510.1.7	Geological	To reduce damage during a seismic event.
604.2	Geological	To reduce damage during a seismic event.
1119.4	Geological	To reduce the potential for release of toxic refrigerant caused by shifting equipment during a seismic event.

ELECTRICAL CODE AMENDMENTS

CODE SECTION	CONDITION	EXPLANATION
690.19	Geological	Emergency situations caused by seismic events may require the disconnection of electrical power in a building. Presently, the CEC does not require a disconnecting means for conductors for multi-arrayed solar photovoltaic systems.

ORDINANCE NO. 354U

AN ORDINANCE OF THE CITY OF MALIBU ADOPTING BY REFERENCE TITLE 26 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA BUILDING CODE, 2010 EDITION; TITLE 27 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA ELECTRICAL CODE, 2010 EDITION; TITLE 28 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA PLUMBING CODE, 2010 EDITION; TITLE 29 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA MECHANICAL CODE, 2010 EDITION; TITLE 30 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA RESIDENTIAL CODE, 2010 EDITION, THE CALIFORNIA GREEN BUILDING STANDARDS CODE, 2010 EDITION AND TITLE 32 OF THE LOS ANGELES COUNTY CODE, INCORPORATING THE CALIFORNIA FIRE CODE, 2010 EDITION; MAKING AMENDMENTS TO SAID CODES AND DECLARING THE URGENCY THEREOF

The City Council of the City of Malibu does hereby ordain as follows:

Section 1. Findings.

Pursuant to California Health and Safety Code Sections 17958.5, 17958.7 and 18941.5, the City Council hereby makes each finding of reasonable necessity for modifications as stated separately in Attachment No. 3 to the December 13, 2010 City Council Agenda Report for Item No. 4.A., for each such modification as identified in Los Angeles County Titles 26, 27, 28, 29, 30, and 32. These modifications to the California Building Standards Code, incorporating the model codes are reasonably necessary due to the local climate, characterized by hot, dry summers and the high potential for seismic activity which make structures particularly vulnerable to rapidly spreading fires and structural damage.

Section 2. Amendments

15.04 Building Code Adopted

Section 15.04.010 of the City of Malibu Municipal Code is amended to read as follows:

15.04.010 Adoption of Building Code.

Except as hereinafter provided, Title 26 Building Code of the Los Angeles County Code , as amended and in effect on January 1, 2011, adopting the California Building Code, 2010 Edition (Part 2 of Title 24 of the California Code of Regulations) is incorporated herein by reference as if fully set forth below and shall be known and may be cited as the Building Code of the city of Malibu.

The provisions of the Building Code applying to dwellings, lodging houses, congregate residences, hotels, motels, apartment houses, convents, monasteries or other uses classified by the building code as a group R occupancy and including Chapters 1, 2, 3, 98 and 99 shall constitute and may be cited as the Housing Code of the City of Malibu.

In the event of any conflict between provisions of the California Building Code, 2010 Edition, Title 26 of the Los Angeles County Building Code, or any amendment to the Building Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 26 of the Los Angeles County Building Code and the California Building Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.04.040 of the Malibu Municipal Code is amended to read as follows:

15.04.040 Violation-Penalty.

Every person violating any provision of the Title 26 Los Angeles County Building Code and appendices, adopted by reference by Section 15.04.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

Section 15.04.050 of the City of Malibu Municipal code is amended to read as follows:

15.04.050 Amendments to Building Code

Notwithstanding the provisions of Section 15.04.010 of this Chapter, Title 26 Los Angeles County Building Code is amended to read as follows:

Section 103.5 is hereby amended to read as follows:

103.5 Costs.

Any person that violates any provision of this code shall be responsible for the costs of any and all code enforcement actions taken by the building official in response to such violations. These costs shall be based on the amounts specified in Table 1-F.

All other fees are as established by the current City of Malibu fee schedule. Where no fee is established by the City of Malibu fee schedule, the Los Angeles County Code fee schedule shall apply.

Section 105.1.1 is amended to read as follows:

105.1.1 General.

Unless otherwise provided for below, in order to conduct the hearings provided for in this code and also to determine the suitability of alternate materials and types of construction and to provide for reasonable interpretations of the provisions of this code, there shall be a building board of appeals consisting of five members who are qualified by experience and training to pass upon matters pertaining to building construction. The building official shall be an *ex officio*-member and shall act as secretary to the board. The members of the building board of appeals shall be appointed by the City Council and shall hold office at its pleasure. The building board of appeals shall adopt reasonable rules and regulations for conducting its investigations. The board shall establish that the approval for alternate materials and the modifications granted for individual cases are in conformity with the intent and purpose of this code and that such alternate material, modification or method of work offered is at least the equivalent of that prescribed in this code in quality, strength, effectiveness, fire resistance, durability, safety and sanitation and does not lessen any fire-protection requirements or any degree of structural integrity. The building board of appeals shall document all decisions and findings in writing to the building official with a duplicate copy to the applicant, and the board may recommend to the City Council such new legislation as is consistent therewith.

Section 105.3 is hereby deleted in its entirety.

Section 105.6 is hereby deleted in its entirety.

Section 106.1.1 is hereby added to read as follows

106.1.1 Parking Lots.

A plan review and permit shall be required for the surfacing, resurfacing, replacement, reconfiguration and striping of parking lots and parking structures serving commercial and multifamily occupancies.

Any of the aforementioned activities in or on existing parking lots must comply with current zoning, National Pollution Discharge Elimination Systems (N.P.D.E.S.) and accessibility requirements as required by applicable codes and standards. Fees are determined by the current fee schedule.

Section 106.3 is hereby amended to read as follows:

106.3 Work Exempted.

A building permit shall not be required for the following:

1. One-story detached accessory buildings used as tool and storage sheds, playhouses and similar uses, provided the projected roof area does not exceed 120 square feet and the plate height does not exceed 12 feet (3.69 m) in height above the grade plane at any point and the maximum roof projection does not exceed 24 inches.

2. Fences and walls not over 6 feet (1829 mm) in height.

3. Steel tanks supported on a foundation not more than two feet (610 mm) above grade when the height does not exceed 11/2 times the diameter.

4. Gantry cranes and similar equipment.

5. Retaining walls that retain not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding a Class I, II, or III-A liquids.

6. Motion picture, television and theater stage sets and scenery, except when used as a building.

7. Ground mounted radio and television antennae towers which do not exceed 45 feet (13 716 mm) in height and ground support dish antennas not exceeding 15 feet (4572 mm) in height above finished grade in any position.

8. Light standards which do not exceed 30 feet (9144 mm) in height.

9. Flagpoles not erected upon a building and not more than 15 feet (4572 mm) high.

10. A tree house provided that:

    10.1. It does not exceed 64 square feet (5.94 m^2) in area nor 8 feet (2438 mm) in height from floor to roof.

10.2. The ceiling height as established by door height or plate line does not exceed 6 feet (1829mm).

11. Canopies or awnings attached to a Group R or U Occupancy and extending not more than 54 inches (1372 mm) from the exterior wall of the building.

12. Sheds, office or storage buildings, and other structures incidental to and work authorized by a valid grading or building permit. Such structures must be removed upon expiration of the permit or completion of the work covered by the permit.

13. Oil derricks.

14. Platforms, walks and driveways not more than 30 inches (762 mm) above grade and not over any basement or story below and which are not part of an accessible route.

15. Prefabricated swimming pools accessory to a Group R, Division 3 Occupancy in which the pool walls are entirely above the adjacent grade and if the capacity does not exceed 5,000 gallons (18 927 L). Fences, gates, door alarms, and other protection devices that are accessory to the prefabricated swimming pool are not exempt from the permit requirements.

17. Playground equipment.

Unless otherwise exempted, separate plumbing, electrical and mechanical permits will be required for the above-exempted items.

Exemption from the permit requirements of this Code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of other laws or ordinances.

Section 107.9 is hereby deleted in its entirety.

Section 107.13 is hereby amended to read as follows:

107.13 Investigation Fee for Work without Permit.

Whenever any work has been commenced without a permit as required by the provisions of Section 106.1 of this code, a special investigation shall be made prior to the issuance of the permit. An investigation fee shall be collected for each permit so investigated.

The payment of the investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

Section 108.1.1 is hereby added to read as follows:

108.1.1 Occupancy Inspection.

All existing commercial occupancies are required to apply for an occupancy inspection prior to occupancy of a building or tenant space by a new owner or occupant.

Upon successful completion of the occupancy inspection the Building Official shall issue a new certificate of occupancy to the building or tenant space as required in Section 109 of the California Building Code.

The certificate of occupancy issued will remain valid and in effect until a change of occupant occurs or is revoked for cause by the Building Official or as required by this code.

Fees determined by the current fee schedule.

Section 108.4.2 is amended to read as follows:

108.4.2 Foundation inspection.

Inspection shall be made after excavations for footings are complete and any required reinforcing steel is in place. For concrete foundations, any required forms shall be in place prior to inspection. All materials for the foundation shall be on the job site; however, where concrete is ready mixed in accordance with approved nationally recognized standards, the concrete need not be on the job site. Where the foundation is to be constructed of approved treated wood, additional inspections may be required by the building official. Required set back and pad elevations shall be established by survey prior to approval by the Building Official.

Section 108.4.6 is amended to read as follows:

108.4.6 Final inspection.

Inspection shall be made after finish grading is approved and the building is completed and ready for occupancy and all other required agency approvals have been obtained.

15.08 Electrical Code Adopted

Section 15.08.010 of the City of Malibu Municipal Code is amended to read as follows:

15.08.010 Adoption of Electrical Code.

Except as hereinafter provided, Title 27, Electrical Code, of the Los Angeles County Code, as amended and in effect on January 1, 2011, adopting the California Electrical Code, 2010 Edition (Part 3 of Title 24 of the California Code of Regulations) is hereby incorporated herein by reference as if fully set forth below, and shall be known and may be cited as the Building Code of the City of Malibu.

In the event of any conflict between provisions of the California Electrical Code, 2010 Edition, Title 27 of the Los Angeles County Electrical Code, or any amendment to the Building Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 27 of the Los Angeles County Electrical Code and the California Electrical Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.08.030 of the Malibu Municipal Code is amended to read as follows:

15.08.30 Violation-Penalty.

Every person violating any provision of the Title 26 Los Angeles County Electrical Code and appendices, adopted by reference by Section 15.08.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

15.12 Plumbing Code Adopted

Section 15.12.010 the City of Malibu Municipal Code is hereby amended to read as follows:

15.12.010 Adoption of Plumbing Code.

Except as hereinafter provided, Title 28, Plumbing Code, of the Los Angeles County Code, as amended and in effect on January 1, 2011, adopting the California Plumbing Code, 2010 Edition (Part 5 of Title 24 of the California Code of Regulations), is hereby incorporated herein by reference as if fully set forth below, and shall be known and may be cited as the Plumbing Code of the City of Malibu.

In the event of any conflict between provisions of the California Plumbing Code, 2010 Edition, Title 28 of the Los Angeles County Plumbing Code, or any amendment to the Building Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 28 of the Los Angeles County Plumbing Code and the California Plumbing Code, 2010 Edition, has been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.12.030 of the City Malibu Municipal Code is amended to read as follows:

15.12.030 Violation –Penalty.

Every person violating any provision of the Title 28 Los Angeles County Plumbing Code and appendices, adopted by reference by Section 15.12.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

Section 15.12.050 of the Malibu Municipal Code is hereby amended to read as follows:

15.12.050 Amendment to Plumbing Code

Notwithstanding the provisions of section 15.12.010 of this chapter, Title 28 Los Angeles County Plumbing Code is amended to read as follows:

Section 103.1.3 is hereby added to read as follows:

103.1.3 Operating Permits.

As of January 1, 2003, all applicants applying for new construction and residential additions, served by an onsite wastewater treatment system, shall be required to apply for and be issued an Operating Permit in addition to any permits required for the installation of an onsite wastewater treatment system. Operating Permits shall be required in addition to any permits required for the replacement or renovation of existing onsite wastewater treatment systems.

The Operating Permit shall be issued to the owner of the property. In the event of the sale of the property a new Operating Permit shall be applied for by the new owner within 30 days of the finalization of the sale of the property.

Homeowners associations will be considered the owner of the property for condominiums and townhouses for the purpose of enforcement of this code.

Existing commercial and multifamily occupancies shall apply for an Operating Permit through the Malibu Building Safety Department prior to January 1, 2004, or as required by the Building Official due to the proximity of the system to surface waters, history of failure, inadequate groundwater separation, inadequate soil conditions, hazardous geologic conditions or other conditions that may cause the system to negatively impact the health and safety of the community or the environment.

All on site wastewater treatment systems serving commercial and multifamily occupancies are subject to specific or general wastewater discharge requirements/ permits as established and issued by the Los Angeles Regional Water Quality Control Board.

The level of management required by conditions of the Operating Permit will be established by the Building Official based on the type of system and the level of risk to the public health and safety and the environment by the system.

Section 103.1.3.1 is hereby added to read as follows

103.1.3.1 Renewal of Operating Permits.

Operating Permits for commercial and multifamily occupancies shall be required to be renewed every two years from the date of initial issuance or as ordered by the Building Official. Operating Permits for single family residential occupancies utilizing alternative systems shall be renewed every three years or upon the sale of the property. Operating Permits for single family residential occupancies utilizing conventional systems shall be renewed every five years or upon the sale of the property. The Building Official may waive the requirement for renewal of a permit at the sale of a property if an Operating Permit was issued not more than 12 months from the date of property transfer.

Section 103.1.3.2 is hereby added to read as follows:

103.1.3.2 Fees.

Fees for Operating Permits and renewal of Operating Permits shall be as set forth in the current fee schedule as approved by the City Council.

Section 103.1.3.3 is hereby added to read as follows:

103.1.3.3 Revocation of Operating Permit.

After an administrative hearing, the Building Official may revoke or suspend an Operating Permit for failure on the part of the permit holder to meet the conditions of the permit or when the occupant is deemed to be in violation of the requirements of the Los Angeles County Health Department or the Los Angeles Regional Water Quality Control Board or this code.

Section 103.1.3.4 is hereby added to read as follows:

103.1.3.4 Appeals.

The permitee may appeal the revocation or suspension of the Operating Permit by the Building Official to the Building Board of Appeals in conformance with Section 109 of the Building Code.

