

EXHIBIT "A" TO ORDINANCE NO. 1180

ADMINISTRATIVE PROVISIONS

150.001 ADOPTED BY REFERENCE

Pursuant to California Government Code §§ 50022.1 to 50022.8, the City adopts and incorporates by reference Appendix Chapter 1 of the California Building Code, 2007 Edition ("CBC"), published by the California Building Standards Commission, 2525 Matomas Park Drive, Suite 130, Sacramento, CA 95833-2936.

§ 150.002 AMENDMENTS, ADDITIONS AND DELETIONS. The CBC is amended, added to, or deleted from, as set forth below:

(A) *Relocated structures.* Section 102.7 is amended by adding the following:

102.7.1 Relocation Investigation and Building Permit required. It is unlawful for any person to move or cause any building or structure to be relocated within the area of the City without first obtaining a relocation permit and a building permit from the Building Official.

102.7.2 Relocation Impractical. The Building Official cannot issue a permit for any building or structure to be relocated where the building or structure endangers the public health, life or safety, or is in violation of pertinent laws or ordinances.

102.7.3 Appeal. Any person denied a permit for relocation of a structure may appeal such decision to the appeals board of the City within seven days of such denial.

102.7.4 Building Permit for Relocated Structures. A building permit may be issued by the Building Official to the owners of the buildings or structures to be located for a period not to exceed six months. The Building Official may extend the permit for an additional period of up to six months.

102.7.5 Performance Bond. The owner of the building to be relocated must submit a cash bond in an amount equal to the estimated cost of the work to be performed as determined by the Building Official. The amount and conditions of the bond must be memorialized in writing in a form prescribed by the City. Upon written request a portion of the bond may be released to the owner during the progress of the work, retaining so much therefore as, in the discretion of the Building Official, must secure the City for the performance of any work remaining.

Failure to complete all work described in the agreement within the time prescribed therein constitutes a material breach thereof. The Building Official may enforce the provisions of the agreement by an action in specific

performance or injunction to cause the structure to be completed or demolished, by any other action at law or equity, by referral to the City Attorney for institution of criminal proceedings, or issuance of a citation for violation of this Title. The deposit required in this Section may be applied to pay reasonable attorney's fees incurred by the City and the balance thereof, if any, must be applied in the manner directed by the court towards fulfillment of the agreement.

(B) *Annual Maintenance permit.* Section 105.1.1 is added as follows:

The Building Official may, upon receipt of the required fee, authorize the issuance of an annual maintenance permit to any qualified person, firm, or corporation regularly engaged in the repair, replacement, alteration, or maintenance of electrical, plumbing or mechanical systems regulated by this code. The annual maintenance permit must cover maintenance work which is performed on the premises of a person, firm or corporation and entitles the holder to be issued permits for said work on a monthly basis in lieu of obtaining individual permits before each installation or alteration of electrical wiring, plumbing, or mechanical equipment.

The holder of an annual maintenance permit must report all work done under the permit to the Building Official not more than fifteen (15) days following the end of each calendar month, or other period established by the Building Official. Each such report must be accompanied by the appropriate fees as required by resolution of the City Council.

(C) *Exempted Work.* Section 105.2 is amended and the following provisions are added respectively to read:

Building:

1. One-story detached accessory buildings not over 12 feet in height used as tool and storage sheds, playhouses, gazebos and similar uses, provided the floor area does not exceed 120 square feet and the building has no plumbing, electrical or mechanical.
2. (a) Fences not over 6 feet high.
(b) Masonry and/or concrete walls not over 3 feet 6 inches high.
4. Retaining walls which are not over 3 feet in height from the top of the footing to the top of the wall, unless supporting a surcharge or impounding flammable liquids.
10. Deleted.
12. Awning supported by an exterior wall less than 3 lb. Per square foot when projecting not more than 54 square inches.

14. Dish receivers, antennas and flagpoles (including supports):
 - (a) Dish receivers 18 inches or less in diameter, or antennas, less than 30 feet in height and connected to the roof or structure.
 - (b) Dish receivers 18 inches or less in diameter, or antennas, less than 50 feet in height and connected to the ground.
 - (c) Flagpoles less than 15 feet connected to the roof or structure.
 - (d) Flagpoles less than 25 feet connected to the ground only
 - (e) Dish receivers 18 inches or less in diameter or dish receivers less than 10 feet in height connected to the ground.

Electrical

1. Portable motors or other portable appliances energized by means of a cord or cable having an attachment plug end to be connected to an approved receptacle when that cord or cable is permitted by the Electrical Code.
2. Repair or replacement of fixed motors, transformers or fixed approved appliances of the same type and rating in the same location.
3. Temporary decorative lighting.
4. Repair or replacement of current-carrying parts of any switch, contactor or control device.
5. Reinstallation of attachment plug receptacles, but not the outlets therefore.
6. Repair or replacement of any over current device of the required capacity in the same location.
7. Repair or replacement of electrodes or transformers of the same size and capacity for the signs or gas tube systems.
8. Taping joints.
9. Removal of electrical wiring.
10. Temporary wiring for experimental purposes in suitable experimental laboratories.

11. The wiring for temporary theater, motion picture or television stage sets.
12. Electrical wiring, devices, appliances, apparatus or equipment operating at less than 25 volts, and not capable of supplying more than 50 watts of energy.
13. Low-energy power, control and signal circuits of Class II and Class III as defined in the electrical Code.
14. A permit is not required for the installation, alteration or repair of electrical wiring, apparatus or equipment or the generation, transmission, distribution or metering of electrical energy or in the operation of signals or the transmission of intelligence by a public or private utility in the exercise of its function as a serving utility.

(D) *Permits.* Section 105.5 is modified by deleting section 105.5 and adding subsection 105.5.1, 105.5.2, and 105.5.3 to read as follows:

105.5.1. Expiration. Every permit issued by the building official will expire by limitation and become null and void if the work authorized by such permit is not commenced, continued, or completed as follows:

a) Work not commenced. If the work authorized by the permit is not commenced within one (1) calendar year after the building official issues the permit. Work is presumed to have commenced if the permittee obtained a required inspection approval of work authorized by the permit.

b) Work stopped. If the work authorized by the permit commenced, but is subsequently stopped for a period of six (6) consecutive calendar months. Work is presumed to be stopped if the permittee has not obtained a required inspection approval of work authorized by the permit within the preceding six (6) month period.

c) Completion of work. Work authorized by a permit must be completed within three (3) calendar years from the date the building official issues the permit.

Upon expiration of a permit, before work can be recommenced, a renewal permit must be obtained as specified in Section 105.5.2

105.5.2. Renewal. An expired permit may be renewed as follows:

a) Work not commenced. When a permit has expired because work was not commenced within one (1) year from the date of permit issuance, a renewal permit may be obtained provided:

1. The plans for the proposed work are essentially the same as originally approved and permitted.
2. The expiration has not exceeded two (2) years from the original issuance date;
3. The same edition of the technical codes are in effect as used in the initial plan approval, or the plans have been updated to comply with the codes currently in effect;
4. All city approvals required before the building official issued a permit, including, without limitation, grading, zoning, fire code, water and sewer connection, or other limitations customarily placed on such permits, are currently valid at the time of issuance of the renewal permit.

The fee for a renewal permit will be one-half (½) the amount required for a new permit.

b) Work stopped. When a permit expires because work authorized by the permit commenced but subsequently stopped for a period of six (6) months, a renewal permit may be obtained provided:

1. The plans for the proposed work are essentially the same as originally approved and permitted;
2. The expiration did not exceed three (3) years from the date the building official issued the original permit;
3. The same edition of the technical codes are in effect as used in the initial plan approval, or the plans have been updated to comply with the codes currently in effect;
4. All city approvals required before the building official issued a permit, including, without limitation, grading, zoning, fire code, water and sewer connection, or other limitations customarily placed on such permits, are

currently valid at the time of issuance of the renewal permit;

The fee for a renewal permit will be one-half ($\frac{1}{2}$) the amount required for a new permit, except where construction progressed and all inspections were approved except for the final inspection, the fee for the renewal permit will be one-quarter ($\frac{1}{4}$) the amount required for a new permit.

c) Work not completed within three years. When a permit expires because the work authorized by the permit was not complete within three (3) years from the date the building official originally issued the permit, a renewal permit may not be issued except upon action of the board of appeals. The board of appeals may grant up to one (1) year additional time to complete the work if it finds that:

1. The permittee diligently pursued completion of the work authorized by the permit, but for good cause has not been able to complete the work within the three (3) year limitation;
2. The permittee is not in violation of the permit conditions, the technical codes, or any city or state code applicable to the construction project;
3. The remaining work can be completed reasonably within the additional time allotted.
4. All city approvals required before the building official issued a permit, including, without limitation, grading, zoning, fire code, water and sewer connection, or other limitations customarily placed on such permits, are currently valid at the time the building official issues a renewal permit;

The fee for a renewal permit is one-half ($\frac{1}{2}$) the amount required for a new permit, except where construction progressed and all inspections were approved except for the final inspection, the fee for the renewal permit is one-quarter ($\frac{1}{4}$) the amount required for a new permit.

105.5.3. Extension of an unexpired permit. The building official may extend the time for action by a permittee to commence work, or complete the work authorized by a permit within the three (3) year limitation, for a period not exceeding six (6) months upon written request by the permittee showing that circumstances, beyond the control of the permittee prevented action from being taken. Not more than one such extension may be granted. No extension may be granted when work stopped and the permit is subject to expiration as described above.

- (E) *Fees.* Sections 108.2 the following provision is added to read:

Section 108.2.1 Fees may be established by City Council resolution.

- (F) *Investigative fees: work without a permit.* Section 108.7 is added as follows:

108.7 FEE. An investigation fee, in addition to the permit fee, must be collected whether or not a permit is then or subsequently issued. The investigation fee must be equal to the amount of the permit fee set forth in the Fee Schedule as adopted by this jurisdiction. The payment of such investigation fee does not exempt any person from compliance with all other provisions of either this code or the technical codes from any penalty prescribed by law.

