

**BUILDING STANDARDS COMMISSION**

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



January 27, 2011

Ms. Annie Murphy, Planning II  
Planning Department  
County of Santa Cruz  
701 Ocean Street, 4<sup>th</sup> Floor  
Santa Cruz, California 95060

Dear Ms. Annie Murphy:

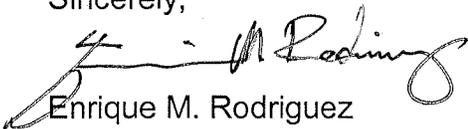
This letter is to acknowledge receipt on December 24, 2010 of the County of Santa Cruz submittal pertaining to Resolution No. 292-2010 with findings and is acceptable for filing. Per Health and Safety Code Section 17958.8 no modification or change to the California Building Standards Code shall become 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



# COUNTY OF SANTA CRUZ

## PLANNING DEPARTMENT

701 OCEAN STREET, 4<sup>TH</sup> FLOOR, SANTA CRUZ, CA 95060  
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123  
KATHLEEN MOLLOY PREVISICH, PLANNING DIRECTOR

December 22, 2010

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

Attn: Jim McGowan, Deputy Executive Director

Dear Mr. McGowan:

On November 16, 2010, following a duly noticed public hearing, the Board of Supervisors of the County of Santa Cruz enacted an ordinance adopting by reference the 2010 California Building Standards, also known as Title 24 of the California Code of Regulations. As permitted by Sections 18941.5 and 17958.7 of the Health and Safety Code, the Board of Supervisors also adopted amendments to several building standards in the 2010 California Building Code that establish more restrictive building standards for Santa Cruz County. As required by Section 17958 of the Health and Safety Code, each amendment is expressly marked with an appropriate finding explaining why the amendment is necessary because of local climatic, topographic, or geological conditions. In a resolution, the Board of Supervisors adopted the amendments to the building standards in the 2010 California Building Standards Code along with their express findings.

As required by State Law, Santa Cruz County is filing with your Commission a copy of the resolution of the Board of Supervisors adopting the amendments to the building standards in the 2010 California Building Standards Code along with their express findings (Attachment 1), and is also filing a copy of the Technical Amendments to the 2010 Building Standards Codes with their express findings (Attachment 2).

The ordinance adopting the 2010 California Building Standards and adopting local amendments to the State Codes will become effective locally on January 1<sup>st</sup>, 2011. Please contact us should you have any questions or concerns our local amendments to the State Codes, or with the express findings.

RECEIVED  
CALIFORNIA BUILDING  
STANDARDS COMMISSION  
DEC 24 A 10:59



Sincerely,

*Annie Murphy*

Annie Murphy

Planner II

(831) 454-3111

[pln400@co.santa-cruz.ca.us](mailto:pln400@co.santa-cruz.ca.us)

Attachments:

1. Resolution approving the amendments to the Building Standards Code with their express findings
2. Technical Amendments to the 2010 Building Standards Codes with their express findings



BEFORE THE BOARD OF SUPERVISORS  
OF THE COUNTY OF SANTA CRUZ, STATE OF CALIFORNIA

RESOLUTION NO. 292-2010

On the motion of Supervisor Pirie  
duly seconded by Supervisor Coonerty

the following is adopted:

BOARD OF SUPERVISORS RESOLUTION APPROVING THE AMENDMENTS TO THE BUILDING STANDARDS CODE, ALSO KNOWN AS TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS, WITH THEIR EXPRESS FINDINGS, FOR FILING WITH THE CALIFORNIA BUILDING STANDARDS COMMISSION, AS REQUIRED BY CALIFORNIA HEALTH AND SAFETY CODE SECTION 17958.7.

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WHEREAS, the State of California has adopted a new 2010 Building Standards Code, also known as Title 24 of the California Code of Regulations, which will become effective at the local government level on January 1, 2011; and

WHEREAS, the State allows local governments to amend State Building Standards with more restrictive building standards if the local government can make express findings that the amended building standards are necessary because of local climatic, geological, or topographical conditions and are more restrictive than the State Building Standards; and

WHEREAS, any amendments adopted by a local government are neither effective nor operative until copies of both the express findings and the amendments have been filed with the California Building Standards Commission; and

WHEREAS, it is necessary for the County of Santa Cruz to adopt amendments to the 2010 Building Standards Code; and

WHEREAS, for each of the amendments to the State Building Standards, express findings have been made that the amendments are appropriate and necessary due to local climatic, geological, or topographical conditions.