Section 103.1.3.5 is hereby added to read as follows

103.1.3.5 Approval for Onsite Wastewater Treatment System Inspectors: As of January 1, 2003

1. Onsite wastewater treatment system inspectors who perform inspection in the City of Malibu shall be a California Certified Engineering Geologist, a California Registered Professional Geotechnical Engineer, a California Registered Civil Engineer, a California Registered Environmental Health Specialist, a California Licensed Contractor (with an A or C-42 license), who have attended training provided, or authorized by the City of Malibu; and who have passed an examination prepared, and administered by the City of Malibu, or an agent authorized by the City of Malibu, to qualify as an approved onsite wastewater treatment systems inspector pursuant to this code.

2. The City of Malibu may approve onsite wastewater treatment system inspectors who attend training provided, or authorized by the City of Malibu, and who pass a standard examination prepared, and administered by the City of Malibu, or an agent authorized by the City of Malibu. Said examination shall be designed to establish the fitness of the applicant for certification to assess the condition and function of onsite wastewater treatment systems, and to determine whether maintenance, including repair, or replacement of system components, is necessary.

3. The passing score for the examination shall be 75% correct answers to all questions posed. Any person who is denied approval as an onsite wastewater treatment system inspector based on his, or her failure to pass the examination given by the City of Malibu may request, and is entitled to receive, a written statement of the City of Malibu's basis for denial.

4. The City of Malibu shall maintain a list of all approved onsite wastewater treatment system inspectors. The list shall be available for inspection, or examination by any person. A copy of the list may be obtained by any person upon request.

5. The City of Malibu may revoke, or suspend the approval, and/or registration of an onsite wastewater treatment system inspector after opportunity for an administrative hearing when it determines that the onsite wastewater treatment system inspector has falsified, or fraudulently altered a system inspection report, or misrepresented, or fails to provide a copy of an inspection report to the Building Official of the results of an inspection preformed by the onsite wastewater treatment system inspector.

6. It shall be a violation of this code for any person to falsify, misrepresent or fraudulently alter a system inspection report, or the result of an inspection.

7. Onsite wastewater treatment system inspectors shall submit the results of the inspection on a System Inspection Report form approved by the City of Malibu together with the signed statement at the bottom of the form attesting that the inspection has been performed, and any recommendations regarding upgrade, repair or maintenance of the onsite wastewater treatment system made by the system inspector in the form were made consistent with the system inspector's training, expertise and experience in the maintenance and proper functioning of the onsite wastewater treatment systems and in accordance to the requirements of this code.

Section 103.1.3.6 is hereby added to read as follows:

103.1.3.6 Criteria for Inspection.

The Building Official shall establish reasonable guidelines for the inspection of existing systems to be as non-intrusive as possible, to avoid damage to the system, and any unnecessary disturbance of the surrounding soil area, which is related to the treatment process.

Section 203 is amended by adding the following:

Alternative System – An onsite wastewater treatment system providing enhanced sewage effluent treatment, secondary or better.

Section 206 is amended by adding the following:

Disinfection – To treat by means of a chemical, physical or other process such as chlorination, ozonation, application of ultraviolet light or sterilization designed to eliminate pathogenic organisms and producing an effluent of 200 MPN/100 mL fecal coliform or less and 104 MPN/100 mL enterococcus or less.

Section 221 is amended by adding the following:

Secondary Treatment – The processing of sewage effluent by means of a treatment device which renders a sewage effluent of 30 mg/L biochemical oxygen demand or less, 30 mg/L total suspended solids or less and 15 mg/L oil and grease or less.

Section 222 is amended by adding the following:

Tertiary Treatment – The processing of sewage effluent by means of a treatment device which renders a sewage effluent of 30 mg/L biochemical oxygen demand or less, 30 mg/L total suspended solids or less, 15 mg/L oil and grease or less, 200 MPN/100 mL fecal coliform or less and 104 MPH/100 mL enterococcus or less.

Section 710.9 is hereby amended by adding the following:

All such pumps and receiving tanks shall be automatically discharged. All sumps shall be provided with pumps or ejectors of the duplex type, simplex pumps are prohibited, and shall be so arranged to function alternately with each pump or ejector cycle, and to function independently in case of overload or mechanical failure. The lowest inlet shall have a minimum clearance of two (2) inches for the high water "starting" level of the sump.

All such pumps and receiving tanks shall be equipped with an automatic alarm system. The alarm system shall be activated upon failure of either pumps or ejectors, whether independently or simultaneously. The alarm shall emit an audible alarm, which can be detected from any location within the building and immediately outside the building served by such sumps and receiving tanks. The Building Official may approve other alarm systems, which provide equivalent enunciation of failure of the pumps or ejectors.

Subsection K1 (G) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles County Plumbing Code, is amended to read as follows:

(G) No onsite wastewater treatment system, or part thereof, shall be located in any other property other than the property which is the site of the building or structure served by such onsite wastewater treatment system, nor shall any onsite wastewater treatment system or part thereof be located at any point having less than the minimum distances indicated in Table K-1.

Nothing contained in this Code shall be construed to prohibit the use of all or part of another property for a onsite wastewater treatment system or part thereof, where secondary sewage effluent treatment, or better, is provided, when proper cause, transfer of ownership, or change of boundary not in violation of other requirements has been first established to the satisfaction of the Building Official. The instrument recording such action shall constitute an agreement with the Building Official which shall clearly state and show that the areas so joined or used shall be maintained as a unit during the time they are so used. Such agreement shall be recorded in the office of the County Recorder as part of the conditions of ownership of said properties, and shall be binding on all heirs, successors, and assigns to such properties. A copy of the instrument recording such proceedings shall be filed with the Building Official.

Subsections K1 (K), and (L) are added to Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code to read as follows:

(K) Commercial buildings and multiple family dwellings to be constructed, or remodeled, after the effective date of this section shall have a onsite wastewater treatment system which provides tertiary sewage effluent treatment as defined by the Building Official, prior to final sewage effluent disposal, unless otherwise approved by the Building Official.

(L) Commercial buildings and multiple family dwellings served by an existing onsite wastewater treatment system which is to be replaced, renovated, or repaired, after the effective date of this section shall have a onsite wastewater treatment system which provides tertiary sewage effluent treatment as defined by the Building Official, prior to final sewage effluent disposal, unless otherwise approved by the Building Official.

Section K2 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code, is amended to read as follows:

The liquid capacity of all septic tanks shall conform to Tables K-2 and K-3 as determined by the number of bedrooms or apartment units in dwelling occupancies or the estimated waste/sewage design flow rate or the number of plumbing fixture units as determined from Table 7-3 of this Code, whichever is greater.

Section K3 and Subsection K3 (3), (4), and (5) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code, are amended to read as follows:

The minimum effective absorption area in disposal fields in square feet (m^2), and in seepage pits in square feet (m^2) of side wall, shall be predicated on the required septic tank capacity in gallons (liters) and/or estimated waste/sewage flow rate, which ever is greater, and shall be as follows:

(3) No excavation for a leach line or leach bed shall extend within five (5) feet (1524 mm) of ground water nor to a depth where sewage may contaminate the underground water stratum.

Exception: When approved by the Building Official, this separation distance may be reduced. The applicant shall supply evidence of ground water depth to the satisfaction of the Building Official.

(4) The minimum effective absorption area in any seepage pit shall be calculated as the excavation sidewall area below the inlet exclusive of any hardpan, rock, clay, or other impervious formations. The minimum required area of porous formation should be provided in one or more seepage pits. No excavation shall extend within ten (10) feet (3038 mm) of ground water, nor to a depth where sewage may contaminate underground water stratum.

Exception: When approved by the Building Official, this separation distance may be reduced. The applicant shall supply evidence of ground water depth to the satisfaction of the Building Official.

(5) Leaching chambers shall be sized on the bottom absorption area (nominal until width) in square feet.

Subsection K4 (A) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code, is amended to read as follows:

(A) The construction dimensions of the subsurface sewage effluent disposal area of an onsite wastewater treatment system shall be based on soils analysis and/or percolation tests. Soils analysis shall be conducted by a licensed soils engineer and the results expressed in United States Department of Agriculture classification terminology. Percolation tests shall be conducted by a licensed geologist, a licensed soils engineer, a licensed civil engineer, or a California Registered Environmental Health Specialist.

Subsections K5 (E) and (L) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles Plumbing Code are amended to read as follows:

(E) Access to each septic tank shall be provided by at least two (2) manholes twenty (20) inches (508 mm) in minimum diameter. One (1) access manhole shall be located over the inlet and one (1) access manhole shall be located over the outlet. Wherever a first compartment exceeds twelve (12) feet (3658 mm) in length, an additional manhole shall be provided over the baffle wall.

(L) Septic tanks shall have the required manholes accessible by extending the manhole openings to grade in a manner acceptable to the Building Official.

Subsection K5 (M)(2) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles Plumbing Code is hereby deleted.

Building OfficialSubsections K6 (A), (B), (C), (D), and (I) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles Plumbing Code are amended to read as follows:

(A) Distribution lines shall be constructed of perforated ABS pipe, perforated PVC pipe, or other materials approved by the Building Official, provided that sufficient openings are available for distribution of the effluent into the trench area.

(B) Before placing filter material or drain lines in a prepared excavation, all smeared or compacted surfaces shall be removed by raking to a depth of one (1) inch (25.4 mm) and the loose material removed. Clean stone, gravel, slag, or similar material acceptable to the Building Official, varying in size from three fourths (3/4) inch to two and one-half (2-1/2) inches (19.1 mm to 64 mm) shall be placed in the trench to the depth and grade required by this section. Drain pipe shall be placed on the filter material in an approved manner. The drain lines shall then be covered with filter material to the minimum depth required by this section and this covered with material approved by the Building Official to prevent closure of voids with earth backfill. No earth backfill shall be placed over the filter material until after inspection and acceptance.

Exception: Listed or approved plastic leaching chambers may be used in lieu of pipe and filter material. Chamber installations shall follow the rules for disposal fields, where applicable, and shall conform to manufacturer's installation instructions.

(C) A grade board staked in the trench to the depth of filter material shall be utilized when the distribution line is constructed of material which will not maintain alignment without continuous support.

(D) When seepage pits are used in combination with disposal fields, the filter material in the trenches shall terminate at least five (5) feet (1524 mm) from the seepage pit excavation.

(I) Disposal fields shall be constructed as follows:

	Minimum	Maximum
Number of drain lines per field	1	---
Length of each line	---	100 ft. (30480 mm)
Bottom width of trench	18 in. (457 mm)	36 in. (914) mm
Spacing of lines, center-to-center		6 ft. (1829 mm)
Depth of earth cover of lines (preferred - 18 in. (457 mm)	12 in. (305 mm)	---
Grade of lines	level	3 in./100 ft. (25 mm/m)
Filter material under drain lines	12 in. (305 mm)	36 in. (914 mm)
Filter material over drain lines	2 in. (51 mm)	---

Minimum spacing between trenches or leaching beds shall be four (4) feet (1219 mm) plus two (2) feet (610 mm) for each additional foot (305 mm) of depth in excess of one (1) foot (305 mm) below the bottom of the drain line. Distribution drain lines in leaching beds shall not be more than six (6) feet (1829 mm) apart on centers, and no part of the perimeter of the leaching bed shall be more than three (3) feet (914 mm) from a distribution drain line. The terminal ends of all disposal fields and trenches shall have an inspection riser constructed of minimum eight (8) inch white PVC. The rise is to be extended to grade and shall terminate in an approved, accessible screw type cover approved by Building Official. The riser shall also extend to the bottom of the disposal field, and shall have one half (1/2) inch holes spaced at four (4) inches on center within the disposal area. Disposal fields, trenches, and leaching beds shall not be paved over or covered by concrete or any material that can reduce or inhibit any possible evaporation of sewer effluent accept as approved by the Building Official.

Subsections K7 (B), (C), and (D) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code are amended to read as follows:

(B) Multiple seepage pits installations shall be served through an approved distribution box. Distribution boxes shall have their locations permanently marked with a steel post, concrete marker or other durable material. Additionally, each distribution box shall have an inspection riser of white PVC or concrete of at least eight (8) inches in diameter. The inspection riser shall allow inspection access to the distribution box. Each riser shall terminate with an approved screw type cap.

(C) Each seepage pit shall be circular in shape and shall have an excavated diameter of not less than four (4) feet (1219 mm). -Approval shall be obtained prior to construction for any pit having an excavated diameter greater than six (6) feet (1829).

(D) Seepage pits may be constructed in one of two ways:

(1) An eight (8) inch (204 mm) white, or other similar approved color, sewer pipe of approved material shall be installed true and plumb in the center of the seepage pit excavation extending from the bottom of the seepage pit excavation to the inlet depth. The sewer pipe shall have one (1) inch (25.5 mm) holes drill each 120 degrees of the sewer pipe circumference at twelve (12) inch (306 mm) intervals on center minimum for the entire length of the sewer pipe to the inlet depth. The sewer pipe shall then extend watertight to grade and shall be capped with an approved screw type, accessible cap. The void between the sewer pipe and the seepage pit excavation shall then be filled with clean stone, gravel, or similar filter material acceptable to the Building Official, varying in size from the three-fourths (3/4) inch to two and one-half (2-1/2) inches (19.1 mm to 64 mm).

(2) Pre-cast concrete circular sections approved by the Building Official may be used. The void between the pre-cast circular sections and the seepage pit excavation shall have a minimum of six (6) inches (152 mm) of clean three-fourths (3/4) inch (19.1) gravel or rock filter material. An approved type one or two piece reinforced concrete slab cover shall be installed on top of the pre-cast concrete circular sections. Each such cover shall have twenty-five hundred (2500) pounds per square inch (17238 kPa) minimum compressive strength shall be not less than five (5) inches (127 mm) thick and shall be designed to support an earth load of not less than four hundred (400) pounds per square foot (19.2 kPa). Each such cover shall be provided with an eight (8) inch (204 mm) minimum inspection hole and shall be coated on the underside with an approved bituminous or other nonpermeable protective compound. An eight (8) inch (204 mm) white, or similar approved color, sewer pipe of approved material shall be installed true and plumb extending watertight from the cover inspection hole to grade and shall be capped with an approved accessible cap.

Subsection K7 (E) of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code is hereby deleted in its entirety and the subsequent sections renumbered.

Section K8 of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code is deleted in its entirety.

Section K9 of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code is hereby added to read as follows:

K9 Commercial or Industrial Special Liquid Waste Disposal

(A) When liquid wastes contain excessive amounts of grease, garbage, flammable wastes, sand, or other ingredients that may affect the operation of a private sewage disposal system, an interceptor for such wastes shall be installed.

(B) Installation of such interceptors shall comply with Section 1009.0 of this code, and their locations shall be in accordance with Table K-1 of this appendix. The Building Official may require and approve additional more restrictive standards.

(C) A sampling box shall be installed when required by the Building Official.