- (G) *Special processing fees.* Section 108.4 is modified by deleting Section 108.4 and adding Sections 108.4.1 and 108.4.2 to read as follows:

108.4.1 SPECIAL PROCESSING. Whenever any work for which a permit is required by this code has been commenced without first obtaining a permit, a special processing review must be made before a permit may be issued for such work.

108.4.2 FEE. A special processing fee, in addition to the permit and investigation fee, must be collected whether or not a permit is then or subsequently issued. The processing fee must be established by the Fee Schedule as adopted by this jurisdiction. The payment of such processing fee does not exempt any person from compliance with all other provisions of either this code or the technical codes nor from any penalty prescribed by law.

- (H) *Fire damage inspection.* The following is added as Section 109.7:

Section 109.7: A fire damage inspection will be required after a fire which caused building, plumbing, electrical, or mechanical damage.

- (I) *Business license inspection.* The following is added as Section 109.8:

Section 109.8: A business license inspection is required before the City issues a business license for a new business, relocated business, or a change of ownership.

- (J) *Special Inspection.* The following is added as Section 109.9:

Section 109.9: When the building official determines to achieve compliance with this code a special inspection or observation may be required by the building official.

- (K) *Board of Appeals.* Section 112 is deleted and the following sections are added:

112.1.General. The board of appeals is designated to hear and decide appeals of orders, decisions or determinations made by the building official relative to the application and interpretations of the technical code. The building official will be an ex officio member and act as secretary to the board but not have voting rights upon any matter before the board. The board may adopt reasonable rules and regulations for conducting its investigations and will render all its decisions and findings on contested matters, in writing to the building official, with a duplicate copy for any appellant or contestant affected by such decision or finding, and may recommend to the city council appropriate new legislation.

112.2. Applicability to Codes. The appeals board will serve as the appellate board or body whenever any of the codes adopted by reference provides for same. The appeals board will also act as the general appeals board for other city construction related adopted regulations.

112.3.Hearing Process. Appeals to the board will be processed in accordance with this Code and on application forms provided by the building official. A fee established by city

council resolution will accompany an application for a hearing before the board of appeals. The fee is refundable should the appellant prevail in a decision by the board. Copies of any rules and regulations adopted by the board must be delivered to the building official, who will make them freely accessible to the public. The board's decision constitutes the City's final decision.

112.4 Limitations of Authority. The board of appeals has no authority to interpret the administrative provisions of this code or to waive requirements of this code or the technical codes.

- (L) *Violations.* Section 113 is amended by adding Section 113.5 to the following:

113.5. To the extent that any of the provisions adopted by reference in this Title differ with those in Title I, the provisions of Title I take precedent.

- (M) *Notice of Noncompliance.* Section 116 is added to read as follows:

116. Notice of Noncompliance. Whenever the building official determines that work was done on, over, or in any property in the city without the required permit, or has otherwise not been completed in accordance with the requirements of this code, the building official may record a Notice of Noncompliance for that property with the office of the County Recorder and notify the owner of the property of such action. The Notice of Noncompliance will describe the property, will set forth the conditions violating this code, and will state that the property owner has been so notified.

The Building Official must submit a Release of Noncompliance Notice to the County Recorder when it is determined that the conditions violating this code were corrected or removed. A fee as established by city council resolution may be charged to the property owner for submitting a Release of Noncompliance Notice.

- (N) *Toilet facilities for workers.* The following Section 117 is added:

117. Any person having charge of or causing work or projects to be performed, which involves workers, must provide on the premises or immediately adjacent thereto, sanitary toilet facilities as approved by the Building Official.

§ 150.003 POSTING OF UNREINFORCED MASONRY BUILDINGS

- i. All unreinforced masonry buildings must be posted with a sign stating "This is an unreinforced masonry building. Unreinforced masonry buildings may be unsafe in the event of a major earthquake." Signs must be permanent, contrasting, and placed in a conspicuous place visible at each entrance to the building. Signs must be printed in 30-point bold type or larger and must be 5" x 7" or larger in size. Conspicuous place means any location within six feet of an entrance door, not over six feet above the floor level, having clear sight lines, and not obscured or obstructed by an open door or by any other object.
- ii. Exception: This section does not apply to unreinforced masonry construction if the walls are non-load bearing with steel or concrete frame.

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CALIFORNIA BUILDING CODE

§150.015 ADOPTED BY REFERENCE

Pursuant to California Government Code §§ 50022.1 to 50022.8, the City adopts and incorporates by reference the California Building Code, 2007 Edition ("CBC"), including Volumes I and II, published by the California Building Standards Commission, 2525 Matomas Park Drive, Suite 130, Sacramento, CA 95833-2936.

§ 150.016 AMENDMENTS, ADDITIONS AND DELETIONS. After due consideration, the City Council finds that as a result of existing local climatic, geological, or topographical conditions that amendments, additions, and deletions to the CBC are reasonably necessary to provide sufficient and effective levels of safety for the protection of life, health and property. Therefore, the CBC is amended, added to, or deleted from, as set forth below:

(C) *Administrative*. Appendix Chapter 1 of the CBC is set forth in this code commencing at § 150.001.

(B) *Suspended Ceilings*. Section 1613.7 is added to read as follows:

1613.7 Suspended Ceilings. Minimum design and installation standards for suspended ceilings must be determined in accordance with the requirements of Chapter 25 of this Code and this subsection.

1613.7.1 Scope. This part contains special requirements for suspended ceilings and lighting systems. Provisions of Section 13.5.6 of ASCE 7 must apply except as modified herein.

1613.7.2 General. The suspended ceilings and lighting systems are limited to 6 feet (1828 mm) below the structural deck unless the lateral bracing is designed by a licensed engineer or architect.

1613.7.3 Design and Installation Requirements.

1613.7.3.1 Bracing at Discontinuity. Positive bracing to the structure must be provided at changes in the ceiling plane elevation or at discontinuities in the ceiling grid system.

1613.7.3.2 Support for Appendages. Cable trays, electrical conduits and piping must be independently supported and independently braced from the structure.

1613.7.3.3 Sprinkler Heads. All sprinkler heads (drops) except fire-resistance-rated floor/ceiling or roof/ceiling assemblies, must be designed to allow for free movement of the sprinkler pipes with oversize rings, sleeves or adaptors through the ceiling tile, in accordance with Section 13.5.6.2.2 (e) of ASCE 7 .

Sprinkler heads penetrating fire-resistance-rated floor/ceiling or roof/ceiling assemblies must comply with Section 712 of this Code.

1613.7.3.4 Perimeter Members. A minimum wall angle size of at least a two inch (51 mm) horizontal leg must be used at perimeter walls and interior full height partitions. The first ceiling tile must maintain 3/4 inch (19 mm) clear from the finish wall surface. An equivalent alternative detail that will provide sufficient movement due to anticipated lateral building displacement may be used in lieu of the long leg angle subject to the approval of the Building Official.

1613.7.4 Special Requirements for Means of Egress. Suspended ceiling assemblies located along means of egress serving an occupant load of 30 or more must comply with the following provisions.

1613.7.4.1 General. Ceiling suspension systems must be connected and braced with vertical hangers attached directly to the structural deck along the means of egress serving an occupant load of 30 or more and at lobbies accessory to Group A Occupancies. Spacing of vertical hangers must not exceed 2 feet (610 mm) on center along the entire length of the suspended ceiling assembly located along the means of egress or at the lobby.

1613.7.4.2 Assembly Device. All lay-in panels must be secured to the suspension ceiling assembly with two hold-down clips minimum for each tile within a 4-foot (1219 mm) radius of the exit lights and exit signs.

1613.7.4.3 Emergency Systems. Independent supports and braces must be provided for light fixtures required for exit illumination. Power supply for exit illumination must comply with the requirements of Section 1006.3 of this Code.

1613.7.4.4 Supports for Appendage. Separate support from the structural deck must be provided for all appendages such as light fixtures, air diffusers, exit signs, and similar elements.

(C) *Seismic Design Provisions for Hillside Buildings.* Section 1613.8 is added to read as follows:

1613.8.1 Purpose. The purpose of this section is to establish minimum regulations for the design and construction of new buildings and additions to existing buildings when constructing such buildings on or into slopes steeper than one unit vertical in three units horizontal (33.3%). These regulations establish minimum standards for seismic force resistance to reduce the risk of injury or loss of life in the event of earthquakes.

1613.8.2 Scope. The provisions of this section must apply to the design of the lateral-force-resisting system for hillside buildings at and below the base level diaphragm. The design of the lateral-force-resisting system above the base level diaphragm must be in accordance with the provisions for seismic and wind design as required elsewhere in this division.

EXCEPTION: Non-habitable accessory buildings and decks not supporting or supported from the main building are exempt from these regulations.

1613.8.3 Definitions. For the purposes of this section certain terms are defined as follows:

BASE LEVEL DIAPHRAGM is the floor at, or closest to, the top of the highest level of the foundation.

DIAPHRAGM ANCHORS are assemblies that connect a diaphragm to the adjacent foundation at the uphill diaphragm edge.

DOWNHILL DIRECTION is the descending direction of the slope approximately perpendicular to the slope contours.

FOUNDATION is concrete or masonry which supports a building, including footings, stem walls, retaining walls, and grade beams.

FOUNDATION EXTENDING IN THE DOWNHILL DIRECTION is a foundation running downhill and approximately perpendicular to the uphill foundation.

HILLSIDE BUILDING is any building or portion thereof constructed on or into a slope steeper than one unit vertical in three units horizontal (33.3%). If only a portion of the building is supported on or into the slope, these regulations apply to the entire building.

PRIMARY ANCHORS are diaphragm anchors designed for and providing a direct connection as described in Sections 1613.8.5 and 1613.8.7.3 between the diaphragm and the uphill foundation.