NOW, THEREFORE, BE IT RESOLVED AND ORDERED, that as part of the process of adopting the 2010 California Building Standards, the Board of Supervisors hereby adopts the amendments to the 2010 Building Standards Code, also known as Title 24 of the California Code of Regulations, and adopts the express findings for each amendment, as contained in Attachment 3, to be filed with the California Building Standards Commission.



Attachment 1

PASSED AND ADOPTED by the Board of Supervisors of the County of Santa Cruz, State of California, this 9th day of November, 2010 by the following vote:

AYES:	SUPERVISORS	Leopold, Pirie, Coonerty, Stone & Campos
NOES:	SUPERVISORS	None
ABSENT:	SUPERVISORS	None
ABSTAIN:	SUPERVISORS	None

**TONY CAMPOS**

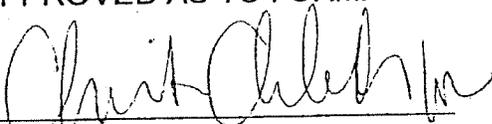
Chairperson of the Board of Supervisors

ATTEST:

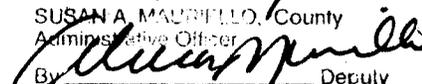
**TESS FITZGERALD**

Clerk of the Board of Supervisors

APPROVED AS TO FORM:

  
 \_\_\_\_\_  
 County Counsel

DISTRIBUTION: County Counsel  
Planning Department

STATE OF CALIFORNIA	)	SS
COUNTY OF SANTA CRUZ	)	
I, SUSAN A. MAURIELLO, County Administrative Officer and ex-officio Clerk of the Board of Supervisors of the County of Santa Cruz, State of California do hereby certify that the foregoing is a true and correct copy of the resolution passed and adopted by and entered in the minutes of the said board. In witness whereof I have hereunto set my hand and affixed the seal of the said Board on <u>November 10, 2010</u>		
SUSAN A. MAURIELLO, County Administrative Officer		
By		Deputy



## TECHNICAL AMENDMENTS TO THE 2010 BUILDING STANDARDS CODES WITH THEIR EXPRESS FINDINGS

**Key:** Underlined text represents an amendment to the 2010 Building Standard Code.

~~Strike-out text~~ is language being deleted from the 2010 Building Standard Code.

Text boxes with *italics* include the findings required for local amendments.

### I. AMENDMENTS TO THE 2010 CALIFORNIA BUILDING CODE

#### (a) Roof assemblies amendments.

(1) Section 1505.1 of the 2010 California Building Code is hereby amended as follows:

**1505.1 General.** Roof assemblies shall be divided into the classes defined below. Class A and B roof assemblies and roof coverings required to be listed by this Section shall be tested in accordance with ASTM E 108 or UL 790.

Table 1505.1a, shall be amended to read as follows:

TABLE 1505.1 a  
MINIMUM ROOF COVERING CLASSIFICATION FOR TYPES OF CONSTRUCTION

1A	1B	11A	11B	111A	111B	1V	VA	VB
B	B	B	<u>B C</u>	B	<u>B C</u>	B	B	<u>B C</u>

For SI: 1 ft = 304.8mm, 1 square foot = 0.0929m<sup>2</sup>.

a. Unless otherwise required in accordance with Chapter 7A.

(2) Section 1505.1.3 of the California Building Code shall be amended as follows:

**15.5.1.3 Roof coverings within all other areas.** The entire roof covering of every existing structure where more than 50% of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair, or replacement of the roof of every existing structure, shall be a fire retardant roof covering that is at least a Class B C.