(D) Interceptors shall be of approved design and be of not less than two (2) compartments unless otherwise approved by the Building Official. Structural requirements shall be in compliance with the applicable subparts of Section K 5 of this appendix.

(E) Interceptors shall be located as close to the source as possible and be accessible for servicing. All necessary manholes for servicing shall be at grade level and be gastight.

(F) Waste discharge from interceptors may be connected to a septic tank or other primary system or be disposed into a separate disposal system.

(G) Recommended Design Criteria. (Formula may be adapted to other types of occupancies with similar wastes.) See charts on this page.

Subsection K10 (A) (3) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is amended to read as follows:

(A) Inspection

(3) Septic tanks and other primary systems shall be installed as required by the Building Official.

Subsection K11 (D) of Appendix K of the 2010 California Plumbing Code, is amended to read as follows:

(D) No person owning or controlling any cesspool, septic tank, or seepage pit on the premises or private property of such person or in any public street, alley, or other public property shall fail, refuse, or neglect to comply with the provisions of this section.

Section K12 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is amended to read as follows:

The Building Official may require any or all of the following information before a permit is issued for an onsite wastewater treatment system, or at any time during the construction thereof.

Subsections K12 (A), (B), and (C) of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code shall be retained unamended following the above amendment.

Section K13 is added to Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code to read as follows:

The Building Official shall require the following before a permit is issued for any new or reconstructed onsite wastewater treatment system on any parcel adjacent to the Pacific Ocean:

(a) Buildings permitted to be constructed, or remodeled, on beachfront property shall have adequate and properly designed bulkheads, or other approved structural protection from wave action for all portions of the onsite wastewater treatment system. All approved Coastal Engineering Reports shall also be required to determine the need and extent of this protection.

(b) Owners or possessors of real property with buildings constructed on beachfront property with an existing onsite wastewater treatment system to be renovated, or repaired, shall have adequate and properly designed bulkheads, or other approved structural protection from wave action, as provided by the Building Official, for all portions of the onsite wastewater treatment system. An approved Coastal Engineering Report shall also be required to determine the need and extent of this protection.

(c) Owners or possessors of real property with buildings constructed on beachfront property with an existing onsite wastewater treatment system damaged by storm, tide, or wave action shall have adequate and properly designed bulkheads, or other approved structural protection from wave action for all portions of the onsite wastewater treatment system. An approved Coastal Engineering Report shall also be required to determine the need and extent of this protection.

(d) Issuance of Permit. Upon review of the application and compliance with all of the requirements contained in this section and all other applicable laws, rules, and regulations, the Building Official shall issue a permit for the installation of bulkheads, or other protective structures required, imposing those conditions and restrictions necessary, and setting a time limit for the completion of the installation of bulkheads, or other protective structures required.

(e) Noncompliance and Right of Entry

(1) Upon expiration of the time limit established in the permit, including such additional time as may have been granted by the Building Official upon further application, if the installation of the bulkheads, or other protective

structures required, has not been accomplished, the Building Official may take all reasonable actions to install the bulkheads, or other protective structures required, upon the real property for which the permit was issued. The Building Official shall have the right of entry upon the owner's or possessor's real property to the extent necessary to effect the installation. A failure, refusal, or neglect of the owner or possessor of the real property to comply with the provisions of the permit for the installation of the bulkhead, or other protective structures required, within the period of time set by the Building Official shall be considered a violation of this section, subjecting the owner or possessor of the real property to the penalties and remedies provided in this Code.

(2) The actual cost incurred by the Building Official in taking the above action, including the cost of equipment, labor (including the cost of City of Malibu consultants and employees), administrative, and other indirect costs shall be charge assessed against the real property benefited, and shall by added to the annual property taxes next levied upon the real property and shall constitute a lien upon the real property in the same manner and to the same extent as does the tax lien securing the annual real property taxes, and may be collected and enforced in the same manner as secured ad valorem property taxes.

Table K-1 of Appendix K of the 2010 California Plumbing Code / Title 28 Los Angeles County Plumbing Code is amended to read as follows:

TABLE K-1

Location of Sewage Disposal System

Minimum Horizontal Distance In Clear Required From:	Building Sewer	Septic Tank	Disposal Field	Seepage Pit or Cesspool
Buildings or structures[1]	2 feet (610 mm)	5 feet (1524 mm)	8 feet (2438mm)	8 feet (2438 mm)
Property line adjoining private property	Clear[2]	5 feet (1524 mm)	5 feet (1524 mm)	8 feet (2438 mm)
Water supply wells	50 feet[3] (15240 mm)	50 feet (15240 mm)	100 feet (30.5 m)	150 feet (45.7 m)
Streams and Lakes	50 feet (15240 mm)	50 feet (15240 mm)	50 feet (15240 mm)	100 feet (30.5 m)
Trees	--	10 feet (3048 mm)	--	10 feet (3048 mm)
Seepage pits or cesspools	--	5 feet (1524 mm)	5 feet (1524 mm)	12 feet (3658 mm)
Disposal field	--	5 feet (1524 mm)	4 feet[4] (1219 mm)	5 feet (1524 mm)

On site domestic water service line	1 foot[5] (305 mm)	5 feet (1524 mm)	5 feet (1524 mm)	5 feet (1524 mm)
Distribution box	--	--	5 feet (1524 mm)	5 feet (1524 mm)
Pressure public water main	10 feet[6] (3048 mm)	10 feet (3048 mm)	10 feet (3048 mm)	10 feet (3048 mm)

Note:

When disposal fields and/or seepage pits are installed in sloping ground, the minimum horizontal distance between any part of the leaching system and ground surface shall be fifteen (15) feet (4572 mm).

1. Including porches and steps, whether covered or uncovered, breezeways, roofed porte-cocheres, roofed patios, carports, covered walks, covered driveways and similar structures or appurtenances.
2. See also Section 313.3 of the Uniform Plumbing Code.
3. All drainage piping shall clear domestic water supply wells by at least fifty (50) feet (15240 mm). This distance may be reduced to not less than twenty-five (25) feet (7620 mm) when the drainage piping is constructed of materials approved for use within a building.
4. Plus two (2) feet (610 mm) for each additional (f) foot (305 mm) of depth in excess of one (1) foot (305 mm) below the bottom of the drain line. (See also Section K6).
5. See Section 720.0 of the Uniform Plumbing Code.
6. For parallel construction - For crossings, approval by the Health Department shall be required.
7. Where special hazards are involved, the distance required shall be increased as may be directed by the Authority Having Juridisction.

Table K-2 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is amended to read as follows:

TABLE K-2

Capacity of Septic Tanks *

Single Family Dwellings ** Number of Bedrooms	Multiple Dwelling Units or Apartments B One Bedroom Each	Maximum Fixture Units Served per Table 7-3	Minimum Septic Tank Capacity in Gallons	(liters)
		15	750	(2838)
		20	1000	(3785)
4		25	1200	(4542)
1 to 6	2 or 3 units	33	1500	(5678)

4	45	2000	(7570)
5	55	2250	(8516)
6	60	2500	(9463)
7	70	2750	(10,409)
8	80	3000	(11,355)
9	90	3250	(12,301)
10	100	3500	(13,248)

* Note:
Extra bedroom, 150 gallons (568 liters) each.
Extra dwelling units over 10, 250 gallons (946 liters) each.
Extra fixture units over 100, 25 gallons (95 liters) per fixture unit.
Septic tank sizes in this table include sludge storage capacity and the connection of domestic food waste disposal units without further volume increase.
** Applies to mobile homes not installed in a mobile home park.

Table K-3 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is amended to read as follows:

TABLE K-3

Estimated Waste/Sewage Flow Rates

Because of the many variable encountered, it is not possible to set absolute values for waste/sewage flow rates for all situations. The designer should evaluate each situation and, if figures in this table need modification, they should be made with the concurrence of the Building Official.

Type of Occupancy	Unit Gallons (liters) Per Day
1. Airport	15 (56.8) per employee 5 (18.9) per passenger
2. Auto Washers	Check with equipment manufacturer
3. Bowling Alleys (snack bar only)	75 (283.9) per lane
4. Camps:	
Campground with central comfort station	35 (132.5) per person
Campground with flush toilets, no showers	25 (94.6) per person
Day camps (no meals served)	15 (56.8) per person
Summer and seasonal	50 (189.3) per person

Type of Occupancy	Unit Gallons (liters) Per Day
5. Churches (Sanctuary)	5 (18.9) per seat
with kitchen waste	7 (26.5) per seat
6. Dance Halls	5 (18.9) per person
7. Factories	
No showers	25 (94.6) per employee
With showers	35 (132.5) per employee
Cafeteria, add	5 (18.9) per employee
8. Hospitals	250 (946.3) per bed
Kitchen waste only	25 (94.6) per bed
Laundry waste only	40 (151.4) per bed
9. Hotels (no kitchen waste)	60 (227.1) per bed (2 person)
10. Institutions (Resident)	75 (283.9) per person
Nursing Home	125 (473.1) per person
Rest Home	125 (473.1) per person
11. Laundries, self-service	300 per machine
Commercial	Per manufacturer=s specifications
12. Motel	50 (189.3) per bed space
with kitchen	60 (227.1) per bed space
13. Office	20 (75.7) per employee
14. Parks B mobile homes	
Picnic parks (toilets only)	20 (75.7) per parking space
Recreational vehicles -	
without water hookup	75 (283.9) per space
with water and sewer hookup	100 (378.5) per space
15. Restaurants - Cafeterias	50 (189.3) per seat
Toilet	
16. Schools B Staff and office	20 (75.7) per person
Elementary students	15 (56.8) per person
Intermediate and High	20 (75.7) per student

with gym and showers, add	5 (18.9) per student
with cafeteria, add	3 (11.4) per student
Boarding, total waste	100 (378.5) per person
17. Service stations, toilets	1000 (378.5) for 1st bay 500 (1892.5) for each additional bay
Recreational vehicle dump station	750
18. Stores	20 (75.7) per employee
Public restrooms, add	1 per 10 sq. ft. (4.1/m^2) of floor space
19. Swimming pools, public	10 (37.9) per person
Theaters, auditoriums	5(18.9) per seat
Drive-in	10 (37.9) per space

(a) Recommended Design Criteria. Sewage Disposal Systems sized using the estimated waste/sewage flow rates should be calculated as follows:

(1) Waste/sewage flow, up to 1500 gallons/day (5677.5 L/day
Flow x 1.5=septic tank size

(2) Waste/sewage flow, over 1500 gallons/day (5677.5 L/day
Flow x 0.75 + 1125= septic tank size

(3) Secondary system shall be sized for total flow per 24 hours.

(b) Also see Section K2 of this appendix.

Table K-5 of Appendix K of the 2010 California Plumbing Code/Title 28 Los Angeles Plumbing Code is deleted in its entirety.

15.16 Mechanical Code Adopted

Section 15.16.010 of the City of Malibu Municipal Code is amended to read as follows:

15.16.010 Adoption of Mechanical Code.

Except as hereinafter provided, Title 29, Mechanical Code, of the Los Angeles County Code, as amended and in effect on January 1, 2011, adopting the California Mechanical Code, 2010 Edition (Part 4 of Title 24 of the California Code of Regulations) is hereby incorporated by reference as if fully set forth below, and shall be known and may be cited as the Mechanical Code of the City of Malibu.

In the event of any conflict between provisions of the California Mechanical Code, 2010 Edition, Title 29 of the Los Angeles County Mechanical Code, or any amendment to the Mechanical

Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 29 of the Los Angeles County Mechanical Code and the California Mechanical Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.16.030 of the City of Malibu Municipal Code is hereby amended to read as follows:

Section 15.16.030 Violations- Penalty.

Every person violating any provision of the Title 29 Los Angeles County Mechanical Code and appendices, adopted by reference by Section 15.16.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

CHAPTER 15.24 Green Building Standards Code is hereby added to read as follows:

15.24 Green Building Standards Code Adopted

Section 15.24.010 Adoption of Green Building Standards Code.

Except as hereinafter provided, the California Green Building Standards Code 2010 Edition (Part 11 of Title 24 of the California Code of Regulations) is herby incorporated herein by reference as if fully set forth below, and shall be known and may be cited as the Green Building Code of the city of Malibu.

In the event of any conflict between provisions of the California Green Building Standards Code, 2010 Edition, or any amendment to the Green Building Standards Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

Section 15.24.020 Definitions.

This section intentionally left blank.

Section 15.24.030 Green Building Standards Code Fees.

Fees are as established by the current City of Malibu fee schedule.

Section 15.24.040 Violations - Penalties.

Every person violating any provision of the Title 31 Los Angeles County Green Building Code and appendices, adopted by reference by Section 15.28.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

Section 15.24.050 Amendment to Green Building Code

Notwithstanding the provisions of section 15.24.010 of this chapter, the California Green Building Standards Code is amended to read as follows:

4.403.1 Irrigation Controllers.

Automatic irrigation system controllers for landscaping provided and installed at the time of final inspection and shall comply with the following:

1. Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plant' needs as weather conditions change.
2. Weather-based controllers without integral rain sensors or communication systems that account for local rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-base controllers are not required to have rain sensor input.

CHAPTER 15.28 Residential Code is hereby added to read as follows:

15.28 Residential Code Adopted

Section 15.28.010 Adoption of Residential Code.

Except as hereinafter changed or modified, Sections 102 through 119 of Chapter 1, Section 1207 of Chapter 12, Chapter 34,67, 69, 98, 99 and Appendix J of the Title 26 of the Los Angeles County Code and Chapters 2 through 10, Chapter 44, and Appendix H of that certain code known as

and designated as the 2010 California Residential Code as published by the California Building Standards Commission are collectively adopted by reference and incorporated in this Title 30 as if fully set forth below, and shall be known the Residential Code of the City of Malibu.

In the event of any conflict between provisions of the California Building Code, 2010 Edition, Title 30 of the Los Angeles County Residential Code, or any amendment to the Residential Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 30 of the Los Angeles County Residential Code and the California Building Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 15.28.020 Definitions.

"Building and Safety Division of the Department of County Engineer -facilities" means the Environmental and Building Safety Division of the City of Malibu.

"County," "County of Los Angeles" or "unincorporataed areas of the county of Los Angeles" means the City of Malibu.

Section 15.28.030 Residential Code Fees.

Fees area as established by the current City of Malibu fee schedule.

Section 15.28.040 Violations - Penalties.

Every person violating any provision of the Title 30 Los Angeles County Residential Code and appendices, adopted by reference by Section 15.28.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

8.12 Fire Code

Section 8.12.010 of the City of Malibu Municipal Code is amended to read as follows:

Section 8.12.010 Adoption of Fire Code.