SECONDARY ANCHORS are diaphragm anchors designed for and providing a redundant diaphragm to foundation connection, as described in Sections 1613.8.6 and 1613.8.7.4.

UPHILL DIAPHRAGM EDGE is the edge of the diaphragm adjacent and closest to the highest ground level at the perimeter of the diaphragm.

UPHILL FOUNDATION is the foundation parallel and closest to the uphill diaphragm edge.

1613.8.4 Analysis and Design.

1613.8.4.1 General. Every hillside building within the scope of this section must be analyzed, designed, and constructed in accordance with the provisions of this division. When the code-prescribed wind design produces greater effects, the wind design must govern, but detailing requirements and limitations prescribed in this and referenced sections must be followed.

1613.8.4.2 Base Level Diaphragm-Downhill Direction. The following provisions must apply to the seismic analysis and design of the connections for the base level diaphragm in the downhill direction.

1613.8.4.2.1 Base for Lateral Force Design Defined. For seismic forces acting in the downhill direction, the base of the building is the floor at or closest to the top of the highest level of the foundation.

1613.8.4.2.2 Base Shear. In developing the base shear for seismic design, the response modification coefficient (R) must not exceed 4.5 for bearing wall and building frame systems. The total base shear must include the forces tributary to the base level diaphragm including forces from the base level diaphragm.

1613.8.5 Base Shear Resistance-Primary Anchors.

1613.8.5.1 General. The base shear in the downhill direction must be resisted through primary anchors from diaphragm struts provided in the base level diaphragm to the foundation.

1613.8.5.2 Location of Primary Anchors. A primary anchor and diaphragm strut must be provided in line with each foundation extending in the downhill direction. Primary anchors and diaphragm struts must also be provided where interior vertical lateral-force-resisting elements occur above and in contact with the base level diaphragm. The spacing of primary anchors and diaphragm struts or collectors must in no case exceed 30 feet (9144 mm).

1613.8.5.3 Design of Primary Anchors and Diaphragm Struts. Primary anchors and diaphragm struts must be designed in accordance with the requirements of Section 1613.8.8.

1613.8.5.4 Limitations. The following lateral-force-resisting elements must not be designed to resist seismic forces below the base level diaphragm in the downhill direction:

1. Wood structural panel wall sheathing,
2. Cement plaster and lath,
3. Gypsum wallboard, and
4. Tension only braced frames.

Braced frames designed in accordance with the requirements of Section 2205.2.2 may be used to transfer forces from the primary anchors and diaphragm struts to the foundation provided lateral forces do not induce flexural stresses in any member of the frame or in the diaphragm struts. Deflections of frames must account for the variation in slope of diagonal members when the frame is not rectangular.

1613.8.6. Base Shear Resistance-Secondary Anchors.

1613.8.6.1 General. In addition to the primary anchors required by Section 1613.8.5, the base shear in the downhill direction must be resisted through secondary anchors in the uphill foundation connected to diaphragm struts in the base level diaphragm.

EXCEPTION: Secondary anchors are not required where foundations extending in the downhill direction spaced at not more than 30 feet (9144 mm) on center extend up to and are directly connected to the base level diaphragm for at least 70% of the diaphragm depth.

1613.8.6.2 Secondary Anchor Capacity and Spacing. Secondary anchors at the base level diaphragm must be designed for a minimum force equal to the base shear, including forces tributary to the base level diaphragm, but not less than 600 pounds per lineal foot (8.76 kN/m). The secondary anchors must be

uniformly distributed along the uphill diaphragm edge and must be spaced a maximum of four feet (1219 mm) on center.

1613.8.6.3 Design. Secondary anchors and diaphragm struts must be designed in accordance with Section 1613.8.8.

1613.8.7 Diaphragms Below the Base Level-Downhill Direction. The following provisions must apply to the lateral analysis and design of the connections for all diaphragms below the base level diaphragm in the downhill direction.

1613.8.7.1 Diaphragm Defined. Every floor level below the base level diaphragm must be designed as a diaphragm.

1613.8.7.2 Design Force. Each diaphragm below the base level diaphragm must be designed for all tributary loads at that level using a minimum seismic force factor not less than the base shear coefficient.

1613.8.7.3 Design Force Resistance-Primary Anchors. The design force described in Section 1613.8.7.2 must be resisted through primary anchors from diaphragm struts provided in each diaphragm to the foundation. Primary anchors must be provided and designed in accordance with the requirements and limitations of Section 1613.8.5.

1613.8.7.4 Design Force Resistance-Secondary Anchors.

1613.8.7.4.1 General. In addition to the primary anchors required in Section 1613.8.7.3, the design force in the downhill direction must be resisted through secondary anchors in the uphill foundation connected to diaphragm struts in each diaphragm below the base level.

EXCEPTION: Secondary anchors are not required where foundations extending in the downhill direction, spaced at not more than 30 feet (9144 mm) on center, extend up to and are directly connected to each diaphragm below the base level for at least 70% of the diaphragm depth.

1613.8.7.4.2 Secondary Anchor Capacity. Secondary anchors at each diaphragm below the base level diaphragm must be designed for a minimum force equal to the design force but not less than 300 pounds per lineal foot (4.38 kN/m). The secondary anchors must be uniformly distributed along the uphill diaphragm edge and must be spaced a maximum of four feet (1219 mm) on center.

1613.8.7.4.3 Design. Secondary anchors and diaphragm struts must be designed in accordance with Section 1613.8.8.

1613.8.8 Primary and Secondary Anchorage and Diaphragm Strut Design. Primary and secondary anchors and diaphragm struts must be designed in accordance with the following provisions:

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

2. Fastening. The diaphragm to foundation anchorage must not be accomplished by the use of toenailing, nails subject to withdrawal, or wood in cross-grain bending or cross-grain tension.

3. Size of Wood Members. Wood diaphragm struts collectors, and other wood members connected to primary anchors must not be less than three-inch (76 mm) nominal width. The effects of eccentricity on wood members must be evaluated as required per Item 9.

4. Design. Primary and secondary anchorage, including diaphragm struts, splices, and collectors must be designed for 125% of the tributary force.

5. Allowable Stress Increase. The one-third allowable stress increase permitted under Section 1605.3.2 must not be taken when the working (allowable) stress design method is used.

6. Seismic Load Factor. The seismic load factor must be 1.7 for steel and concrete anchorage when the strength design method is used.

7. Primary Anchors. The load path for primary anchors and diaphragm struts must be fully developed into the diaphragm and into the foundation. The foundation must be shown to be adequate to resist the concentrated loads from the primary anchors.

8. Secondary Anchors. The load path for secondary anchors and diaphragm struts must be fully developed in the diaphragm but need not be developed beyond the connection to the foundation.

9. Symmetry. All lateral force foundation anchorage and diaphragm strut connections must be symmetrical. Eccentric connections may be permitted when demonstrated by calculation or tests that all components of force have been provided for in the structural analysis or tests.

10. Wood Ledgers. Wood ledgers must not be used to resist cross-grain bending or cross-grain tension.

1613.8.9 Lateral-Force-Resisting Elements Normal to the Downhill Direction.

1613.8.9.1 General. In the direction normal to the downhill direction, lateral-force-resisting elements must be designed in accordance with the requirements of this section.

1613.8.9.2 Base Shear. In developing the base shear for seismic design, the response modification coefficient (R) must not exceed 4.5 for bearing wall and building frame systems.

1613.8.9.3 Vertical Distribution of Seismic Forces. For seismic forces acting normal to the downhill direction the distribution of seismic forces over the height of the building using Section 12.8.3 of ASCE 7 must be determined using the height measured from the top of the lowest level of the building foundation.

1613.8.9.4 Drift Limitations. The story drift below the base level diaphragm must not exceed 0.005 times the story height. The total drift from the base level diaphragm to the top of the foundation must not exceed 3/4 inch (19 mm). Where the story height or the height from the base level diaphragm to the top of the foundation varies because of a stepped footing or story offset, the height must be measured from the average height of the top of the foundation. The story drift must not be reduced by the effect of horizontal diaphragm stiffness.

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

1613.8.9.5 Distribution of Lateral Forces.

1613.8.9.5.1 General. The design lateral force must be distributed to lateral-force-resisting elements of varying heights in accordance with the stiffness of each individual element.

1613.8.9.5.2 Wood Structural Panel Sheathed Walls. The stiffness of a stepped wood structural panel shear wall may be determined by dividing the wall into adjacent rectangular elements, subject to the same top of wall deflection. Deflections of shear walls may be estimated by Section 2305.3.2. Sheathing and fastening requirements for the stiffest section must be used for the entire wall. Each section of wall must be anchored for shear and uplift at

each step. The minimum horizontal length of a step must be eight feet (2438 mm) and the maximum vertical height of a step must be two feet, eight inches (813 mm).

1613.8.9.5.3 Reinforced Concrete or Masonry Shear Walls. Reinforced concrete or masonry shear walls must have forces distributed in proportion to the rigidity of each section of the wall.

1613.8.9.6 Limitations. The following lateral force-resisting-elements must not be designed to resist lateral forces below the base level diaphragm in the direction normal to the downhill direction:

1. Cement plaster and lath,
2. Gypsum wallboard, and
3. Tension-only braced frames.

Braced frames designed in accordance with the requirements of Chapter 22 of this Code may be designed as lateral-force-resisting elements in the direction normal to the downhill direction, provided lateral forces do not induce flexural stresses in any member of the frame. Deflections of frames must account for the variation in slope of diagonal members when the frame is not rectangular.

1613.8.10 Specific Design Provisions.

1613.8.10.1 Footings and Grade Beams. All footings and grade beams must comply with the following:

1. Grade beams must extend at least 12 inches (305 mm) below the lowest adjacent grade and provide a minimum 24-inch (610 mm) distance horizontally from the bottom outside face of the grade beam to the face of the descending slope.
2. Continuous footings must be reinforced with at least two No. 4 reinforcing bars at the top and two No. 4 reinforcing bars at the bottom.
3. All main footing and grade beam reinforcement steel must be bent into the intersecting footing and fully developed around each corner and intersection.
4. All concrete stem walls must extend from the foundation and reinforced as required for concrete or masonry walls.