*Finding: Because of the steep, environmentally constrained and remote topography of Santa Cruz County it is necessary to amend the requirements for roof coverings to eliminate Class C roofing to require more restrictive non-combustible materials.*

#### (b) Structural amendments

##### (1) Earthquake Loads amendment.

Section 1613 of the 2010 Building Code is hereby amended, by adding subsection 1613.8 to read as follows:

1613.8 ASCE 7, Section 12.8.7. Modify ASCE 7, Section 12.8.7 by amending Equation 12.8-16 as follows:

$$\Theta = P \times \Delta I / V \times h \times C_d$$

(12.8-16)

*Finding: This amendment is necessary due to local geology and seismic conditions. Results from studies after the 1994 Northridge earthquake indicated that much of the damage was attributed to lack of quality control during construction. The proposed amendment improves quality control during construction and therefore needs to be incorporated into the Code.*

## **(2) Special Inspections for Concrete Construction Amendment**

Section 1704.4 of the California Residential Code is hereby amended to read as follows:

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

Exceptions: Special inspections shall not be required for:

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

*Finding: This amendment is necessary due to local geology and seismic conditions. Results from studies after the 1994 Northridge earthquake indicated that much of the damage was attributed to lack of quality control during construction. The proposed amendment improves quality control during construction and therefore needs to be incorporated into the Code.*

## **(3) Concrete Amendment**

Section 1908.1.8 ACI 318 of the 2010 California Building Code shall be amended as follows:

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

- 22.10 – Plain concrete in structures assigned to seismic design category C, D, E or F.  
22.10.1 – Structures assigned to Seismic Design Category C, D, E, or F shall not have elements of structural plain concrete, except as follows:

~~Structural plain concrete basement, foundation or other walls below the base are permitted in detached one and two family dwellings three stories or less in height constructed with stud bearing walls. In dwellings assigned to seismic design category D or E, the height of the wall shall not exceed 8 feet (2438 mm), the thickness shall not be less than 7 ½ inches (190 mm), and the wall shall retain no more than 4 feet (1219 mm) of unbalanced fill. Walls shall have reinforcement in accordance with 22.6.6.5.~~

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

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

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

Exception:

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

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

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

*Finding:*

*Local Geological Conditions – The Santa Cruz County region is a densely populated area having buildings constructed over and near an array of fault systems capable of producing major earthquakes, including but not limited to the recent 1989 Loma Prieta Earthquake. The proposed modification to ensure that the concrete footings will be reinforced to help minimize damage to the foundation due to a seismic event.*

**(c) Shear wall amendments.**

**(1) Aspect ratios.**

Section 2306.3 of the California Building Code is amended as follows:

Gypsum wallboard and Portland cement plaster, along with footnote 2 are hereby deleted from reference Standard AF&PA SDPWS Table 4.3.4.

**(2) Shear walls sheathed with other materials.**

Section 2306.7 of the California Building Code is hereby amended so that the last sentence in this section reads as follows:

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

**(3) Allowable Shear.**

Table 2306.7 of the California Building Code is hereby deleted.

**(4) Bracing.**

Table 2308.12.4 is hereby amended to read as follows:

In footnotes 'b' and 'c' of Table 2308.12.4, delete all references to "gypsum board", "lath and plaster", "Portland cement plaster", and "gypsum sheathing boards".

**(5) Resistance to shear.**

Section 2505.1 is hereby deleted.

*Findings for amendments 12.10.215 (c) 1 through (c) 5 above:*

*Local Geological Conditions – The Santa Cruz County region is a densely populated area having buildings constructed over and near an array of fault systems capable of producing major earthquakes, including but not limited to the recent 1989 Loma Prieta Earthquake. Due to the experience that gypsum wall board, fiberboard, and gypsum plaster, and stucco did not perform well during seismic events in large numbers of buildings in this region and the increased risk associated with such a seismic failure, the proposed modification to have a higher minimum standard for braced wall panels need to be incorporated into the code to assure that new buildings and additions to existing buildings are designed and constructed in a manner that does not result in significant damage.*

**(d) Accessibility amendment - Width Standards for Doorways.**

Exception 7 of Section 1008.1.1 of Chapter 10 of the 2010 California Building Code is hereby amended to read as follows:

In other than Group R-1 occupancies, the minimum widths for interior egress doors within a dwelling unit or sleeping unit that is not required to be adaptable or accessible as specified in Chapter 11A or 11B, as applicable, shall be 30 inches clear width. If, and to the extent that, this Subsection is inconsistent with any provision of the California Building Code currently or hereafter adopted by the County of Santa Cruz, the more restrictive provisions shall prevail.