Except as hereinafter provided, Title 32, Fire Code, of the Los Angeles County Code, as amended and in effect on January 1, 2011, adopting the California Fire Code, 2010 Edition (Part 9 of Title 24 of the California Code of Regulations) is hereby incorporated herein by reference as if fully set forth below, and shall be known and may be cited as the Fire Code of the City of Malibu.

In the event of any conflict between provisions of the California Fire Code, 2010 Edition, Title 32 of the Los Angeles County Fire Code, or any amendment to the Fire Code contained in the Malibu Municipal Code, the provision contained in the later listed document shall control.

A copy of Title 32 of the Los Angeles County Fire Code and the California Fire Code, 2010 Edition, have been deposited in the office of the City Clerk of the City of Malibu and shall be at all times maintained by the City Clerk for use and examination by the public.

Section 8.12.020 of the Malibu Municipal Code is hereby amended to read as follows:

Section 8.12.020 Violation – Penalty.

Every person violating any provision of the Title 32 Los Angeles County Fire Code and appendices, adopted by reference by Section 8.12.010, or of any permit or license granted thereunder, or any rules or regulations promulgated pursuant thereto, is guilty of a misdemeanor. Upon conviction thereof he or she shall be punishable by a fine not to exceed one thousand dollars or imprisonment not to exceed six months, or by both such fine and imprisonment. The imposition of such penalty for any violation shall not excuse the violation or permit it to continue. Each day that a violation occurs shall constitute a separate offense.

Section 3. Severability.

Should any section, subsection, clause, or provision of this Ordinance for any reason be held to be invalid or unconstitutional, such invalidity or unconstitutionality shall not affect the validity or constitutionality of the remaining portions of this Ordinance; it being hereby expressly declared that this Ordinance, and each section, subsection, sentence, clause, and phrase hereof would have been prepared, proposed, approved, and ratified irrespective of the fact that any one or more sections, subsections, sentences, clauses, or phrases be declared invalid or unconstitutional.

Section 4. Effective Date.

This Ordinance shall take effect on January 1, 2011, and shall apply to all projects submitted for plan check and / or permit application on or after that date.

Section 5. California Environmental Quality Act.

This Ordinance has been determined to be exempt from the California Environmental Quality Act pursuant to State Guidelines Section 15061 (b)(3) as a project that has no potential for causing a significant effect on the environment.

Section 6. Certification.

The City Clerk shall certify the adoption of this Ordinance.

The City Clerk shall file a certified copy of this Ordinance with the California Building Standards Commission.

Section 7. Urgency Findings.

State law requires localities to adopt the 2010 California Building, Plumbing, Mechanical, Electrical, Green Building, Residential, and Fire Codes and any modifications there to, by January 1, 2011. It is essential that the City adopt the above stated Codes and modifications necessitated by local topographical, geological, and climatic conditions by that date. In the absence of legislation effective by that date, technical codes adequate to meet the City's special circumstances will not be in effect and hazards will be posed which would immediately threaten the public peace, health, and safety. Accordingly, this ordinance shall be an Urgency Ordinance and shall take effect immediately and become operative January 1, 2011.

PASSED, APPROVED AND ADOPTED this 13th day of December, 2010.

JEFFERSON WAGNER, Mayor

ATTEST:

LISA POPE, City Clerk
(seal)

APPROVED AS TO FORM:

CHRISTI HOGIN, City Attorney

I CERTIFY THAT THE FOREGOING ORDINANCE NO. 354U was passed and adopted at the regular City Council meeting of May 10, 2010, by the following vote:

AYES:	5	Councilmembers:	Conley Ulich, La Monte, Rosenthal, Sibert, Wagner
NOES:	0		
ABSTAIN:	0		
ABSENT:	0		

Lisa Pope

LISA POPE, City Clerk
(seal)

FINDINGS FOR AMENDMENTS TO 2010 STATE BUILDING AND FIRE CODES

BUILDING CODE AMENDMENTS

Code Section	Condition	Explanation of Amendment
701A.1	Climatic	Clarifies the application of Chapter 7A to include additions, alterations, and/or relocated buildings. Many areas of the County have been designated as Fire Hazard Severity Zones due to low humidity, strong winds, and dry vegetation. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.
701A.3	Climatic	Clarifies the application of Chapter 7 A to include additions, alterations, and/or relocated buildings. Many areas of the County have been designated as Fire Hazard Severity Zones due to the increased risk of fire caused by low humidity, strong winds, and dry vegetation. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.
701A.3.1	Climatic	Clarifies the application of Chapter 7 A to include additions, alterations, and/or relocated buildings. Many areas of the County have been designated as Fire Hazard Severity Zones due to the increased risk of fire caused by low humidity, strong winds, and dry vegetation. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.
703A.5.2 & 703A.5.2.2	Climatic	Disallows the use of wood-shingle/wood-shake roofs due to the increased risk of fire in the County caused by low humidity, strong winds, and dry vegetation.
704A.3	Climatic	Disallows the use of wood-shingle/wood-shake roofs due to the increased risk of fire in the County caused by low humidity, strong winds, and dry vegetation in high fire severity zones.
705A.2	Climatic	Disallows the use of wood-shingle/wood-shake roofs and requires the use of Class A roof covering due to the increased risk of fire in the County caused by low humidity, strong winds, and dry vegetation in high fire severity zones.
1029.4	Geological	The greater Los Angeles/Long Beach region is a densely populated area having buildings constructed over and near a vast array of earthquake fault systems capable of producing major earthquakes, including but not limited to the recent

Code Section	Condition	Explanation of Amendment
		1994 Northridge Earthquake. The proposed amendment is intended to prevent occupants from being trapped in a building and to allow rescue workers to easily enter after an earthquake.
1207.1, 1207.11, 1207.12	Climatic and Topographic	Sound Transmission – "Soundproofing" buildings adjacent to Airport (LAX). The purpose of this section is to establish uniform minimum noise insulation performance standards to protect persons from the effects of excessive noise (sound), hearing loss or impairment, and interference with speech and sleep. The amendment requires other types of buildings, such as, long-term care facilities, single-family dwellings, private schools, and places of worship to be "soundproofed." Based on the local topographic conditions in the Los Angeles Basin, which includes the surrounding hills and mountains, such as the Santa Monica Mountains, and the climatic conditions of local wind blowing off shore, such as the Santa Ana winds, many planes are required to land and take off near the airports (LAX) to fly over areas where there are buildings including single family home, long-term care facilities, private schools and places of worship and other residential buildings, apartment houses, hotels, etc. The noise from these planes creates a hardship for the citizens, therefore, requiring the buildings to be "soundproofed."
1403.3	Climatic Geological	Section amended to limit the deflection of lateral support of veneer and prohibit its usage as part of the structural design strength of walls, due to the increased risk of significant earthquakes in the County. The Structural Engineers Association of Southern California (SEAOSC) and LA City Post Northridge Earthquake committee discovered significant loss of veneer from buildings due to inadequate design and construction. As deflection limitation in out-of-plane directions is not covered in this Code, this amendment will prevent loosening and spalling of veneer in a significant earthquake.
1405.7 through 1405.7.2	Geological	Section amended to require proper anchorage of masonry or stone veneer, due to the increased risk of significant earthquakes in the County. Investigations following the Northridge earthquake discovered numerous cases where veneer pulled away from wood stud framing. Most of it was due to corrosion and weakness in the anchor ties and mesh connections to the framing. Where sheathing was beneath the veneer, nail attachments were often not attached to the wall framing below. SEAOSC/LA City Post Northridge Earthquake committee findings indicated significant loss of veneer from buildings due to inadequate design and construction. Therefore, additional reinforcement for heavy veneer, stone and masonry veneer is needed to minimize such occurrences in the event of future significant earthquakes.
1507.3.1	Geological	Section amended to require concrete and clay tiles to be installed over solid structural sheathing boards only, due to the increased risk of significant earthquakes in the County. The changes in Section 1507.3.1 are needed because there were numerous observations of tile roofs pulling away from wood framed buildings following the 1994 Northridge Earthquake. Where sheathing beneath the tile roofs was not nailed adequately or the nails were not attached on each side of each tile or the nail just pulled out over a period of time because the shank of the nails were smooth. Northridge SEAOSC/LA City Post Northridge Earthquake committee findings indicated significant problems with tile roof due to inadequate design and/or construction. Therefore, the amendment is needed to needed to minimize such occurrences in the event of future significant earthquakes.
Table 1507.3.7	Geological	Table amended to require proper anchorage for clay or concrete tiles from sliding or rotating due to the increased risk of significant earthquakes in the County. Design provisions developed based on detailed study of the 1994 Northridge and the 1971

Code Section	Condition	Explanation of Amendment
		Sylmar earthquakes need to be incorporated into the local building code.
1613.6.7	Geological	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 deletion of the importance factor from Equation 16-44 will ensure that a safe seismic separation distance is provided. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1613.8 through 1613.8.1	Geological	The steel Buckling Restrained Braced Frame (BRBF) system was first approved for use in the 2003 NEHRP Provisions. The values for the approximate period perimeters C_t and x were also approved as part of that original BSSC Proposal 6-6R (2003). It was an oversight that these parameters were not carried forward into the 2005 Edition of the ASCE 7. Currently, these two factors can be found in Appendix R of AISC 341-05. There, they function only as a placeholder that will be removed in the next version upon approval by ASCE 7 Task Committee on Seismic. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1613.8.2	Geological	Observed damages to one- and two-family dwellings of light frame construction after the Northridge Earthquake may have been partially attributed to vertical irregularities common to this type of occupancy and construction. In an effort to improve quality of construction and incorporate lessons learned from studies after the Northridge Earthquake, the modification to ASCE 7-05 Section 12.2.3.1 by limiting the number of stories and height of the structure to two stories will significantly minimize the impact of vertical irregularities and concentration of inelastic behavior from mixed structural systems. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1613.8.3	Geological	The importance factor, I, was dropped from equation 12.8-16 by mistake while transcribing it from NEHRP Recommended Provisions (2003) equation 5.2-16. For buildings with importance factor, I, higher than 1.0, stability coefficient should include the importance factor. The modification is consistent with the provisions adopted by OSPHD and DSA-SS as reflected in Section 1615.10.7 of the 2010 California Building Code. SEAOSC Steel Committee had supported the proposed modification during the 2007 code adoption process. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.

Code Section	Condition	Explanation of Amendment
1613.8.4	Geological	A joint Structural Engineers Association of Southern California (SEAOSC), Los Angeles County, and Los Angeles City Task Force investigated the performance of concrete and masonry construction with flexible wood diaphragm failures after the Northridge earthquake. It was concluded at that time that continuous ties are needed at specified spacing to control cross grain tension in the interior of the diaphragm. Additionally, subdiaphragm shears need to be limited to control combined orthogonal stresses within the diaphragm. Recognizing the importance and need to continue the recommendation made by the task force, but also taking into consideration the improved performance and standards for diaphragm construction today, a proposal to increase the continuous tie spacing limit to 40 ft in lieu of 25 ft and to use 75 percent of the allowable code diaphragm shear to determine the depth of the sub-diaphragm in lieu of the 300 plf is deemed appropriate and acceptable. The Los Angeles region is within a very active geological location. The various jurisdictions within this region have taken additional steps to prevent roof or floor diaphragms from pulling away from concrete or masonry walls. This decision was made due to the frequency of this type of failure during the past significant earthquakes. This amendment is a continuation of an amendment adopted during previous code adoption cycles.
1613.9 through 1613.9.10.5	Geological Topographical	Section is added to improve seismic safety of buildings constructed on or into hillsides. Due to the local topographical and geological conditions of the sites within the Los Angeles region and their probabilities for earthquakes, this technical amendment is required to address and clarify special needs for buildings constructed on hillside locations. A joint Structural Engineers Association of Southern California (SEAOSC) and both the 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 both the City and County of Los Angeles for several years with much success. This amendment is a continuation of an amendment adopted during previous code adoption cycles.
1704.1	Geological Topographical	Section amended to remove the exemption of Group U from special inspection requirements. One of the significant problems discovered from the studies after the Northridge Earthquake was the extent of poor quality in construction, especially for residential wood frame accessory structures. The provisions to require that special inspectors be provided for work listed under Section 1704 to observe the actual construction will ensure that acceptable standards of workmanship are provided.
1704.4	Geological	Results from studies after the 1994 Northridge Earthquake indicated that a significant portion of the damages were attributable to lack of quality control during construction resulting in poor performance of the building or structure. Therefore, the amendment restricts the exceptions to the requirement for special inspection. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.

Code Section	Condition	Explanation of Amendment
1704.8	Geological	Studies after the Northridge Earthquake revealed that great confusion exists in the field over what is required by the Code in the way of special inspection beyond just piles and caissons. Connecting grade beams used in driven deep foundations will generally act like concrete beams and should not be treated like typical footings. Section 1704.4 requires concrete beams to have special inspection, but exempts the footings of buildings three stories or less in height. This amendment clarifies that the grade beams that connect driven deep foundations are not exempt from special inspection even if they are used as part of the foundation system. They are an essential part of the driven deep foundation system and should receive the same level of inspection, particularly since this type of system must resist the higher demand of seismic loads in this region. The amendment is necessary due to the increased risk of significant earthquakes in the County.
1704.9	Geological	Studies after the Northridge Earthquake revealed that great confusion exists in the field over what is required by the Code in the way of special inspection beyond just piles and caissons. Connecting grade beams used in cast-in-place deep foundations will generally act like concrete beams and should not be treated like typical footings. Section 1704.4 requires concrete beams to have special inspection, but exempts the footings of buildings three stories or less in height. This amendment clarifies that the grade beams that connect cast-in-place deep foundations are not exempt from special inspection even if they are used as part of the foundation system. They are an essential part of the cast-in-place deep foundation system and should receive the same level of inspection, particularly since this type of system must resist the higher demand of seismic loads in this region. The amendment is necessary due to the increased risk of significant earthquakes in the County.
1705.3	Geological	In Southern California, very few detached one- or two-family dwellings not exceeding two stories above grade plane are built as "box-type" structures, specially for those in hillside areas and near the oceanfront. Many with steel moment frames or braced frames, and or cantilevered columns can still be shown as "regular" structures by calculations. With the higher seismic demand placed on buildings and structures in this region, the language in Sections 1705.3 Item 3 of the California Building Code would permit many detached one- or two-family dwellings not exceeding two stories above grade plane with complex structural elements to be constructed without the benefit of special inspections. By requiring special inspections, the quality of major structural elements and connections that affect the vertical and lateral load resisting systems of the structure will greatly be increased. The exception should only be allowed for detached one- or two-family dwellings not exceeding two stories above grade plane assigned to Seismic Design category A, B, and C.
1710.1	Geological	The language in Sections 1710.1 of the California Building Code permits the owner to employ any registered design professional to perform structural observations with minimum guidelines. However, it is important to recognize that the registered design professional responsible for the structural design has thorough knowledge of the building he/she designed. By requiring the registered design professional responsible for the structural design or their designee who were involved with the design to observe the construction, the quality of the observation for major structural elements and connections that affect the vertical and lateral load resisting systems of the structure will greatly be increased. Additional requirements are provided to help clarify the role and duties of the structural observer and the method of reporting and correcting observed deficiencies to the building official. This