1613.8.10.2 Protection Against Decay and Termites. All wood to earth separation must comply with the following:

1. Where a footing or grade beam extends across a descending slope, the stem wall, grade beam, or footing must extend up to a minimum 18 inches (457 mm) above the highest adjacent grade.

EXCEPTION: At paved garage and doorway entrances to the building, the stem wall need only extend to the finished concrete slab, provided the wood framing is protected with a moisture proof barrier.

2. Wood ledgers supporting a vertical load of more than 100 pounds per lineal foot (1.46 kN/m) and located within 48 inches (1219 mm) of adjacent grade are prohibited. Galvanized steel ledgers and anchor bolts, with or without wood nailers, or treated or decay resistant sill plates supported on a concrete or masonry seat, may be used.

1613.8.10.3 Sill Plates. All sill plates and anchorage must comply with the following:

1. All wood framed walls, including nonbearing walls, when resting on a footing, foundation, or grade beam stem wall, must be supported on wood sill plates bearing on a level surface.

2. Power-driven fasteners must not be used to anchor sill plates except at interior nonbearing walls not designed as shear walls.

1613.8.10.4 Column Base Plate Anchorage. The base of isolated wood posts (not framed into a stud wall) supporting a vertical load of 4000 pounds (17.8 kN) or more and the base plate for a steel column must comply with the following:

1. When the post or column is supported on a pedestal extending above the top of a footing or grade beam, the pedestal must be designed and reinforced as required for concrete or masonry columns. The pedestal must be reinforced with a minimum of four No. 4 bars extending to the bottom of the footing or grade beam. The top of exterior pedestals must be sloped for positive drainage.

2. The base plate anchor bolts or the embedded portion of the post base, and the vertical reinforcing bars for the pedestal, must be confined with two No. 4 or three No. 3 ties within the top five inches (127 mm) of the concrete or masonry pedestal. The base plate anchor bolts must be embedded a minimum of 20 bolt diameters into the concrete or masonry pedestal. The base plate anchor bolts and post bases must be galvanized and each anchor bolt must have at least two galvanized nuts above the base plate.

1613.8.10.5 Steel Beam to Column Supports. All steel beam to column supports must be positively braced in each direction. Steel beams must have

stiffener plates installed on each side of the beam web at the column. The stiffener plates must be welded to each beam flange and the beam web. Each brace connection or structural member must consist of at least two 5/8 inch (15.9 mm) diameter machine bolts.

- (D) *Sub-Diaphragm and Continuity Ties*. Section 1614, 1614.1 and 1614.1.6 are added to read as follows:

1614.1 General. The text of ASCE 7 must be modified as indicated in this Section.

1614.1.6 ASCE 7, 12.11.2.2.3. Modify ASCE 7 Section 12.11.2.3 to read as follows:

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

For wood diaphragms supporting concrete or masonry walls, wood diaphragms must comply with the following:

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

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

- (E) *Structural Building Separation*. Section 1614, 1614.1 and 1614.1.7 is added to read as follows:

1614.1 General. The text of ASCE 7 must be modified as indicated in this Section.

1614.1.7 ASCE 7, Section 12.12.3. Replace ASCE 7 Section 12.12.3 as follows:

12.12.3 Minimum Building Separation. All structures must be separated from adjoining structures. Separations must allow for the maximum inelastic response displacement (Δ_M). Δ_M must be determined at critical locations with consideration for both translational and torsional displacements of the structure as follows:

$$\Delta_M = C_d \delta_{\max} \quad (\text{Equation 16-45})$$

where δ_{\max} is the calculated maximum displacement at Level x as define in ASCE 7 Section 12.8.4.3.

Adjacent buildings on the same property must be separated by at least a distance Δ_{MT} , where

$$\Delta_{MT} = \sqrt{(\Delta_{M1})^2 + (\Delta_{M2})^2} \quad (\text{Equation 16-46})$$

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

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

Exception: Smaller separations or property line setbacks must be permitted when justified by rational analyses

(F) *Drainage.* Section 1803.7 is added to read:

1803.7.1 General. Provisions must be made for the control and drainage of surface water around buildings. Concentrated drainage such as rainwater from gutters and downspouts, scuppers, and roof valleys must be diverted away from building foundations by means of concrete splash blocks and/or other approved non-erosive devices.

1803.7.2 Gutters and Downspouts. When buildings are located on expansive soil having an expansion index greater than 50, gutters, downspouts, piping, and/or other non-erosive devices must be provided to collect and conduct rainwater to a street, storm drain, or other approved watercourse or disposal area.

1803.7.3 Vapor Barrier. An approved vapor barrier must be installed below slab floors of all residential occupancies in such a manner as to form an effective barrier against the migration of moisture into the slab. When sheet plastic material is employed for this purpose it must be not less than 6 mils (.006 inch) in thickness. The installation of a vapor barrier must not impair the effectiveness of required anchor bolts or other structural parts of a building.

Foundations at the perimeter of the concrete floor slabs must form a continuous moisture barrier of Portland cement concrete or solid grouted masonry to the depths required by Table 1805.4.2.

(G) *Footings Supporting Walls of light-frame construction.* Table 1805.4.2 is deleted and new Table 1805.4.2 to read as follows:

TABLE 1805.4.2
FOUNDATION SUPPORTING WALLS OF LIGHT-FRAME CONSTRUCTION

Weighted Expansion Index	Foundations For Slab & Raised Floor Systems (2)(5)(7)						Concrete Slabs		Restrictions on Piers Under Raised Floors		
	# of Stories	Slab Thickness (8)	Footing Width (9)	Footing Thickness (inches)	All Perimeter Footings (6)		Interior Pigs for Slab & Raised Floors (6)	Reinforcement for Continuous Foundations (3) (8)		3 1/4" Minimum Thickness 4" Over 51 EI	Pre-moistening of Soils Under Footings, Piers and Slabs (5) (6)
					Depth Below Natural Surface of Ground and Finish Grade						
0-20 Very Low (Non-expansive)	1	6	12	6	12	12	12	1 - #4 Top & Bottom	2"	Moistening of Ground Prior to Placing Concrete is Recommended	Piers allowed for single floor loads only
	2	8	15	7	18	18	18	1 - #4 Top & Bottom	4"		
	3	10	18	8	24	24	24				
21-50 Low	1	6	12	6	15	15	12	1 - #4 Top & Bottom	4"	#4 at 48" o.c. each way, or #3 at 36" o.c. each way	Piers allowed for single floor loads only
	2	8	15	7	18	18	18				
	3	10	18	8	24	24	24				
51-90 Medium	1	6	12	6	21	21	12	1 - #4 Top & Bottom	4"	#3 at 24" o.c. each way	Piers not allowed
	2	8	15	8	21	21	18				
	3	10	18	8	24	24	24				
91-130 High	1	6	12	8	27	27	12	2 - #4 Top & Bottom	4"	#3 at 24" o.c. each way	Piers not allowed
	2	8	15	8	27	27	18				
	3	10	18	8	27	27	24				
Above 130 Very High	Special Design by Licensed Engineer or Architect Required										

FOOTNOTES ON FOLLOWING PAGE

FOOTNOTES

1. Premoistening is required where specified in Table 1805.4.2 in order to achieve maximum and uniform expansion of the soil before construction and thus limit structural distress caused by uneven expansions and shrinkage. Other systems which do not include pre-moistening may be approved by the Building Official when such alternatives are shown to provide equivalent safeguards against the adverse effects of expansive soil.
2. Underfloor access crawl holes must be provided with curbs extending not less than six (6) inches above adjacent grade to prevent surface water from entering the foundation area.
3. Reinforcement for continuous foundations must be placed not less than 3" above the bottom of the footing and not less than 3" below the top of the stem.
4. Slab reinforcement must be placed at slab mid-depth and continue to within two inches of the exterior face of the exterior footing walls.
5. Moisture content must be maintained until foundations and piers are poured and a vapor barrier is installed. Tests must be taken within 24 hours of each slab pour.
6. Crawl spaces under raised floors need not be pre-moistened except under interior footings. Interior footings which are not enclosed by a continuous perimeter foundation system or equivalent concrete or masonry moisture barrier complying with Section 1805.4.2 in this ordinance must be designed and constructed as specified for perimeter footings in Table 1805.4.2
7. A grade beam not less than 12' x 12" in cross-sectional area, reinforced as specified for continuous foundations in Table 1805.4.2 must be provided at garage door openings.
8. Foundation stem walls which exceed a height of 3 times the stem thickness above the lowest adjacent grade must be reinforced in accordance with engineering design.
9. Footing widths may be reduced upon submittal of calculations by registered civil or structural engineer or licensed architect, but must be a minimum of 12 inches for one and two-story structures and 15 inches for three-story structures.
10. Bent reinforcing bars between exterior footing and slab must be omitted when the floor is designed as an independent, "floating" slab.
11. Fireplace footings must be reinforced with a horizontal grid located 3" above the bottom of the footing and consisting of not less than No. 4 bars at 12" on center each way. Vertical chimney reinforcing bars must be hooked under the grid.
12. Underground utility conduits must be installed before foundation inspection and must extend above and beyond the foundation so that final connection will not undermine the finished foundation.

(H) *Out-of-Plane Deflection.* Section 1908.1 is amended to read as shown below and Section 1908.1.17 is added to read as follows:

1908.1 General. The text of ACI 318 must be modified as indicated in Sections 1908.1.1 through 1908.1.17.

1908.1.17 ACI 318, Section 14.8. Modify ACI 318 Section 14.8.3 and 14.8.4 replacing equation (14-7), (14-8) and (14-9).

1. Modify equation (14-7) of ACI 318 Section 14.8.3 as follows:

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

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

and the value E_s/E_c must not be taken less than 6.