Code Section	Condition	Explanation of Amendment
		amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1710.2	Geological	With the higher seismic demand placed on buildings and structures in this region, the language in Sections 1710.2 Item 3 of the California Building Code would permit many low-rise buildings and structures with complex structural elements to be constructed without the benefit of a structural observation. By requiring a registered design professional to observe the construction, the quality of the observation for major structural elements and connections that affect the vertical and lateral load resisting systems of the structure will greatly be increased. An exception is provided to permit simple structures and buildings to be excluded. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1807.1.4	Climatic Geological	No substantiating data has been provided to show that a wood foundation is effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Wood retaining walls, 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 and temperate 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 events and wet applications. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems that may result by using wood foundations that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1807.1.6	Geological	With the higher seismic demand placed on buildings and structures in this region, it is deemed necessary to take precautionary steps to reduce or eliminate potential problems that may result by following prescriptive design provisions that do not take into consideration the surrounding environment. Plain concrete performs poorly in withstanding the cyclic forces resulting from seismic events. In addition, no substantiating data has been provided to show that under-reinforced foundation walls are effective in resisting seismic loads and may potentially lead to a higher risk of failure. It is important that the benefit and expertise of a registered design professional be obtained to properly analyze the structure and take these issues into consideration. This amendment is a continuation of an amendment adopted during previous Code adoption cycles.
1809.3	Geological	With the higher seismic demand placed on buildings and structures in this region, it is deemed necessary to take precautionary steps to reduce or eliminate potential problems that may result for under-reinforced footings located on sloped surfaces. Requiring minimum reinforcement for stepped footings is intended to address the problem of poor performance of plain or under-reinforced footings during a seismic event. This amendment is a continuation of an amendment adopted during previous Code adoption cycles.

Code Section	Condition	Explanation of Amendment
1809.7 and Table 1809.7	Geological	No substantiating data has been provided to show that under-reinforced footings are effective in resisting seismic loads and may potentially lead to a higher risk of failure. Therefore, this amendment requires minimum reinforcement in continuous footings to address the problem of poor performance of plain or under-reinforced footings during a seismic event. With the higher seismic demand placed on buildings and structures in this region, it is deemed necessary to take precautionary steps to reduce or eliminate potential problems that may result by following prescriptive design provisions for footings that do not take into consideration the surrounding environment. It was important that the benefit and expertise of a registered design professional be obtained to properly analyze the structure and take these factors into consideration. This amendment reflects the recommendations by the Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Task Force that investigated the poor performance observed in the 1994 Northridge Earthquake. This amendment is a continuation of an amendment adopted during previous code adoption cycles.
1809.12	Climatic Geological	No substantiating data has been provided to show that timber footings are effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effects of constant moisture in the soil and wood-destroying organisms. Timber footings, when they are not properly treated and protected against deterioration, have performed very poorly. Most contractors are typically accustomed to construction in dry and temperate 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 events and wet applications. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems that may result by using timber footings that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1908.1 and 1908.1.11 through 1908.1.14	Geological	This amendment is intended to carry over critical provisions for the design of concrete columns in moment frames from the UBC. Increased confinement is critical to the integrity of such columns and these modifications ensure that it is provided when certain thresholds are exceeded. In addition, this amendment carries over from the UBC a critical provision for the design of concrete shear walls. It essentially limits the use of very highly gravity-loaded walls from being included in the seismic load resisting system, since their failure could have catastrophic effect on the building. Furthermore, this amendment was incorporated in the code based on observations from the 1994 Northridge Earthquake. Rebar placed in very thin concrete topping slabs has been observed in some instances to have popped out of the slab due to insufficient concrete coverage. This modification ensures that critical boundary and collector rebars are placed in sufficiently thick slabs to prevent buckling of such reinforcements. This amendment is a continuation of an amendment adopted during previous Code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.

Code Section	Condition	Explanation of Amendment
1908.1.2	Geological	By virtue of ACI 318 Section 21.1.1.7(d), intermediate precast structural walls designed under Section 21.4, material requirements intended under provisions 21.1.4, 21.1.5, 21.1.6, and 21.1.7 would be excluded for structures assigned to Seismic Design Category D, E, or F. The amendments to ACI 318 Chapter 21 are needed to ensure that structural walls designed under ASCE 7 Table 12.2-1 using the intermediate wall panel category would conform to ductility requirements comparable to special structural walls; and conformance to the long standing practice of ACI 318 to impose special requirements for high seismic design regions. This amendment gives explicit requirements under which design and detailing need to conform to special structural wall system provisions in ACI-318 Section 21.9, which covers both cast-in-place as well as precast. This amendment further gives building officials the tools to enforce minimum life safety building performance under earthquake forces in Seismic Design Category D, E, or F. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1908.1.3	Geological	The design provision for wall pier detailing was originally introduced by SEAOC in 1987 to legacy Uniform Building Code (UBC) and was included in the 1988 UBC through the 1997 UBC (2002 CBC). The wall pier detailing provision prescribed under Section 1908.1.4 was intended for high seismic zones equivalent to current Seismic Design Category D, E, or F. Section 1908.1.3 was added as a complement of wall pier detailing in Seismic Design Category C (formerly seismic zones 2A and 2B under the legacy model code). ACI 318 Commentary R 21.1.1 emphasized "It is essential that structures assigned to higher Seismic Design Categories possess a higher degree of toughness," and further encourages practitioners to use special structural wall systems in regions of high seismic risk. ASCE 7 Table 12.2-1 permits intermediate precast structural wall system in Seismic Design Category D, E, or F. Current Section 1908.1.3 is not limited to just structures assigned to Seismic Design Category C. The required shear strength under 21.3.3, referenced in current Section 21.4.5, is based on V_u under either nominal moment strength or two times the code prescribed earthquake force. The required shear strength in 21.6.5.1, referenced in Section 21.9.10.2 (IBC 1908.1.4), is based on the probable shear strength, V_e under the probable moment strength, M_{pr}. In addition, the spacing of required shear reinforcement is 8 inches on center under current Section 21.4.5 instead of 6 inches on center with seismic hooks at both ends under Section 21.9.10.2. Requirement of wall pier under Section 21.9.10.2 would enhance better ductility. The current practice in commercial buildings constructed using precast panel wall systems is to have large window and door openings and/or narrow wall piers. Wall panels varying up to three stories high with openings resembles a wall frame which is not currently recognized under any of the defined seismic-force resisting systems other than consideration of structural wall systems. Conformance to special structural wall system design and detailing of wall piers ensures minimum life safety performance in resisting earthquake forces for structures in Seismic Design Category D, E, or F. The modification separates wall piers designed for structures assigned to Seismic Design Category C from those assigned to Seismic Design Category D, E, or F. This modification is consistent with the amendment adopted by DSA-SS as reflected in Section 1916.4.4 of the 2010 Edition of the California Building Code. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.

Code Section	Condition	Explanation of Amendment
1908.1.8	Geological	This amendment requires minimum reinforcement in continuous 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 amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
1909.4	Geological	With the higher seismic demand placed on buildings and structures in this region, it is deemed necessary to take precautionary steps to reduce or eliminate potential problems that may result by permitting a reduced edge thickness of the footing that support walls without taking into consideration the surrounding environment. In addition, no substantiating data has been provided to show that the reduced edge thickness is effective in resisting seismic loads and may potentially lead to a higher risk of failure. It is important that the benefit and expertise of a registered design professional be obtained to properly analyze the structure and take these issues into consideration. This amendment is a continuation of an amendment adopted during previous code adoption cycles.

<table>
<tr><th>Code Section</th><th>Condition</th><th>Explanation of Amendment</th></tr>
<tr><td>204.1.1</td><td>Geological</td><td>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. AWS D1.8/D1.8M requires that all seismic force resisting system welds are to be made with filler metals classified using AWS A5 standards that achieve the following mechanical properties:
<table>
<tr><th colspan="3">Mechanical Properties for Demand Critical Welds</th></tr>
<tr><th rowspan="2">Property</th><th colspan="2">Classification</th></tr>
<tr><th>70 ksi (480 MPa)</th><th>80 ksi (550 MPa)</th></tr>
<tr><td>Yield Strength, ksi (MPa)</td><td>58 (400) min.</td><td>68 (470) min.</td></tr>
<tr><td>Tensile Strength, ksi (MPa)</td><td>70 (480) min.</td><td>80 (550) min.</td></tr>
<tr><td>Elongation (%)</td><td>22 min.</td><td>19 min.</td></tr>
<tr><td>CVN Toughness, ft-lbf (J)</td><td colspan="2">40 (54) min. @ 70 °F (20 °C) [b, c]</td></tr>
<tr><td colspan="3">[b] For LAST of +50 °F (+10 °C). For LAST less than +50 °F (+10 °C), see AWS D1.8/D1.8M Clause 6.3.6.
[c] Tests conducted in accordance to AWS D1.8/D1.8M Annex A meeting 40 ft-lbf (54 J) min. at a temperature lower than +70 °F (20 °C) also meet this requirement.</td></tr>
</table>
In addition to the above requirements, AWS D1.8/D1.8M requires, unless otherwise exempted from testing, that all demand critical welds are to be made with filler metals receiving Heat Input Envelope Testing that achieve the following mechanical properties in the weld metal:
<table>
<tr><th colspan="3">Filler Metal Classification Properties for Seismic Force Resisting System Welds</th></tr>
<tr><th rowspan="2">Property</th><th colspan="2">Classification</th></tr>
<tr><th>70 ksi (480 MPa)</th><th>80 ksi (550 MPa)</th></tr>
<tr><td>Yield Strength, ksi (MPa)</td><td>58 (400) min.</td><td>68 (470) min.</td></tr>
<tr><td>Tensile Strength, ksi (MPa)</td><td>70 (480) min.</td><td>80 (550) min.</td></tr>
<tr><td>Elongation, %</td><td>22 min.</td><td>19 min.</td></tr>
<tr><td>CVN Toughness, ft-lbf (J)</td><td colspan="2">20 (27) min. @ 0 °F (–18 °C) [a]</td></tr>
<tr><td colspan="3">[a] Filler metals classified as meeting 20 ft-lbf (27 J) min. at a temperature lower than 0 °F (–18 °C) also meet this requirement.</td></tr>
</table>
The amendment is necessary due to the increased risk of significant earthquakes in the County.</td></tr>
</table>

Code Section	Condition	Explanation of Amendment
2304.9.1 and Table 2304.9.1	Geological	Due to the high geologic activities in the Southern California area and the expected higher level of performance on buildings and structures, this proposed local amendment limits the use of staple fasteners in resisting or transferring seismic forces. 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 nailed wood structural shear panels. The test results of stapled wood structural shear panels appeared much lower in strength and drift than nailed wood structural shear panel test results. Therefore, the use of staples as fasteners to resist or transfer seismic forces shall not be permitted without being substantiated by cyclic testing. This amendment is a continuation of a similar amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2304.11.7	Climatic Geological	No substantiating data has been provided to show that wood used in retaining or crib walls is effective in supporting buildings and structures during a seismic event while being subject to deterioration caused by the combined detrimental effect of constant moisture in the soil and wood-destroying organisms. Wood used in retaining or crib walls, when it is not properly treated and protected against deterioration, has performed very poorly. Most contractors are typically accustomed to construction in dry and temperate 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 events and wet applications. The proposed amendment takes the necessary precautionary steps to reduce or eliminate potential problems that may result by using wood in retaining or crib walls that experience relatively rapid decay due to the fact that the region does not experience temperatures cold enough to destroy or retard the growth and proliferation of wood-destroying organisms. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2305.4	Geological	The overdriving of nails into the structural wood panels still remains a concern when pneumatic nail guns are used for wood structural panel shear wall nailing. Box nails were observed to cause massive and multiple failures of the typical 3/8-inch thick plywood during the 1994 Northridge Earthquake. The use of clipped head nails continues to be restricted from use in wood structural panel shear walls where the minimum nail head size must be maintained in order to minimize nails from pulling through sheathing materials. Clipped or mechanically driven nails used in wood structural panel shear wall construction were found to perform much worse in previous wood structural panel shear wall testing done at the University of California Irvine. The existing test results indicated that, under cyclic loading, the wood structural panel shear walls were less energy absorbent and less ductile. The panels reached ultimate load capacity and failed at substantially less lateral deflection than those using same size hand-driven nails. 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 amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.

Code Section	Condition	Explanation of Amendment
2305.5	Geological	Many of the hold-down connectors currently in use do not have any acceptance report based on dynamic testing protocol. This amendment continues to limit the allowable capacity to 75% of the acceptance report value to provide an additional factor of safety for statically tested anchorage devices. Cyclic forces imparted on buildings and structures by seismic activity cause more damage than equivalent forces which are applied in a static manner. Steel plate washers will reduce the additional damage which can result when hold-down connectors are fastened to wood framing members. 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 the 1994 Northridge Earthquake. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2306.2.1 and Tables 2306.2.1(3) through 2306.2.1(4)	Geological	The Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the damages to buildings and structures during the 1994 Northridge Earthquake recommended reducing allowable shear values in wood structural panel shear walls or diaphragms that were not substantiated by cyclic testing. That recommendation was consistent with a report to the Governor from the Seismic Safety Commission of the State of California recommending that code requirements be "more thoroughly substantiated with testing." The allowable shear values for wood structural panel shear walls or diaphragms fastened with staples are based on monotonic testing and do not take into consideration that earthquake forces load shear wall or diaphragm in a repeating and fully reversible manner. In September 2007, limited cyclic testing was conducted by a private engineering firm to determine if wood structural panels fastened with staples would exhibit the same behavior as wood structural panels fastened with common nails. The test result revealed that wood structural panels fastened with staples appeared to be much lower in strength and stiffness than wood structural panels fastened with common nails. It was recommended that the use of staples as fasteners for wood structural panel shear walls or diaphragms not be permitted to resist seismic forces in structures assigned to Seismic Design Category D, E and F unless it can be substantiated by cyclic testing. Furthermore, the cities and unincorporated areas within the Los Angeles region have taken extra measures to maintain the structural integrity of the framing of shear walls and diaphragms designed for high levels of seismic forces by requiring wood sheathing be applied directly over the framing members and prohibiting the use of panels placed over gypsum sheathing. This amendment is intended to prevent the undesirable performance of nails when gypsum board softens due to cyclic earthquake displacements and the nail ultimately does not have any engagement in a solid material within the thickness of the gypsum board. This amendment continues the previous amendment adopted during the 2007 code adoption cycle.

Code Section	Condition	Explanation of Amendment
2306.3 and Tables 2306.3 through 2306.3(2)	Geological	The Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the damages to buildings and structures during the 1994 Northridge Earthquake recommended reducing allowable shear values in wood structural panel shear walls or diaphragms that were not substantiated by cyclic testing. That recommendation was consistent with a report to the Governor from the Seismic Safety Commission of the State of California recommending that code requirements be "more thoroughly substantiated with testing." The allowable shear values for wood structural panel shear walls or diaphragms fastened with stapled nails are based on monotonic testing and do not take into consideration that earthquake forces load shear wall or diaphragm in a repeating and fully reversible manner. In September 2007, limited cyclic testing was conducted by a private engineering firm to determine if wood structural panels fastened with stapled nails would exhibit the same behavior as wood structural panels fastened with common nails. The test result revealed that wood structural panel fastened with stapled nails appeared to be much lower in strength and stiffness than wood structural panels fastened with common nails. It was recommended that the use of stapled nail as fasteners for wood structural panel shear walls or diaphragms not be permitted to resist seismic forces in structures assigned to Seismic Design Category D, E and F unless it can be substantiated by cyclic testing. Furthermore, the cities and unincorporated areas within the Los Angeles region have taken extra measures to maintain the structural integrity of the framing of shear walls and diaphragms designed for high levels of seismic forces by requiring wood sheathing be applied directly over the framing members and prohibiting the use of panels placed over gypsum sheathing. This amendment is intended to prevent the undesirable performance of nails when gypsum board softens due to cyclic earthquake displacements and the nail ultimately does not have any engagement in a solid material within the thickness of the gypsum board. This amendment continues the previous amendment adopted during the 2007 code adoption cycle, and is necessary due to the increased risk of significant earthquakes in the County.
2306.7	Geological	Due to the high geologic activities in the Southern California area and the expected higher level of performance on buildings and structures, this amendment limits the location where shear walls sheathed with lath, plaster or gypsum board are used in multi-level buildings. 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 and formed the basis for this amendment. Considering that shear walls sheathed with lath, plaster or gypsum board are less ductile than steel moment frames or wood structural panel shear walls, the cities and unincorporated areas of the Los Angeles region have taken the necessary measures to limit the potential structural damage that may be caused by the use of such walls at the lower level of multi-level building that are subject to higher levels of seismic loads. This amendment is a continuation of an amendment adopted during previous code adoption cycles.

Code Section	Condition	Explanation of Amendment
2308.3.4	Geological	With the higher seismic demand placed on buildings and structures in this region, 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. The purpose of this amendment is to limit the use of the exception to structures assigned to Seismic Design Category A, B or C where lower seismic demands are expected. Requiring interior braced walls be supported by continuous foundations is intended to reduce or eliminate the poor performance of buildings or structures. This amendment is a continuation of an amendment adopted during previous code adoption cycles.
2308.12.2	Geological	Additional weight attributed to the use of heavy veneer substantially increases loads to conventionally braced walls in an earthquake. Moreover, normal to greater than normal wall loads that occur in an earthquake can seriously overstress wood bearing walls in combined seismic/gravity load combinations. Numerous conventionally framed veneer covered structures sustained serious damages in the Northridge Earthquake as a result of the heavy weight of the veneer. This amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2308.12.4 and Table 2308.12.4	Geological	This amendment specifies minimum 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 amendment is a continuation of an amendment adopted during previous code adoption cycles, and is necessary due to the increased risk of significant earthquakes in the County.
2308.12.5	Geological	Due to the high geologic activities in the Southern California area and the expected higher level of performance on buildings and structures, this amendment limits the use of staple fasteners in resisting or transferring seismic forces. 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 nailed wood structural shear panels. The test results of stapled wood structural shear panels appeared much lower in strength and drift than nailed wood structural shear panel test results. Therefore, the use of staples as fasteners to resist or transfer seismic forces shall not be permitted without being substantiated by cyclic testing. This amendment is a continuation of a similar amendment adopted during previous code adoption cycles.
3401.8.1 to 3401.8.3	Geological	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 purpose of the amendments is to prevent inadequate construction or bracing to resist horizontal forces, thus becoming a hazard to life or property in the event of an earthquake.

Code Section	Condition	Explanation of Amendment
3401.9	Geological	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 purpose of the amendment is to save lives in the event of an earthquake when panics occur and glass shatters.
J101.1	Geological Topographical Climate	This section is revised to include erosion and sediment control measures to address the complex and diverse set of soil types and geologic conditions that exist in the Los Angeles County region.
J103.1 – J103.2	Geological Topographical Climate	This section is revised to provide adequate control of grading operations typical to the Los Angeles County region due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.
J104.2.1 – J104.4	Geological Topographical Climate	Sections revised or added to provide adequate control of grading operations typical to the Los Angeles County region due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.
J105.1-J105.14	Geological Topographical Climate	Sections revised or added to provide adequate control of grading operations typical to the Los Angeles County region due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.
J106.1	Geological Topographical Climate	Section revised to require more stringent cut slope ratios to address the complex and diverse set of soil types and geologic conditions that exist in the Los Angeles County region.
J106.2	Geological Topographical Climate	Section added to require drainage terraces to address the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J107.1-J107.7	Geological Topographical Climate	Sections revised to provide more stringent fill requirements for slope stability, and settlement due to the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J107.8 – J107.9	Geological Topographical Climate	Sections revised to provide more stringent inspection and testing requirements for fill slope stability due to the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J108.1 – J108.4	Geological Topographical Climate	Sections revised to provide more stringent slope setback requirements to address the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J109.1 – J109.3	Geological Topographical Climate	Sections revised to provide more stringent drainage and terracing requirements to address the complex and diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J109.5	Geological Topographical Climate	Subsection added to provide for adequate outlet of drainage flows due to the diverse set of soil types, climates, and geologic conditions which exist in the Los Angeles County region.
J110 - J110.8.5	Geological Topographical Climate	Sections revised or added to provide for State requirements of storm water pollution prevention and more stringent slope planting, and slope stability requirements to control erosion due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.
J111	Geological Topographical Climate	Section revised to reference additional standards for soils testing due to the complex and diverse set of soil types, climates, and geologic conditions that exist in the Los Angeles County region.

SECTION 109. This ordinance shall become operative on January 1, 2011.

ELECTRICAL CODE AMENDMENTS

CODE SECTION	CONDITION	EXPLANATION
690.19	Geological	Emergency situations caused by seismic events may require the disconnection of electrical power in a building. Presently, the CEC does not require a disconnecting means for conductors for multi-arrayed solar photovoltaic systems.

Plumbing Code Amendments

CODE SECTION	CONDITION	EXPLANATION
K3.0	Geological, Topographical,	To establish more restrictive requirements for protection of local groundwater due to local soil conditions.
K4.0(C)	Geological, Topographical	To establish more restrictive requirements for protection of local groundwater due to local soil conditions.
K6.0(E)	Geological, Topographical	To establish more restrictive requirements for protection of local groundwater due to local soil conditions.

CODE SECTION	CONDITION	EXPLANATION
K6.0(H)	Geological, Topographical	To establish more restrictive requirements for protection of local groundwater due to local soil conditions.
K7.0(B)	Geological, Topographical	To establish more restrictive requirements for protection of local groundwater due to local soil conditions.
K10.0(A)(5)	Geological	To establish more restrictive requirements to prevent earth movement based on local soil and seismic conditions.
K11.0(F)	Geological	To establish more restrictive requirements to prevent earth movement based on local soil and seismic conditions.
Table K-3	Geological, Topographical	To establish more restrictive requirements for protection of local groundwater due to local soil conditions, sewer capacity, and sewage treatment.
Table K-4	Geological, Topographical	To establish consistency with requirements of the County Health Department, for sewer capacity, and sewage treatment due to local soil conditions.
Table K-5	Geological, Topographical	To establish consistency with requirements of the County Health Department for sewer capacity, and sewage treatment, due to local soil conditions.

CODE SECTION	CONDITION	EXPLANATION
K6.0(H)	Geological, Topographical	To establish more restrictive requirements for protection of local groundwater due to local soil conditions.
K7.0(B)	Geological, Topographical	To establish more restrictive requirements for protection of local groundwater due to local soil conditions.
K10.0(A)(5)	Geological	To establish more restrictive requirements to prevent earth movement based on local soil and seismic conditions.
K11.0(F)	Geological	To establish more restrictive requirements to prevent earth movement based on local soil and seismic conditions.
Table K-3	Geological, Topographical	To establish more restrictive requirements for protection of local groundwater due to local soil conditions, sewer capacity, and sewage treatment.
Table K-4	Geological, Topographical	To establish consistency with requirements of the County Health Department, for sewer capacity, and sewage treatment due to local soil conditions.
Table K-5	Geological, Topographical	To establish consistency with requirements of the County Health Department for sewer capacity, and sewage treatment, due to local soil conditions.

TABLE

MECHANICAL CODE AMENDMENTS		
CODE SECTION	CONDITION	EXPLANATION
501	Climatic	Additional Health Department requirements are necessary due to local air quality concerns.
510.1.7	Geological	To reduce damage during a seismic event.
604.2	Geological	To reduce damage during a seismic event.
1119.4	Geological	To reduce the potential for release of toxic refrigerant caused by shifting equipment during a seismic event.

Code Section	Condition	Explanation of Amendment
R301.1.3.2	Geological	After the 1994 Northridge Earthquake, the Wood Frame Construction Joint Task Force recommended that the quality of wood frame construction needs 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.
R301.1.4	Geological Topographical	This technical amendment is for buildings constructed on hillsides. Due to the local topographical and geological conditions of the sites within the greater Los Angeles region and their susceptibility to earthquakes, this amendment is required to address and clarify special needs for buildings constructed on 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

Code Section	Condition	Explanation of Amendment
		millions of dollars in damage. These criteria were developed to minimize the damage to these structures and have been in use by the City and County of Los Angeles for several years.
R301.2.2.2.5	Geological	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 in the 2010 California Residential Code. Such limitations are recommended to reduce structural damages in the event of an earthquake. The cities and county of the Los Angeles region have 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.
R301.2.2.3.5.1	Geological	The term "one" in AISI S230, Section B1 conflicts with Table B1-1, whereas in the table it states the "thinnest connected steel sheet." The term "one" in the AISI S230, Section B1 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. For example, in a steel-to-steel connection consisting of a 33 mils and 44 mils, and if in any part of the code it is required to provide (4) No. 8 screws; according to Table B1-1 the factor 1.0 would apply to the required number of screws and thus a reduction of screws would not be allowed.
R322.1.4.1	Geological Topographical	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.
R327	Climatic	States that Chapter R327 requirements are applicable to all occupancy groups as wildfire exposure impacts all types of buildings and structures. This amendment is needed due to the high-fire severity zones caused by low humidity, strong winds and dry vegetation.
R327.1.1	Climatic	Clarifies the application of Chapter R327 to include additions, alterations, and/or relocated buildings. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.

Code Section	Condition	Explanation of Amendment
R327.1.3	Climatic	Clarifies the application of Chapter R327 to include additions, alterations, and/or relocated buildings. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.
R327.1.3.1	Climatic	Clarifies the application of Chapter R327 to include additions, alterations, and/or relocated buildings. Additions, alterations, and/or relocated buildings have the same fire risk as new buildings.
R327.3.5.2	Climatic	Due to low humidity, strong winds, and dry vegetation in high-fire severity zones, the Fire Department could not find sufficient evidence to allow the use of wood-shingle/wood-shake roof.
R327.3.5.2.2	Climatic	Due to low humidity, strong winds and dry vegetation in high-fire severity zones, the Fire Department could not find sufficient evidence to allow the use of wood-shingle/wood-shake roof.
R327.4.3	Climatic	Due to low humidity, strong winds, and dry vegetation in high-fire severity zones, the Fire Department could not find sufficient evidence to allow the use of wood-shingle/wood-shake roof.
R327.5.2	Climatic	Due to low humidity, strong winds, and dry vegetation in high-fire severity zones, the Fire Department could not find sufficient evidence to allow the use of wood-shingle/wood-shake roof and would require the use of Class A roof covering.
R401.1	Geological	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 necessary 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 the wood foundation guidelines specified in this Chapter.
R403.1.2 R403.1.3 R403.1.5	Climatic Geological	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

Code Section	Condition	Explanation of Amendment
		Structural Engineers Association of Southern California (SEAOSC) and the Los Angeles City Joint Task Force that investigated the poor performance observed in the 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.
R404.2	Climatic Geological	No substantiating data has been provided to show that wood foundations are 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 events 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.
R501.1	Geological	There is no limitation for weight of mechanical and plumbing fixtures and equipment in the CRC Code. Requirements of ASCE 7-05 and CBC are necessary that limits equipment weight up to 400 pounds, mounted at 4 feet or less above the floor or attic level without engineering design.

Code Section	Condition	Explanation of Amendment
R503.2.4	Geological	Section R502.10 of the Code does not provide any prescriptive criteria to limit the maximum floor opening size nor does Section R503 provide any details to address the issue of shear transfer near larger floor openings. With the higher seismic demand placed on buildings and structures in this region, it is important to ensure that a complete load path is provided to reduce or eliminate potential damages caused by seismic forces. Requiring blocking with metal ties around larger floor openings and limiting opening size is consistent with the requirements of Section R301.2.2.2.5.
602.3.2	Geological	The cities and county of the Los Angeles region have taken extra measures to maintain the structural integrity of the framing of the shear walls when designed for high levels of seismic loads by eliminating single top plate construction. 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.
Table R602.3(1)	Geological	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.
Table R602.3(2)	Geological	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

Code Section	Condition	Explanation of Amendment
		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.
Table R602.10.1.2(2)	Geological	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 have 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 2010 California Building Code.
Table R602.10.2	Geological	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

Code Section	Condition	Explanation of Amendment
		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.
Figure R602.10.3.2	Geological	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 ply-plywood during the Northridge Earthquake. The cities and county of the Los Angeles region have 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.
R602.10.3.3	Geological	The proposal to change the minimum lap splice requirement is consistent with Section 12.16.1 of ACI 318-05.
Figure R602.10.3.3	Geological	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 have 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.