2. Modify ACI 318 Sec, 14.8.4 as follows:

14.8.4 – Maximum out-of-plane deflection, Δ_s , due to service loads, including $P\Delta$ effects, must not exceed $l/150$.

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

$$\Delta_s = \frac{2}{3} \Delta_{cr} + \frac{M_a - \frac{2}{3} M_{cr}}{M_n - \frac{2}{3} M_{cr}} \left(\Delta_n - \frac{2}{3} \Delta_{cr} \right) \quad (14-8)$$

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

$$\Delta_s = \left(\frac{M_a}{M_{cr}} \right) \Delta_{cr} \quad (14-9)$$

where:

$$\Delta_{cr} = \frac{5M_{cr}l_c^2}{48E_cI_g}$$

$$\Delta_n = \frac{5M_nl_c^2}{48E_cI_{cr}}$$

- (I) *Wood Structural Panels.* Sections 2306.3.1, 2306.4.1 and Table 2306.4.1 are amended to read as follows:

2306.3.1 Wood structural panel diaphragms. Wood structural panel diaphragms are permitted to resist horizontal forces using the allowable shear capacities set forth in Table 2306.3.1 or 2306.3.2.

2306.4.1. Wood structural panel shear walls. The allowable shear capacities for wood structural panel shear walls must be in accordance with Table 2306.4.1. These capacities are permitted to be increased 40 percent for wind design. Wood shear walls must be constructed of wood structural panels manufactured with exterior glue and not less than 4 feet by 8 feet (1219 mm by 2438 mm), except at boundaries and at changes in framing. Wood structural panel thickness for shear walls must not be less than 3/8 inch thick and studs must not be spaced at more than 16 inches on center.

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

Any wood structural panel sheathing used for diaphragms and shear walls that are part of the seismic-force-resisting system must be applied directly to framing members.

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

Table 2306.4.1 of the 2007 California Building Code is deleted in its entirety.
 Table 2306.4.1 is added to read as follows:

TABLE 2306.4.1

<u>PANEL GRADE</u>	<u>MINIMUM PANEL THICKNESS (inch)</u>	<u>MINIMUM FASTENER PENETRATION IN FRAMING (inches)</u>	<u>ALLOWABLE SHEAR VALUE FOR SEISMIC FORCES PANELS APPLIED DIRECTLY TO FRAMING</u>		<u>ALLOWABLE SHEAR VALUE FOR WIND FORCES PANELS APPLIED DIRECTLY TO FRAMING</u>				
			<u>NAIL (common or galvanized box) or staple size^k</u>	<u>Fastener spacing at panel edges (inches)</u>	<u>NAIL (common or galvanized box) or staple size^k</u>	<u>Fastener spacing at panel edges (inches)</u>			
						<u>6</u>	<u>4</u>	<u>3</u>	<u>2^e</u>
<u>Structural I</u>	<u>5/16</u>	<u>1-1/4</u>	<u>6d (2"x0.113" common, 2"x0.099" galvanized box)</u>	<u>150</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>
			<u>1-1/2 16 Gage</u>	<u>124</u>	<u>184</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>
<u>3/8</u>	<u>3/8</u>	<u>1-3/8</u>	<u>8d (2 1/2"x0.131" common, 2 1/2"x0.113" galvanized box)</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>
			<u>1-1/2 16 Gage</u>	<u>116</u>	<u>176</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>200</u>
<u>7/16</u>	<u>1-3/8</u>	<u>1</u>	<u>8d (2 1/2"x0.131" common, 2 1/2"x0.113" galvanized box)</u>	<u>255^d</u>	<u>395^d</u>	<u>505^d</u>	<u>505^d</u>	<u>505^d</u>	<u>505^d</u>
			<u>1-1/2 16 Gage</u>	<u>128</u>	<u>195</u>	<u>259</u>	<u>333</u>	<u>333</u>	<u>333</u>
<u>15/32</u>	<u>1-3/8</u>	<u>1</u>	<u>8d (2 1/2"x0.131" common, 2 1/2"x0.113" galvanized box)</u>	<u>280</u>	<u>430</u>	<u>550</u>	<u>550</u>	<u>550</u>	<u>550</u>
			<u>1-1/2 16 Gage</u>	<u>170</u>	<u>260</u>	<u>345</u>	<u>440</u>	<u>440</u>	

	<u>1</u>	<u>1-1/2 16 Gage</u>	<u>139</u>	<u>210</u>	<u>281</u>	$\frac{35}{6}$	<u>1-1/2 16 Gage</u>	<u>185</u>	<u>280</u>	<u>375</u>	<u>475</u>
	<u>1-1/2</u>	<u>10d (3"x0.148" common, 3"x0.128" galvanized box)</u>	<u>340</u>	<u>510</u>	<u>665^f</u>	$\frac{87}{0}$	<u>10d (3"x0.148" common, 3"x0.128" galvanized box)</u>	<u>340</u>	<u>510</u>	<u>665^f</u>	<u>870</u>
	<u>1-1/4</u>	<u>6d (2"x0.113" common, 2"x0.099" galvanized box)</u>	<u>180</u>	<u>200</u>	<u>200</u>	$\frac{20}{0}$	<u>6d (2"x0.113" common, 2"x0.099" galvanized box)</u>	<u>180</u>	<u>270</u>	<u>350</u>	<u>450</u>
	<u>1</u>	<u>1-1/2 16 Gage</u>	<u>109</u>	<u>165</u>	<u>200</u>	$\frac{20}{0}$	<u>1-1/2 16 Gage</u>	<u>145</u>	<u>220</u>	<u>295</u>	<u>375</u>
	<u>1-1/4</u>	<u>6d (2"x0.113" common, 2"x0.099" galvanized box)</u>	<u>200</u>	<u>200</u>	<u>200</u>	$\frac{20}{0}$	<u>6d (2"x0.113" common, 2"x0.099" galvanized box)</u>	<u>200</u>	<u>300</u>	<u>390</u>	<u>510</u>
	<u>1-3/8</u>	<u>8d (2 1/2"x0.131" common, 2 1/2"x0.113" galvanized box)</u>	<u>200</u>	<u>200</u>	<u>200</u>	$\frac{20}{0}$	<u>8d (2 1/2"x0.131" common, 2 1/2"x0.113" galvanized box)</u>	<u>220^d</u>	<u>320^d</u>	<u>410^d</u>	<u>530^d</u>
	<u>1</u>	<u>1-1/2 16 Gage</u>	<u>105</u>	<u>158</u>	<u>200</u>	$\frac{20}{0}$	<u>1-1/2 16 Gage</u>	<u>140</u>	<u>210</u>	<u>280</u>	<u>360</u>
	<u>1-3/8</u>	<u>8d (2 1/2"x0.131" common, 2 1/2"x0.113" galvanized box)</u>	<u>240^d</u>	<u>350^d</u>	<u>450^d</u>	$\frac{58}{5d}$	<u>8d (2 1/2"x0.131" common, 2 1/2"x0.113" galvanized box)</u>	<u>240^d</u>	<u>350^d</u>	<u>450^d</u>	<u>585^d</u>
	<u>1</u>	<u>1-1/2 16 Gage</u>	<u>116</u>	<u>173</u>	<u>233</u>	$\frac{29}{6}$	<u>1-1/2 16 Gage</u>	<u>155</u>	<u>230</u>	<u>310</u>	<u>395</u>
	<u>1-3/8</u>	<u>8d (2 1/2"x0.131" common, 2 1/2"x0.113" galvanized box)</u>	<u>260</u>	<u>380</u>	<u>490</u>	$\frac{64}{0}$	<u>8d (2 1/2"x0.131" common, 2 1/2"x0.113" galvanized box)</u>	<u>260</u>	<u>380</u>	<u>490</u>	<u>640</u>
	<u>1-1/2</u>	<u>10d (3"x0.148" common, 3"x0.128" galvanized box)</u>	<u>310</u>	<u>460</u>	<u>600^f</u>	$\frac{77}{0}$	<u>10d (3"x0.148" common, 3"x0.128" galvanized box)</u>	<u>310</u>	<u>460</u>	<u>600^f</u>	<u>770</u>
	<u>1</u>	<u>1-1/2 16 Gage</u>	<u>128</u>	<u>191</u>	<u>251</u>	$\frac{32}{3}$	<u>1-1/2 16 Gage</u>	<u>170</u>	<u>255</u>	<u>335</u>	<u>430</u>

Sheathing
plywood
siding
except
Group 5
Species

<u>19/32</u>	<u>1-1/2</u>	<u>10d (3"x0.148" common, 3"x0.128" galvanized box)</u>	<u>340</u>	<u>510</u>	<u>665^f</u>	<u>87</u> <u>0</u>	<u>10d (3"x0.148" common, 3"x0.128" galvanized box)</u>	<u>340</u>	<u>510</u>	<u>665^f</u>	<u>870</u>
	<u>1</u>	<u>1-3/4 16 Gage</u>	<u>139</u>	<u>210</u>	<u>281</u>	<u>35</u> <u>6</u>	<u>1-3/4 16 Gage</u>	<u>185</u>	<u>280</u>	<u>375</u>	<u>475</u>
		<u>Nail Size (galvanized casing)</u>					<u>Nail Size (galvanized casing)</u>				
<u>5/16^c</u>	<u>1-1/4</u>	<u>6d (2"x0.099")</u>	<u>140</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>6d (2"x0.099")</u>	<u>14</u> <u>0</u>	<u>21</u> <u>0</u>	<u>275</u>	<u>360</u>
<u>3/8</u>	<u>1-3/8</u>	<u>8d (2 1/2"x0.113")</u>	<u>160</u>	<u>200</u>	<u>200</u>	<u>200</u>	<u>8d (2 1/2"x0.113")</u>	<u>16</u> <u>0</u>	<u>24</u> <u>0</u>	<u>310</u>	<u>410</u>