Code Section	Condition	Explanation of Amendment
Table R602.10.4.1	Geological	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 have 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.
Figure R602.10.4.1.1	Geological	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 have 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 2010 California Residential Code and Section 2308.12.8 of the 2010 California Building Code.

Code Section	Condition	Explanation of Amendment
R602.10.7.1	Geological	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 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.
R606.2.4	Geological	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.
Table R802.5.1(9)	Geological	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).
R802.8	Geological	This proposed amendment provides provisions to ensure that the ends of wood members and the points of bearing have adequate lateral support to prevent rotation and to help stabilize the members during construction. This proposed amendment is consistent with and similar to requirements contained in the NDS.
R802.10.2	Geological	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.
R803.2.4	Geological	Section R802 of the Code does not provide any prescriptive criteria to limit the maximum size of roof openings, nor does Section R803 provide any details to address the issue of shear transfer near larger roof openings. With the higher seismic demand placed on buildings and structures in this region, it is important to ensure that a complete load path is provided to reduce or eliminate potential damage caused by seismic forces. Requiring blocking with metal ties around larger roof openings and limiting the size of openings is consistent with the requirements of Section R301.2.2.2.5.

Code Section	Condition	Explanation of Amendment
R1001.3.1	Geological	The performance of fireplaces/chimneys 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.

GREEN BUILDING STANDARDS CODE AMENDMENTS		
CODE SECTION	CONDITION	EXPLANATION
301.2.2.1	Climatic and Topographic	Environmental resources in the County of Los Angeles are scarce due to varying and occasionally immoderate temperatures and weather conditions. Expanding the scope of the mandatory requirements of this Code for buildings not defined as low rise residential that are greater than or equal to 25,000 square feet in floor area will achieve a greater reduction in greenhouse gases, higher efficiencies of energy, water, and material usage and improved environmental air quality.

GREEN BUILDING STANDARDS CODE AMENDMENTS		
CODE SECTION	CONDITION	EXPLANATION
4.106.4	Climatic and Topographic	The County of Los Angeles is a densely populated area having residential buildings constructed within a region where water is scarce and maintaining storm water runoff quality is an issue. The proposed low-impact development measures will allow greater conservation of rain water, increase in groundwater recharge, reduction of storm water runoff, and improvement in storm water runoff quality
4.106.5	Climatic	The County of Los Angeles is a densely populated area having residential buildings constructed within a region where water is scarce. The proposed landscape design measures will allow greater efficiencies of outdoor water use.
4.201.1.1, 4.201.1.2	Climatic	Resources in the County of Los Angeles are scarce due to varying and occasionally immoderate temperatures and weather conditions. Expanding the scope of the mandatory measures to require projects of five residential units or more to achieve a reduction in energy usage of at least 15 percent will reduce greenhouse gases and promote greater efficiency in energy usage.
4.304.1	Climatic	The County of Los Angeles is a densely populated area having residential buildings constructed within a region where water is scarce. The proposed modification to require weather or soil based irrigation controllers for any residential building subject to Chapter 4, regardless of which entity provides the landscaping, will allow greater efficiencies of outdoor water use.
4.304.3	Climatic	The County of Los Angeles is a densely populated area having residential buildings constructed within a region where water is scarce. The proposed landscape design measures will allow greater efficiencies of outdoor water use.
4.408.1.1, 4.408.1.2, 4.408.2, 4.408.2.1, 4.408.2.2	Climatic and Topographic	Solid waste disposal sites and locally sourced construction materials in the County of Los Angeles are scarce due to population density and varying and occasionally immoderate temperatures and weather conditions. The proposed modification to require projects of five residential units or more to recycle or reuse 65 percent (instead of 50 percent) of construction debris will allow for a reduction in greenhouse gases

GREEN BUILDING STANDARDS CODE AMENDMENTS		
CODE SECTION	CONDITION	EXPLANATION
		and greater material conservation and resource efficiency.
5.106.2	Climatic and Topographic	The County of Los Angeles is a densely populated area having buildings constructed within a region where water is scarce and maintaining storm water runoff quality is an issue. The proposed low-impact development measures will allow greater conservation of rain water, increase in groundwater recharge, reduction of storm water runoff and improvement in storm water runoff quality.
5.304.1, 5.304.3	Climatic	The County of Los Angeles is a densely populated area having residential buildings constructed within a region where water is scarce. The proposed landscape design measures will allow greater efficiencies of outdoor water use.
5.408, 5.408.1, 5.408.2, 5.408.2.1, 5.408.2.2, 5.408.3, 5.408.4	Climatic and Topographic	Solid waste disposal sites and locally sourced construction materials in the County of Los Angeles are scarce due to population density and varying and occasionally immoderate temperatures and weather conditions. The proposed modification to require projects that are not defined as low rise to recycle or reuse 65 percent (instead of 50 percent) of construction debris will allow for a reduction in greenhouse gases and greater material conservation and resource efficiency.
A5.601.1	Climatic and Topographic	Environmental resources in the County of Los Angeles are scarce due to varying and occasionally immoderate temperatures and weather conditions. Expanding the scope of the mandatory requirements of this Code for buildings not defined as low rise residential that are greater than or equal to 25,000 square feet in floor area will achieve a greater reduction in greenhouse gases, higher efficiencies of energy, water, and material usage and improved environmental air quality.

GREEN BUILDING STANDARDS CODE AMENDMENTS		
CODE SECTION	CONDITION	EXPLANATION
		and greater material conservation and resource efficiency.
5.106.2	Climatic and Topographic	The County of Los Angeles is a densely populated area having buildings constructed within a region where water is scarce and maintaining storm water runoff quality is an issue. The proposed low-impact development measures will allow greater conservation of rain water, increase in groundwater recharge, reduction of storm water runoff and improvement in storm water runoff quality.
5.304.1, 5.304.3	Climatic	The County of Los Angeles is a densely populated area having residential buildings constructed within a region where water is scarce. The proposed landscape design measures will allow greater efficiencies of outdoor water use.
5.408, 5.408.1, 5.408.2, 5.408.2.1, 5.408.2.2, 5.408.3, 5.408.4	Climatic and Topographic	Solid waste disposal sites and locally sourced construction materials in the County of Los Angeles are scarce due to population density and varying and occasionally immoderate temperatures and weather conditions. The proposed modification to require projects that are not defined as low rise to recycle or reuse 65 percent (instead of 50 percent) of construction debris will allow for a reduction in greenhouse gases and greater material conservation and resource efficiency.
A5.601.1	Climatic and Topographic	Environmental resources in the County of Los Angeles are scarce due to varying and occasionally immoderate temperatures and weather conditions. Expanding the scope of the mandatory requirements of this Code for buildings not defined as low rise residential that are greater than or equal to 25,000 square feet in floor area will achieve a greater reduction in greenhouse gases, higher efficiencies of energy, water, and material usage and improved environmental air quality.

Section	Local Condition	Explanation and Findings
304.1.2 – Vegetation	Climatic and Topographical	Local amendment requiring brush clearance in order to maintain defensible space for fire operations that is necessary due to Los Angeles County's unique climate and topography to reduce risk of fire and to minimize the spreading of fire to structures.
315.2.2.1 – Storage under stairways	Climatic	Prevents storage of combustible materials under stairways to help prevent fire in stairways from preventing safe exit in event of fire. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions.
325.1.1 – Support clearance	Climatic and Topographical	Local amendment requiring brush clearance under electrical transmission lines in order to prevent fires caused by powerlines and to maintain defensible space for fire operations that is necessary due to Los Angeles County's unique climate and topography to reduce risk of fire and to minimize the spreading of fire to structures.
325.1.2 – Line clearance	Climatic and Topographical	Local amendment requiring clearance away from electrical transmission lines in order to prevent fires caused by powerlines and to maintain defensible space for fire operations that is necessary due to Los Angeles County's unique climate and topography to reduce risk of fire and to minimize the spreading of fire to structures.
325.1.3 – Self-supporting aerial cable	Climatic and Topographical	Local amendment requiring clearance of trees and other growth from aerial cables in order to prevent fires and to maintain defensible space for fire operations that is necessary due to Los Angeles County's unique climate and topography to reduce risk of fire and to minimize the spreading of fire to structures.

325.2.1 – Clearances	Climatic and Topographical	Local amendment creating defensible space for fire operations that is necessary due to Los Angeles County's unique climate and topography to reduce risk of fire and to minimize the spreading of fire to structures.
325.2.2 – Extra Hazard	Climatic and Topographical	Local amendment creating defensible space for fire operations that is necessary due to Los Angeles County's unique climate and topography to reduce risk of fire, to minimize impacts of fire in fire hazard severity zone, and to reduce possibility of wildland fires spreading to structures.
325.10 – Roadway Clearance	Climatic and Topographical	Local amendment requiring clearance of roadways to provide adequate access for firefighting apparatus, to create defensible space for fire operations, and to reduce the possibility of wildland fires spreading to structures Necessary due to Los Angeles County's unique climate and topography.
326.7 – Fire protection facilities required	Climatic, Geological, and Topographical	Local amendment to require fire safety measures including but not limited to water supply, firebreaks, posting of fire watchers, access roads, restriction of activities during high fire hazard and other conditions to maintain reasonable fire safety. Necessary due to Los Angeles County's unique climate and topography to reduce risk of fire, to reduce the possibility of wildland fires spreading to structures, and to minimize impacts of fire. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.
326.12.2 - Chimneys	Climatic and Topographical	Local amendment to reduce the threat of fires by requiring spark arrestors on chimneys that is necessary due to Los Angeles County's unique climate and topography to reduce risk of fire and to minimize impacts of fire. Such spark arrestors reduce the likelihood of embers exiting a chimney and igniting a fire.
326.14 – Roadway Clearance	Climatic and Topographical	Local amendment requiring clearance of roadways to provide adequate access for firefighting apparatus, to create defensible space for fire operations, and to reduce the possibility of wildland fires spreading to structures Necessary due to Los Angeles County's unique climate and topography.

503.1.2 – Additional access	Climatic, Geological, and Topographical	Provides for additional access requirements necessary because of terrain, climate or other factors that limit access. Necessary to ensure adequate response times due to the unique climatic and topographical conditions that increase the risk of fires in fire hazard severity zones. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.
503.2.1 – Dimensions	Climatic, Geological, and Topographical	Requires unobstructed clearance to sky on fire apparatus access roads with exception for protected tree species. Necessary to prevent obstruction of access roads by tree limbs or other obstructions and thus allow for quick response times to fires and other emergencies. Necessary to ensure adequate response times due to the unique climatic and topographical conditions that increase the risk of fires in fire hazard severity zones. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.
503.2.5 - Dead-ends	Climatic, Geological, and Topographical	Provides for more stringent width, turning radius and grade specifications for access roads to ensure access for fire apparatus. Necessary due to unique climatic and topographical conditions that increase the risk of fires. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.
503.4 – Obstruction of fire apparatus access roads	Climatic, Geological, and Topographical	Adds speed bumps to list of prohibited obstructions to fire apparatus access roads. Speed bumps reduce response times to fires and other emergencies because fire apparatus have to slow down to pass over them or drive around them. Necessary to ensure adequate response times due to the unique climatic and topographical conditions that increase the risk of fires in fire hazard severity zones. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.
503.4.1 – Traffic calming devices	Climatic, Geological, and Topographical	Requires fire code official approval to install traffic calming devices. Such devices can reduce response times to fires and other emergencies. Necessary to ensure adequate response times due

		to the unique climatic and topographical conditions that increase the risk of fires in fire hazard severity zones. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.
503.7 – Fire protection in recreational vehicle, mobile home, manufactured housing parks, sales lots, and storage lots	Climatic, Geological, and Topographical	Requires additional fire protection systems including fire-flow and access, for recreational vehicle, mobile home, and manufactured housing parks, sales lots, and storage lots. Necessary to ensure adequate water supply and access to such locations due to the unique climatic and topographical conditions that increase the risk of fires in fire hazard severity zones. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.
504.5 – Roof top access and safety	Climatic, Geological, and Topographical	Provides various design and location requirements for solar photovoltaic systems installed on roofs of buildings for residential and commercial structures. Access and spacing requirements ensure firefighter access to the roof, provide access pathways to specific areas of the roof, provide for venting cut-out areas, and to provide emergency egress from the roof. Necessary because of increased danger of fire in Los Angeles County due to climatic and topographical conditions.
507.5.1.1 - Pool draft system in fire hazard severity zones.	Climatic, Geological, and Topographical	Requires a draft hydrant for swimming pools and spas located in the fire hazard severity zone in order to provide a source of water to fight fires. Necessary because of unique climatic and topographical conditions that increase the risk of fires in fire hazard severity zones. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.
507.5.10 – Draft System Identification sign	Climatic, Geological, and Topographical	Provides posting of sign to notify fire department of draft hydrant for swimming pools and spas in fire hazard severity zone. Necessary because of unique climatic and topographical conditions that increase the risk of fires in fire hazard severity zones. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.

901.7.7 – Obstruction to fire protection equipment	Climatic, Geological, and Topographical	Prohibits obstruction of fire protection equipment. Necessary because of unique climatic and topographical conditions that increase the risk of fires in fire hazard severity zones. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.
901.7.8 – Above-ground water control valve signs	Climatic, Geological, and Topographical	Provides signage requirements for water control valves in order to facilitate fire fighter identification and use of said valves in an emergency. Necessary because of unique climatic and topographical conditions that increase the risk of fires in fire hazard severity zones. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.
901.7.11 – Clear space around above-ground water control valve signs –	Climatic, Geological, and Topographical	Provides clearance requirements for water control valves in order to facilitate fire fighter identification and use of said valves in an emergency. Necessary because of unique climatic and topographical conditions that increase the risk of fires in fire hazard severity zones. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.
903.1.2 – Occupancies in Fire Hazard Severity Zones and in the Malibu-Santa Monica Mountains or San Gabriel Southface areas	Climatic, Geological, and Topographical	Provides an additional level of protection to occupancies in case of a fire by requiring installation of automatic fire sprinklers. Necessary because of unique climatic and topographical conditions that increase the risk of catastrophic fires in fire hazard severity zones and due to the topography that reduces response times to fires. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.