Notes to Table 2306.4.1

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

- a. For framing of other species: (1) Find specific gravity for species of lumber in AF&PA NDS. (2) For staples find shear value from table above for Structural I panels (regardless of actual grade) and multiply value by 0.82 for species with specific gravity of 0.42 or greater, or 0.65 for all other species. (3) For nails find shear value from table above for nail size for actual grade and multiply value by the following adjustment factor: Specific Gravity Adjustment Factor = $[1-(0.5-SG)]$, where SG = Specific Gravity of the framing lumber. This adjustment factor must not be greater than 1.
- b. Panel edges backed with 2-inch nominal or thicker framing. Install panels either horizontally or vertically. Space fasteners maximum 6 inches on center along intermediate framing members for 3/8-inch and 7/16-inch panels installed on studs spaced 24 inches on center. For other conditions and panel thickness, space fasteners maximum 12 inches on center on intermediate supports.
- c. 3/8-inch panel thickness or siding with a span rating of 16 inches on center is the minimum recommended where applied direct to framing as exterior siding.
- d. Except for wood structural panel sheathing used for shear walls that are part of the seismic-force-resisting system, allowable shear values are permitted to be increased to values shown for 15/32-inch sheathing with same nailing provided (a) studs are spaced a maximum of 16 inches on center, or (b) panels are applied with long dimension across studs.
- e. Framing at adjoining panel edges must be 3 inches nominal or wider, and nails must be staggered where nails are spaced 2 inches on center.
- f. Framing at adjoining panel edges must be 3 inches nominal or wider, and nails must be staggered where both of the following conditions are met: (1) 10d (3"x0.148") nails having penetration into framing of more than 1-1/2 inches and (2) nails are spaced 3 inches on center.
- g. Values apply to all-veneer plywood. Thickness at point of fastening on panel edges governs shear values.
- h. Where panels applied on both faces of a wall and nail spacing is less than 6 inches o.c. on either side, panel joints must be offset to fall on different framing members, or framing must be 3-inch nominal or thicker at adjoining panel edges and nails on each side must be staggered.
- i. In Seismic Design Category D, E or F, where shear design values exceed 350 pounds per linear foot, all framing members receiving edge nailing from abutting panels must not be less than a single 3-inch nominal member, or two 2-inch nominal members fastened together in accordance with Section 2306.1 to transfer the design shear value between framing members. Wood structural panel joint and sill plate nailing must be staggered in all cases. See Section 2305.3.11 for sill plate size and anchorage requirements.
- j. Galvanized nails must be hot dipped or tumbled.
- k. Staples must have a minimum crown width of 7/16 inch and must be installed with their crowns parallel to the long dimension of the framing members.

- i. For shear loads of normal or permanent load duration as defined by the AF&PA NDS, the values in the table above must be multiplied by 0.63 or 0.56, respectively.
- m. [DSA-SS & OSHPD 1, 2 and 4] Refer to Section 2305.2.4.2, which requires any wood structural panel sheathing used for diaphragms and shear walls that are part of the seismic-force-resisting system to be applied directly to framing members.
- n. The maximum allowable shear value for three-ply plywood resisting seismic forces is 200 pounds per foot (2.92 kn/m).

(J) *Shear Walls Sheathing.* Section 2306.4.5 to read as follows:

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

(K) *Conventional Light-Frame Construction.* Section 2308.

2308.3.4. Braced wall line support. Braced wall lines must be supported by continuous foundations.

2308.12.4. Braced Wall Line Sheathing. Braced wall lines must be braced by one of the types of sheathing prescribed by Table 2308.12.4 as shown in Figure 2308.9.3. The sum of lengths of braced wall panels at each braced wall line must conform to Table 2308.12.4. Braced wall panels must be distributed along the length of the braced wall line and start at no more than 8 feet (2438 mm) from each end of the braced wall line. Panel sheathing joints must occur over studs or blocking. Sheathing must be fastened to studs, top and bottom plates and at panel edges occurring over blocking. Wall framing to which sheathing used for bracing is applied must be nominal 2 inch wide [actual 1½ inch (38 mm)] or larger members, spaced a maximum of 16 inches on center. Nailing must be minimum 8d common placed 3/8 inches from panel edges and spaced not more than 6 inches on center, and 12 inches on center along intermediate framing members.

Braced wall panel construction types must not be mixed within a braced wall line.

2308.12.5. Attachment of Sheathing. Fastening of braced wall panel sheathing must not be less than that prescribed in Table 2308.12.4 of this division

or CBC Table 2304.9.1. Wall sheathing must not be attached to framing members by adhesives.

All braced wall panels must extend to the roof sheathing and must be attached to parallel roof rafters or the blocking above the braced wall panels with framing clips (18 gauge minimum) spaced at maximum 24 inches (6096 mm) on center with four 8d common nails per leg (total eight 8d common nails per clip).

TABLE 2308.12.4
WALL BRACING IN SEISMIC DESIGN CATEGORIES D AND E
(Minimum Length of Wall Bracing per each 25 Linear Feet of Braced Wall Line^a)

CONDITION	SHEATHING TYPE ^b	$S_{DS} < 0.50$	$0.50 \leq S_{DS} < 0.75$	$0.75 \leq S_{DS} \leq 1.00$	$S_{DS} > 1.00$
One story ^f	G-P ^c	10 feet 8 inches	14 feet 8 inches	18 feet 8 inches	25 feet 0 inches
	S-W ^e	5 feet 4 inches	8 feet 0 inches	9 feet 4 inches	12 feet 0 inches
Story below top Story [HCD 1]	G-P ^c	18 feet 8 inches ^d	NP	NP	NP
	S-W ^{d, e}	10 feet 8 inches ^d	13 feet 4 inches ^d	17 feet 4 inches ^d	21 feet 4 inches ^d
Bottom story of three stories [HCD 1]	G-P ^c	Conventional construction not permitted; conformance with Section 2301.2, item lor 2 is required.			
	S-W				

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

a. Minimum length of panel bracing of one face of the wall for S-W sheathing must be at least 4'-0" long or both faces of the wall for G-P sheathing must be at least 8'-0" long; h/w ratio must not exceed 2:1. For S-W panel bracing of the same material on two faces of the wall, the minimum length is permitted to be one-half the tabulated value but the h/w ratio must not exceed 2:1 and design for uplift is required.

b. G-P = gypsum board, and portland cement plaster or gypsum sheathing boards; S-W = wood structural panels. NP = not permitted.

c. Nailing as specified below must occur at all panel edges at studs, at top and bottom plates and, where occurring, at blocking:

For 1/2-inch gypsum board, 5d (0.113 inch diameter) cooler nails at 7 inches on center;

For 5/8-inch gypsum board, No. 11 gage (0.120 inch diameter) at 7 inches on center;

For gypsum sheathing board, 1 3/4 inches long by 7/16-inch head, diamond point galvanized nails at 4 inches on center;

For gypsum lath, No. 13 gage (0.092 inch) by 18 Inches long, 9/64-inch head, plasterboard at 5 inches on center;

For Portland cement plaster, No. 11 gage (0.120 inch) by 1 1/2 inches long, 7/16-inch head at 6 inches on center;

d.[HCD 1] Applies to detached one- and two - family dwellings only.

e.S-W sheathing must be 15/32" thick nailed with 8d nails, at 6:6:12.

f. For brace wall lines supporting only U occupancies, accessory to single family dwellings, one of braced wall lines may have one panel constructed as follows per each 12 linear feet of braced wall line. Each panel must have a length of not less than 2 feet 8 inches (813 mm) and a height of not more than 10 feet (3048 mm). Each panel must be sheathed on one face with 15/32 inch thick plywood sheathing nailed with 8d nails at 6:6:12 and blocked at all plywood edges. Two anchor bolts installed in accordance with Section 2308.6 must be provided in each panel. Anchor bolts must be placed at panel quarter points. Each panel end stud must have a tie-down device fastened to the foundation, capable of providing an approved uplift capacity of not less than 1,800 pounds (816.5 kg). The tie-down device must be installed in accordance with the manufacturer's recommendations. The panels must be supported directly on a foundation on a foundation which is continuous across the entire length of the braced wall line. This foundation must be reinforced with not less than one No. 4 bar top and bottom.

(L) *Anchorage.* Section 2308.12.9 to read as follows:

2308.12.9 Steel bolts with minimum normal diameter of 5/8" spaced a maximum of 4' on center must be used in seismic design category E.

(M) *Definitions.* For the purposes of this chapter, the following definition applies and is added to Section 3402.

Substantial Structural Damage. A condition where:

1. In any story, the vertical elements of the lateral-force-resisting system, have suffered damage such that the lateral load-carrying capacity of the structure in any direction has been reduced by more than 20 percent from its pre-damaged condition, or

2. The capacity of any vertical gravity load-carrying component, or any group of such components, that supports more than 30 percent of the total area of the structure's floor(s) and roof(s) has been reduced more than 20 percent from its pre-damaged condition, and the remaining capacity of such affected elements with respect to all dead and live loads is less than 75 percent of that required by the building code for new buildings of similar structure, purpose, and location.

(N) *Repairs.* For the purposes of this chapter, the following repair requirements are added as a new Subsection 3403.5 to Section 3403 Additions, Alterations or Repair:

3403.5.1 Repairs. Repairs of structural elements must comply with this section.

3403.5.1.1 Seismic evaluation and design. Seismic evaluation and design of an existing building and its components must be based on the following criteria.

3403.5.1.1.1 Evaluation and design procedures. The seismic evaluation and design must be based on the procedures specified in the building code, ASCE 31 *Seismic Evaluation of Existing Buildings* (for evaluation only) or ASCE 41 *Seismic Rehabilitation of Existing Buildings*. The procedures contained in Appendix A of the *California Existing Building Code* must be permitted to be used as specified in Section 3403.5.1.1.3.

3403.5.1.1.2 CBC level seismic forces. When seismic forces are required to meet the building code level, they must be one of the following:

- a. 100 percent of the values in the building code. The R factor used for analysis in accordance with Chapter 16 of the building code must be the R factor specified for structural systems classified as “Ordinary” unless it can be demonstrated that the structural system satisfies the proportioning and detailing requirements for systems classified as “Intermediate” or “Special”.
- ii. Forces corresponding to BSE-1 and BSE-2 Earthquake Hazard Levels defined in ASCE 41. Where ASCE 41 is used, the corresponding performance levels must be those shown in Table 3403.5.1.1.2.

TABLE 3403.5.1.1.2
ASCE 41 and ASCE 31 PERFORMANCE LEVELS

OCCUPANCY CATEGORY (BASED ON IBC TABLE 1604.5)	PERFORMANCE LEVEL FOR USE WITH ASCE 31 AND WITH ASCE 41 BSE-1 EARTHQUAKE HAZARD LEVEL	PERFORMANCE LEVEL FOR USE WITH ASCE 41 BSE-2 EARTHQUAKE HAZARD LEVEL
I	Life Safety (LS)	Collapse Prevention (CP)
II	Life Safety (LS)	Collapse Prevention (CP)
III	Note (a)	Note (a)
IV	Immediate Occupancy (IO)	Life Safety (LS)

iii. Performance Levels for Occupancy Category III must be taken as halfway between the performance levels specified for Occupancy Category II and Occupancy Category IV.

3403.5.1.1.3 Reduced CBC level seismic forces. When seismic forces are permitted to meet reduced building code levels, they must be one of the following:

1. 75 percent of the forces prescribed in the building code. The R factor used for analysis in accordance with Chapter 16 of the building code must be the R factor as specified in Section 3403.5.1.1.2.
2. In accordance with the applicable chapters in Appendix A of the *California Existing Building Code* as specified in Items 2.1 through 2.5 below. Structures or portions of structures that comply with the requirements of the applicable chapter in Appendix A must be deemed to comply with the requirements for reduced building code force levels.
 - 2.1. The seismic evaluation and design of unreinforced masonry bearing wall buildings in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A1.
 - 2.2. Seismic evaluation and design of the wall anchorage system in reinforced concrete and reinforced masonry wall buildings with flexible diaphragms in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A2.
 - 2.3. Seismic evaluation and design of cripple walls and sill plate anchorage in residential buildings of light-frame wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A3.
 - 2.4. Seismic evaluation and design of soft, weak, or open-front wall conditions in multiunit residential buildings of wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A4.
 - 2.5. Seismic evaluation and design of concrete buildings and concrete with masonry infill buildings in all Occupancy Categories are permitted to be based on the procedures specified in Appendix Chapter A5.
3. In accordance with ASCE 31 based on the applicable performance level as shown in Table 3403.5.1.1.2.
4. Those associated with the BSE-1 Earthquake Hazard Level defined in ASCE 41 and the performance level as shown in Table 3403.5.1.1.2. Where ASCE 41 is used, the design spectral response acceleration parameters S_{xs} and S_{x1} must not be taken less than 75 percent of the respective design spectral response acceleration parameters S_{Ds} and S_{D1} defined by the *California Building Code* and its reference standards.

3403.5.1.2 Wind Design. Wind design of existing buildings must be based on the procedures specified in the building code.

3403.5.2 Repairs to damaged buildings. Repairs to damaged buildings must comply with this section.

3403.5.2.1 Unsafe conditions. Regardless of the extent of structural damage, unsafe conditions must be eliminated.

3403.5.2.2 Substantial structural damage to vertical elements of the lateral-force-resisting system. A building that has sustained substantial structural damage to the vertical elements of its lateral-force-resisting system must be evaluated and repaired in accordance with the applicable provisions of Section 3403.5.2.2.1 through 3403.5.2.2.3.

3403.5.2.2.1 Evaluation. The building must be evaluated by a registered design professional, and the evaluation findings must be submitted to the code official. The evaluation must establish whether the damaged building, if repaired to its pre-damage state, would comply with the provisions of the building code. Wind forces for this evaluation must be those prescribed in the building code. Seismic forces for this evaluation are permitted to be the reduced level seismic forces specified in Code Section 3403.5.1.1.3.

3403.5.2.2.2 Extent of repair for compliant buildings. If the evaluation establishes compliance of the pre-damage building in accordance with Section 3403.5.2.2.1, then repairs must be permitted that restore the building to its pre-damage state, using materials and strengths that existed before the damage.

3403.5.2.2.3 Extent of repair for non-compliant buildings. If the evaluation does not establish compliance of the pre-damage building in accordance with Section 3403.5.2.2.1, then the building must be rehabilitated to comply with applicable provisions of the building code for load combinations including wind or seismic forces. The wind design level for the repair must be as required by the building code in effect at the time of original construction unless the damage was caused wind, in which case the design level must be as required by the code in effect at the time of original construction or as required by the building code, whichever is greater. Seismic forces for this rehabilitation design must be those required for the design of the pre-damaged building, but not less than the reduced level seismic forces specified in Section 3403.5.1.1.3. New structural members and connections required by this rehabilitation design must comply with the detailing provisions of the building code for new buildings of similar structure, purpose, and location.

3403.5.2.3 Substantial structural damage to vertical load-carrying components. Vertical load-carrying components that have sustained substantial structural damage must be rehabilitated to comply with the applicable

provisions for dead and live loads in the building code. Undamaged vertical load-carrying components that receive dead or live loads from rehabilitated rehabilitation design. New structural members and connections required by this components must also be rehabilitated to carry the design loads of the rehabilitation design must comply with the detailing provisions of the building code for new buildings of similar structure, purpose, and location.

3403.5.2.3.1 Lateral force-resisting elements. Regardless of the level of damage to vertical elements of the lateral force-resisting system, if substantial structural damage to vertical load-carrying components was caused primarily by wind or seismic effects, then the building must be evaluated in accordance with Section 3403.5.2.2.1 and, if non-compliant, rehabilitated in accordance with Section 3403.5.2.2.3.

3403.5.2.4 Less than substantial structural damage. For damage less than substantial structural damage, repairs must be allowed that restore the building to its pre-damage state, using materials and strengths that existed before the damage. New structural members and connections used for this repair must comply with the detailing provisions of the building code for new buildings of similar structure, purpose, and location.

3403.5.3 Referenced Standards

Standard Reference Number	Title	Referenced In Code Section Number
ASCE 31-03	Seismic Evaluation of Existing Buildings	3403.5.1.1.1, TABLE 3403.5.1.1.2, 3403.5.1.1.3
ASCE 41-06	Seismic Rehabilitation of Existing Building	3403.5.1.1.1, 3403.5.1.1.2, TABLE 3403.5.1.1.2, 3403.5.1.1.3

(O) *Appendix chapters. Appendix F, H, I, J* are adopted as part of this code with modifications as listed in this section.

(P) *Design loads for patios.* Section I103 is to Appendix I:

Section 3120: Sections I 104 must only apply to lattice roof designs or solid roof design of less than 3 lb. Per square foot. Roof designs not meeting this criteria must be designed to meet other applicable sections of this code.

(Q) *Powers and duties of the Building Official.* Section J101.3 is added to read:

For the purposes of Appendix J, the City Engineer or Building Official is the designated Building Official.

EXHIBIT "B" TO ORDINANCE NO. 1180

CALIFORNIA PLUMBING CODE

§ 150.025 ADOPTED BY REFERENCE.

Pursuant to California Government Code §§ 50022.1 to 50022.8, the City adopts and incorporates by reference the California Plumbing Code 2007 Edition ("CPC"), and Appendices A, B, D, I, and K, promulgated and published by the California Building Standards Commission, 2525 Matomas Park Drive, Suite 130, Sacramento, CA 93833-2936.

§ 150.026 AMENDMENTS, ADDITIONS AND DELETIONS. After due consideration, the City Council finds that as a result of existing local climatic, geological, or topographical conditions that amendments, additions, and deletions to the CPC are reasonably necessary to provide sufficient and effective levels of safety for the protection of life, health and property. Therefore, the CPC is amended, added to, or deleted from, as set forth below:

Administrative. CPC Appendix Chapter 1 is deleted.

(A) *PEX.* Section 604.11.3 is added to read:

Cross-linked polyethylene (PEX) tub installation is limited to single family detached with written request of property owner and installed in compliance with manufacture listing.

(B) *Materials.* Sections 701.1.2.3, 903.1.2.4, 1101.3.2, and 1102.1.3 are added to read:

ABS and PVC installations fully enclosed are limited to commercial and industrial buildings. Not more than one story in height of type VB wood frame construction fully fire sprinklered, except below grade concrete slab construction when approved by the Building Official.

EXHIBIT "C" TO ORDINANCE NO. 1180

CALIFORNIA FIRE CODE

§ 150.035 ADOPTED BY REFERENCE

Pursuant to California Government Code §§ 50022.1 to 50022.8, the City adopts and incorporates by reference the California Fire Code 2007 Edition ("CFC") promulgated and published by the California Building Standards Commission, 2525 Matomas Park Drive, Suite 130, Sacramento, CA 93833-2936.

§ 150.036 AMENDMENTS, ADDITIONS AND DELETIONS. After due consideration, the City Council finds that as a result of existing local climatic, geological, or topographical conditions that amendments, additions, and deletions to the CFC are reasonably necessary to provide sufficient and effective levels of safety for the protection of life, health and property. Therefore, the CFC is amended, added to, or deleted from, as set forth below:

(A) *Premises Identification*. Section 505.1 is amended and the following provisions are added respectively to read:

505.1 Premises Identification. Approved address numbers and letters must be placed on all new and existing buildings and units in such a location as to be plainly visible and legible from the street or road fronting such building and units. Numbers and letters must be a minimum of 4 inches for residential, 6 inches in height for commercial, and 12 inches in height for industrial buildings and units and cannot be located on doors or other areas that will be obstructed from view. The numbers and letters must be of a color that contrast with their background and must be in the approved city numbering sequence. Commercial and Industrial buildings and units that are served by an alley must also have approved address numbers and letters posted in a visible location near the primary door to the alley

(B) *Automatic Sprinkler Systems*. Section 903.2 is amended and the following provisions are added respectively to read:

903.2 Where required. An automatic Sprinkler system in new buildings and structures must be provided in the locations described in this section.