903.2.11.3 - Building over three stories in height	Climatic and Geological	Provides an additional level of protection to occupancies in case of a fire by requiring installation of automatic fire sprinklers. Necessary because of large number of buildings over three stories in Los Angeles County that increases the risk of fire due to damage or collapse of buildings due to the increased prevalence of earthquakes in Los Angeles County.
903.4.2 - Alarms	Climatic and Geological	Requires installation of exterior fire alarm visual device. Visual alarms are necessary to warn both disabled and non-disabled persons. Necessary because of increased likelihood of fires due to climatic conditions. Further necessary because risk of fire is increased due to the prevalence of earthquakes in the County.
903.7 – Buildings Four or more stories	Climatic and Geological	Requires installation of devices for the automatic fire sprinkler system within an exit stairway enclosure. Necessary because of increased likelihood of fires due to climatic conditions. Further necessary because risk of fire is increased due to the prevalence of earthquakes in the County.
905.2.1 – Class I standpipes; 905.2.1.1, 905.2.1.2; 905.2.1.3	Climatic	Construction and installation requirements for Class I standpipes to ensure adequate fire protection systems and water supply due to fires in Los Angeles County's hot and windy climate.
905.4 - Location of Class I standpipe hose connections	Climatic	Installation/Regulation of Fire Protection System to ensure proper location of hose connection to control fires in Los Angeles County's hot and windy climate.
905.5.3 - Class II System 1 1/2-inch hose	Climatic	Installation and regulation of interior wet standpipes to ensure adequate fire protection system due to fires in Los Angeles County's hot and windy climate.
905.6.1 - Protection	Climatic	Local amendment regarding installation and regulation of Fire Protection System to ensure proper location of hose connection to control fires in Los Angeles County's hot and windy climate.

905.6.1.1 - size	Climatic	Size requirements for Class III standpipes to ensure adequate fire protection system due to fires in Los Angeles County's hot and windy climate.
905.9 - Riser shutoff valve supervision and drain	Climatic	Additional requirements to fire protection system for testing, maintenance and operation to control fires in Los Angeles County's hot and windy climate.
905.12 - Basement pipe inlets, 905.12.1, 905.12.2, 905.12.4	Climatic	Requires installation and other guidelines related to inlets for fire protection systems in basements. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions.
907.9.4.1 - Obstruction of fire alarm equipment	Climatic, Geological, and Topographical	Prohibits concealing or obstructing fire alarm equipment. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions. Further necessary because the risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.
910.2 – Where required	Climatic	Requires installation of smoke and heat vents in roofs of buildings or portions thereof occupied as Group F-1, S-1, or containing high-piled combustible storage. Necessary because of increased danger of fire in los Angeles County due to hot and windy conditions.
910.2.1.1 – Group S-2	Climatic	Requires smoke and heat removal for basement level parking garages. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions.
910.4 – Mechanical smoke exhaust	Climatic	Requirements for mechanical smoke exhaust in buildings. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions.
912.2.1 – Visible location	Climatic, Topographical, Geological	Requires fire department connections to be located within 150 feet of a public fire hydrant and at a safe distance from the building. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions. Further necessary because the risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.

912.7 – Identi-fication	Climatic, Topographical	Requires red paint on fire department connections subject to rust or corrosion in order to identify them to firefighters and protect from the elements. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions.
912.8 – Breakable caps or plugs	Climatic, Topographical	Requires breakable caps or plugs for fire hose couplings to protect them from the elements and to ensure easy access to the fire department connection during fires. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions.
914.9.1 - Spray booths	Climatic	Requires Spray booths to have automatic fire sprinkler system protection under specified conditions. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions. Further necessary because the risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.
1007.9.1 – Signage of high-rise buildings	Climatic, Geological, and Topographical	Requirements for signage warning against elevator use in an emergency. Necessary to ensure proper notice and evacuation in case of fire or other emergency. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions. Further necessary because risk of fire and need for evacuation is increased due to the prevalence of earthquakes in Los Angeles County.
1107.9 – Helistops for high rise	Climatic; Topographical	Provides for additional public safety evacuation/landing area on high-rise buildings. Necessary due to large number of high-rise buildings in Los Angeles County and difficulty in evacuating high-rise buildings in case of fire or other emergency.
1107.10 – Helistops in fire hazard severity zones; 1107.10.1 Surface;	Climatic; Topographical	Provides for requirements for helistops in fire hazard severity zones to enable helicopters and associated water tenders and support equipment to safely operate to conduct operations to combat fires in those areas. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions and topography that hinders the ability for fire apparatus to gain access to remote portions of the County.

1107.10.2 - Hydrant	Climatic; Topographical	Provides for a hydrant next to helistops in fire hazard severity zones to enable helicopters to fill their tanks to facilitate water drops on wildland fires in those areas. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions and topography that hinders the ability for fire apparatus to gain access to remote portions of the County.
1107.10.3 – Access	Climatic; Topographical	Provides for requirements for fire apparatus access to helistops in fire hazard severity zones to enable support equipment and apparatus associated with helicopter operations to combat fires in those areas. Necessary because of increased danger of fire in the County due to hot and windy conditions and topography that hinders the ability for fire apparatus to gain access to remote portions of the County.
1504.4 - Fire Protection	Climatic	Provides for spray booths to be equipped with automatic fire sprinklers. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions.
Sections 1603, 1604, 1605, 1606, 1607 – Fruit and Crop Ripening	Climatic and Geological	Provides requirements for fruit and crop ripening operations to prevent ignition of ethylene gas and reduce risk of fire and explosion. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions and to reduce risk of fires and explosion from earthquakes.
1910 - Storage of Combustible Idle Pallets, 1910.10, 1910.2, 1910.3, 1910.4, 1910.5, 1910.6, Table 1910.4.1, Table 1910.4.2	Climatic	Provides requirements for the safe storage of combustible pallets to reduce risk of fire. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions.
Table 2306.2	Climatic and Geological	Provides for increased separation for aisles. Necessary because of unique climatic conditions that increase the risk of fires. Further necessary because risk of fire is increased due to the prevalence of earthquakes in Los Angeles County.

2306.7.1 - Vents	Climatic	Requires installation of smoke and heat vents. Necessary because of increased danger of fire in Los Angeles County due to hot and windy conditions.
2308.2.2 – Racks with solid shelving	Climatic	Provides for effectiveness of sprinkler systems by prohibiting solid shelves, which would restrict water from extinguishing fire on shelves. Necessary because of increased danger of fire in Los Angeles County due to climatic conditions.
2404.21 - Combustible vegetation.	Climatic and Topographic	Increased clearance requirements for combustible vegetation near tents and membrane structures. Necessary to increase fire and life safety around such structures and to create defensible space. Necessary because of fire risk due to climate and unique topography of Los Angeles County.
2605.9 – Backflash Prevention	Geological	Requirements for protective devices to be installed on fuel gas and oxygen lines to increase safety and reduce risk of explosion and fire. Necessary because risk of leaks or tank failure is increased due to the prevalence of earthquakes in Los Angeles County.
2703.11.3.8 – Floors	Climatic and Geological	Creates requirements for floors in buildings where hazardous materials are used or stored. Necessary to increase fire and life safety and to minimize fire danger from hazardous materials. Necessary because risk of fire and spillage of hazardous materials is increased due to the prevalence of earthquakes in Los Angeles County.
3404.2.8.3 – Secondary Containment	Geological	Requirements for secondary containment of flammable and combustible liquids that are necessary to increase fire and life safety and to prevent fires involving flammable and combustible liquids from spreading. Necessary because risk of leaks or tank failure is increased due to the prevalence of earthquakes in Los Angeles County.
3404.2.8.16.1 – System requirements	Climatic and Geological	Require foam deluge system. Necessary because of increased danger of fire in Los Angeles County due to climatic conditions and because risk of leaks or tank failure is increased due to the prevalence of earthquakes in Los Angeles County.

3404.2.9.1.1 - Required foam fire protection systems	Geological and Climatic	Requires all above-ground tanks exceeding 1,500 square feet of liquid surface area used for the storage of Class I or Class II flammable liquids to be provided with foam fire protection. Necessary because of increased danger of fire in Los Angeles County due to climatic conditions and because risk of leaks or tank failure is increased due to the prevalence of earthquakes in Los Angeles County
3404.2.9.6.1 .3 - Location of tanks for boilover liquids	Geological and Climatic	Provides for additional spacing between tanks to reduce fire danger and help prevent fire from spreading to adjacent tanks. Necessary because of increased danger of fire in Los Angeles County due to climatic conditions and because risk of leaks or tank failure is increased due to the prevalence of earthquakes in Los Angeles County.
3404.3.7.6 - Construction	Geological and Climatic	Construction and fire access requirements for liquid storage rooms. Necessary because of increased danger of fire in Los Angeles County due to climatic conditions and because risk of explosion or container failure is increased due to the prevalence of earthquakes in Los Angeles County.
3406.5.1.1 - Location	Geological and Climatic	Provides increased distances for bulk transfer and process transfer operations so that they are farther away from the public and other buildings. Necessary because of increased danger of fire in Los Angeles County due to climatic conditions and because risk of leaks or tank failure is increased due to the prevalence of earthquakes in Los Angeles County
3406.5.1.19 – Liquid transfer	Geological and Climatic	Class I, II, or III liquids shall be transferred from a tank vehicle or tank car only into an approved atmospheric tank or approved portable tank. Necessary because of increased danger of fire in Los Angeles County due to climatic conditions and because risk of leaks or tank failure is increased due to the prevalence of earthquakes in Los Angeles County
3804.4 – Multiple container installation	Geological and Climatic	Requirements for LP gas storage tank distances. Necessary because of increased danger of fire in Los Angeles County due to climatic conditions and because risk of leaks or tank failure is increased due to the prevalence of earthquakes in Los Angeles County

4605.1 – fire storage yard; 4605.1.1 – access to piles; 4605.1.2	Climatic and Topographical	Creates requirements for fire access roads for outdoor operations to enable fire apparatus to gain access to fight fires. Necessary to increase fire and life safety and to minimize risk of fire spreading beyond storage areas; Necessary because risk of fire due to climate and topography in Los Angeles County.
4907.1 – General	Climatic and Topographical	Local amendment providing that defensible space requirements shall also comply with Chapter 3 of this code. Necessary due to Los Angeles County's unique climate and topography to reduce risk of fire and to minimize impacts of fire in fire hazard severity zone.
4908.1 – Fuel Modification Plan in Fire Hazard Severity Zone; 4908.1.1 Plan Modification	Climatic and Topographical	Local amendment creating defensible space for fire operations that is necessary due to Los Angeles County's unique climate and topography to reduce risk of fire and to minimize impacts of fire in fire hazard severity zone.
5004 – fire apparatus access roads; 5006 – housekeeping ; 5008 fires;	Climatic and Topographical	Creates requirements for fire access roads and storage requirements for tire storage in automobile wrecking yards. Necessary to enable fire apparatus and fire fighters to gain access to fight fires and respond to emergencies. Necessary because risk of fire due to climate and topography in Los Angeles County.
APPENDIX B B105.1 – One-family dwellings	Topographical and Climatic	Provides for increased fire-flow to allow for more water to be available to fight fires. Necessary because of increased danger of fire in Los Angeles County due to climatic and topographical conditions.
APPENDIX B B105.1.1 – Two-family dwellings	Topographical and Climatic	Provides for increased fire-flow to allow for more water to be available to fight fires. Necessary because of increased danger of fire in Los Angeles County due to climatic and topographical conditions.

APPENDIX B B105.2 – Buildings other than one-and two-family dwellings	Topographical and Climatic	Provides for increased fire-flow to allow for more water to be available to fight fires. Necessary because of increased danger of fire in Los Angeles County due to climatic and topographical conditions.
APPENDIX B B105.3 – Mobile home parks	Topographical and Climatic	Provides for increased fire-flow at mobile home parks in Very High Fire Hazard Severity Zones to allow for more water to be available to fight fires. Necessary because of increased danger of fire in Los Angeles County due to climatic and topographical conditions.
APPENDIX B B105.4 – Land subdivision projects	Topographical and Climatic	Provides for increased fire-flow for subdivisions of land to allow for more water to be available to fight fires. Necessary because of increased danger of fire in Los Angeles County due to climatic and topographical conditions.
APPENDIX C, Section C102.2 – Location on street	Topographical and Climatic	Provides for hydrant spacing on streets to ensure hydrants are accessible to firefighters. Necessary because of increased danger of fire in Los Angeles County due to climatic and topographical conditions.
APPENDIX C, Section C105.2 – One-family dwelling	Topographical and Climatic	Provides for hydrant spacing to ensure that water is available to fight fires. Necessary because of increased danger of fire in Los Angeles County due to climatic and topographical conditions.
APPENDIX C, Section C105.2.1 – Cul-de-sac hydrant location	Topographical and Climatic	Provides for hydrant spacing for cul-de-sacs to ensure that there is adequate water supply available to fight fires. Necessary because of increased danger of fire in the County due to climatic and topographical conditions.
APPENDIX C, Section C105.2.2 – Buildings other than one-family dwelling units.	Topographical and Climatic	Provides for hydrant spacing for buildings other than single family dwellings to ensure that there is adequate water supply available to fight fires. Necessary because of increased danger of fire in the County due to climatic and topographical conditions.

APPENDIX C, Section C106 – On-site hydrants	Topographical and Climatic	Provides requirements for on-site hydrants to ensure that there is adequate water supply available to fight fires. Necessary because of increased danger of fire in Los Angeles County due to climatic and topographical conditions.
APPENDIX K – Roof Obstructions, K103.1, K103.2, K103.2.1, K103.2.1.1, K103.2.1.2, K103.2.1.3, K103.2.2, K103.2.2.1, K103.2.3, K103.2.4, K103.3, K103.4, K103.4.2, K103.2.1, K103.4.2.2, K103.4.2.3, K103.4.2.4, K103.4.3, K103.4.3.1, K103.4.3.2, K103.4.3.2.1, K103.4.3.2.2, K103.4.3.2.3, K103.4.3.2.4, K103.4.3.2.5, K103.4.3.2.6, K103.5, K103.5.1	Topographical and Climatic	Provides various design and location requirements for solar photovoltaic systems installed on roofs of buildings for residential and commercial structures. Access and spacing requirements ensure firefighter access to the roof, provide access pathways to specific areas of the roof, provide for venting cut-out areas, and to provide emergency egress from the roof. Necessary because of increased danger of fire in Los Angeles County due to climatic and topographical conditions.

Appendix K104.1, K104.2, K104.2.1, K104.2.2, K104.2.2.2, K104.2.2.3, K104.2.3, K104.2.3.1, K104.2.3.2 K104.2.3.2.1, K104.2.3.2.2, K104.2.3.2.3, K104.2.3.2.4, K104.2.3.5, K104.2.3.6, K104.3	Topographical and Climatic	Provides various design and location requirements for roof gardens and landscaped roofs for residential and commercial structures. Access and spacing requirements ensure firefighter access to the roof, provide access pathways to specific areas of the roof, provide for venting cut-out areas, and to provide emergency egress from the roof. Necessary because of increased danger of fire in Los Angeles County due to climatic and topographical conditions.