903.2.1 In all new occupancies, except detached Group U occupancies less than 500 square feet.

903.2.2 In any existing building when any addition, or series of additions, to that building, including but limited to lofts, mezzanines,

store rooms, or connected storage buildings increase the overall floor area of the building by 500 square feet or more. In the case of any existing single family residence, when addition or series of additions increase the overall floor area of the residence by 1000 square feet or more.

903.2.3 In any existing building before a change in its occupancy classification to a group A, E, H, I, R1, R3, S1, S2, S3 occupancy from any other occupancy classification as determined by current code definitions with respect to currently permitted and proposed uses.

903.2.4 High-piled storage. An automatic sprinkler system must be provided as required in Chapter 23 in all buildings of Group M where storage of merchandise is in high piled or rack storage arrays.

903.2.5 Rubbish and linen chutes. An automatic sprinkler system must be installed at the top of rubbish and linen chutes and in their terminal rooms. Chutes extending through three or more floors must have additional sprinkler heads installed within such chutes at alternate floors. Chute sprinklers must be accessible for servicing.

(C) *Roof Coverings*. Section 705 is added as follows:

All new buildings must be constructed with Class A roof coverings. When 50% or more of the roof of an existing building is recovered, Class A roof covering must be used, except when the existing roof support structure will not support the weight of a Class A roof covering, Class B roof covering may be approved with the consent of the Fire Official or Building Official. Notwithstanding the foregoing, wood shake or wood shingles roof covering are prohibited.

(D) *Appendix Chapters*. Appendix Chapters 1, 4, B, C, D, and H are adopted as part of this code with modifications as listed in this section.

(i) Appendix Chapter 1, section 108 is deleted and the following is added:

108 General. The board of appeals is designated to hear and decide appeals of orders, decisions or determinations made by the fire official relative to the application and interpretations of the technical code. The fire official will be an ex officio member and act as secretary to the board but not have voting rights upon any matter before the board. The board may adopt reasonable rules and regulations for conducting

its investigations and will render all its decisions and findings on contested matters, in writing to the fire official, with a duplicate copy for any appellant or contestant affected by such decision or finding, and may recommend to the city council appropriate new legislation.

108.1 Applicability to Codes. The appeals board will serve as the appellate board or body whenever any of the codes adopted by reference provides for same. The appeals board will also act as the general appeals board for other city construction related adopted regulations

108.2 Hearing Process. Appeals to the board will be processed in accordance with this Code and on application forms provided by the fire official. A fee established by city council resolution will accompany an application for a hearing before the board of appeals. The fee is refundable should the appellant prevail in a decision by the board. Copies of any rules and regulations adopted by the board must be delivered to the building official, who will make them freely accessible to the public. The board's decision constitutes the City's final decision.

108.3 Limitations of Authority. The board of appeals has no authority to interpret the administrative provisions of this code or to waive requirements of this code or the technical codes.

(ii) *Violations.* Section 109 is amended by adding Section 109.4 to the following:

109.4 To the extent that any of the provisions adopted by reference in this Title differ with the provisions of Title I of this code, Title I governs.

EXHIBIT "D" TO ORDINANCE NO. 1180

CALIFORNIA ELECTRICAL CODE

§ 150.045 ADOPTED BY REFERENCE.

Pursuant to California Government Code §§ 50022.1 to 50022.8, the City adopts and incorporates by reference the California Electrical Code, 2007 Edition ("CEC"), promulgated and published by the California Building Standards Commission, 2525 Matomas Park Drive, Suite 130, Sacramento, CA 95833-2936.

§ 150.046 AMENDMENTS, ADDITIONS AND DELETIONS. After due consideration, the City Council finds that as a result of existing local climatic, geological, or topographical conditions that amendments, additions, and deletions to the CEC are reasonably necessary to provide sufficient and effective levels of safety for the protection of life, health and property. Therefore, the CEC is amended, added to, or deleted from, as set forth below:

(A) *Conductors*. The following is added to Section 110.5.1 to read:

ALUMINUM CONDUCTORS. Aluminum conductors used in industrial applications under the provisions of this Code must be a minimum of #6 A.W.G. stranded conductor.

(B) *Electrode*. Section 250.52 (A)(3) is deleted and new Section 250.52 (A)(3) is added to read:

Section 250.52(A)(3) Concrete-encased electrode. An electrode encased by at least 2 inches (50.8 mm) of concrete, located within and near the bottom of a concrete foundation or footing that is in direct contact with the earth, consisting of at least 20 feet (6.1 m) of bare copper conductor not smaller than No. 4 A. W. G.

EXHIBIT "E" TO ORDINANCE NO. 1180

CALIFORNIA MECHANICAL CODE

§ 150.065 ADOPTED BY REFERENCE

Pursuant to California Government Code §§ 50022.1 to 50022.8, the City adopts and incorporates by reference the California Mechanical Code 2007 Edition ("CMC"), including its appendices A, B, C, and D, promulgated and published by the California Building Standards Commission, 2525 Matomas Park Drive, Suite 130, Sacramento, CA 93833-2936.

§ 150.066 AMENDMENTS, ADDITIONS AND DELETIONS. After due consideration, the City Council finds that as a result of existing local climatic, geological, or topographical conditions that amendments, additions, and deletions to the CMC are reasonably necessary to provide sufficient and effective levels of safety for the protection of life, health and property. Therefore, the CMC is amended, added to, or deleted from, as set forth below:

(A) *Administration*. CMC Appendix Chapter 1 is deleted.

(B) *Hood and ventilation systems*. Section 508.1 is deleted and new Section 508.1 is added to read:

Section 508.1: Where required. Hoods and hood ventilation systems must be installed to the satisfaction of the Building Official at or above all commercial-type deep fat fryers, broilers, fry grills, steam-jacketed kettles, hot top ranges, ovens, barbecues, rotisseries, dish washing machines and similar equipment which produce comparable amounts of steam, smoke, grease or heat in a food-processing establishment.

For the purpose of this section, a food-processing establishment shall include any building or portion thereof used for the processing of food, including dwelling units.

EXHIBIT "F" TO ORDINANCE NO. 1180

CALIFORNIA EXISTING BUILDING CODE

§ 150.085 ADOPTED BY REFERENCE

Pursuant to California Government Code §§ 50022.1 to 50022.8, the City adopts and incorporates by reference the California Existing Building Code 2006 Edition ("CEBC"), published by the California Standards Commission, 2525 Matomas Park Drive, Suite 130, Sacramento, CA 95833-2936.

§ 150.086 AMENDMENTS, ADDITIONS AND DELETIONS. The CEBC is amended, added to, or deleted from as set forth below:

(A) *Design*. New Section A105.5 is added to Section A105 to read:

Section A105.5: For the purpose of this chapter, seismic zone SD1 or greater is used.

EXHIBIT "G" TO ORDINANCE NO. 1180

INTERNATIONAL PROPERTY MAINTENANCE CODE

§ 150.150 ADOPTED BY REFERENCE

Pursuant to California Government Code §§ 50022.1 to 50022.8, the City adopts and incorporates by reference the International Property Maintenance Code 2006 Edition ("Maintenance Code"), published by the International Code Council, Inc. 5203 Leesburg Pike, Suite 600, Falls Church, Virginia 22041-3401.

§ 150.151 AMENDMENTS, ADDITIONS AND DELETIONS. The Maintenance Code is amended, added to, or deleted from as set forth below:

(A) Section 103.5 is amended by adding the following:

103.5.1 The fees for activities and services performed by the department in carrying out its responsibilities under this code are established by city council resolution.

(B) Chapter 3 is amended by adding the following section:

309 Substandard Buildings. Any building or portion thereof determined to be an unsafe building or any building or portion, including any dwelling unit, guest room or suite of rooms, or the premises on which the same is located, in which there exists any of the conditions referenced in this section to an extent that endangers the life, limb, health, property, safety or welfare of the public or the occupants thereof, constitutes a substandard building.

309.1 Inadequate Sanitation. Buildings or portions thereof are substandard when they are insanitary. Inadequate sanitation includes, without limitation, lack of water closet, lavatory, bathtub or shower facilities and kitchen sink, lack of hot and cold running water, lack of heating facilities, lack of minimum amounts of natural light and ventilation, lack of required room and space dimensions, lack of required electrical lighting, dampness of habitable rooms, infestation of insects, vermin or rodents, lack of connection to a sewage disposal system and general dilapidation or improper maintenance.

309.2 Hazards. Buildings or portions thereof are substandard when they are or contain structural hazards which include deteriorated or inadequate foundations, flooring or floor supports, walls or vertical supports that lean, list or

buckle, members of ceilings, roofs and roof supports or other horizontal members that sag, split or buckle, any or all deteriorated required electrical wiring system or service, plumbing system including supply, drain, waste and vent system or mechanical system that was installed in violation of code requirements in effect at the time of installation or not installed in accordance with generally accepted construction practices in areas where no codes were in effect or that has not been maintained in good condition. Fireplaces or chimneys that list, bulge or settle due to defective material or deterioration.

309.3 Hazardous or Insanitary Premises. The accumulation of weeds, vegetation, junk, dead organic matter, debris, garbage, offal, rat harborages, stagnant water, combustible materials, and similar materials or conditions on a premises constitutes fire, health or safety hazards that is substandard.

309.4 Improper Occupancy. All buildings or portions thereof occupied for living, sleeping, cooking or dining purposes that were not designed or intended to be used for such occupancies are substandard.

(C) Section 404.4.1 Room area is amended to add the following.

404.4.1.2 Area for sleeping purposes. Every bedroom occupied by one person must contain at least 70 square feet of floor area, and every bedroom occupied by more than one person must contain at least 50 square feet of floor area for each occupant thereof.