*Finding: Santa Cruz County is comprised of many areas with steep slopes and is subject to a variety of geologic hazards including flooding, storm surge, landsliding and earthquakes. The County contains several fault zones including the San Andreas, Butano, Zayante, Corralitos Complex, and San Gregorio. The Loma Prieta Earthquake of 1989 was centered in Santa Cruz County and caused widespread damage to structures. Based on these topographic and geologic features in Santa Cruz County and the need for the public--including those with mobility issues--to quickly exit structures from all exits, a minimum 30-inch width for doorways, hallways and stairways is necessary.*

**(e) Accessibility amendment - Alterations**

Title 24 California Code of Regulations (State Building Code) Part 2, Chapter 11B, Section 1134B.2 requires that building owners, property owners, and commercial landlords make buildings and facilities accessible to persons with disabilities when performing renovation, structural repair, alterations, and additions to existing buildings and facilities. The provisions of Section 1134B.2 also apply to alterations to portions of the facility that are outside areas serving the building, included but not limited to parking lots, sidewalks, and walkways. For the purposes of Section 1134B.2, slurry sealing, top dressing, overlaying, and restriping shall not be considered an alteration. However, repaving, reconstructing or replacing a parking lot shall constitute an alteration.

*Finding: The County's previous amendment has been modified to be consistent with the state Building Code regarding what would be considered an alteration that would trigger compliance with accessibility requirements for existing buildings.*

**(f) Existing Structures Amendment.** Sections 3401, 3402, 3403, 3404, 3405, 3407, 3408, and 3410 of Chapter 34, entitled "Existing Structures", of the 2010 California Building Code are hereby adopted in their entirety.

*Finding: Santa Cruz County is in a seismically active area and has areas subject to flooding. The provisions above from Chapter 34 are necessary to preserve the structural integrity of existing buildings within the County in the event of flooding or seismic activity. Adoption of these Sections will also ensure that the County remains eligible for FEMA funding in the event of a natural disaster.*

**(g) Swimming Pool enclosures amendment.**

**Section 3109—Swimming Pool Enclosures and Safety Devices**—of the California Building Code is hereby deleted in its entirety and replaced with Section 12.10.216 to read as follows:

(a) Scope. The provisions of this Section shall apply to the design and construction of barriers and entrapment avoidance devices for swimming pools, spas and hot tubs located on the premises of Group R, Division 3 Occupancies, and to pool design and construction, pool decks, and pool drainage and disposal.

1. Application to Facilities Regulated by Department of Social Services. This Section does not apply to any facility regulated by the State Department of Social Services even if the facility is also used as a private residence of the operator. Pool safety in those facilities shall be regulated pursuant to regulations adopted by the State Department of Social Services.

(b) Definitions. For the purpose of this Section, certain terms, words and phrases are defined as follows:

Aboveground/On-Ground Pool. See definition of "Swimming Pool."

Approved Safety Pool Cover. A manually or power-operated safety pool cover that meets all of the performance standards of the ASTM, in compliance with Standard F 1346-91

ANSI. American National Standards Institute.

ASME. The American Society of Mechanical Engineers.

ASTM. The American Society for Testing and Materials.

Barrier. A fence, wall, building wall or combination thereof that completely surrounds the swimming pool and obstructs access to the swimming pool.

Exit Alarm. A device or devices that make audible, continuous alarm sounds when any door or window that permits access from a residence to the pool area, that is without any intervening barrier, is opened or is left ajar.

Grade. The underlying surface, such as earth or a walking surface.

Hot Tub. See definition of "Spa, Nonself-Contained" and "Spa, Self-Contained."

In-ground Pool. See definition of "Swimming Pool."

Separation Fence. A barrier that separates all doors of a dwelling unit with direct access to a swimming pool from the swimming pool.

Spa, Nonself-Contained. A hydromassage pool or tub for recreational or therapeutic use, not located in health-care facilities, designed for immersion of users and usually having a filter, heater and motor-driven blower. It may be installed indoors or outdoors, on the ground or on a supporting structure, or in the ground or in a supporting structure. A nonself-contained spa is intended for recreational bathing and contains water over 18 inches (457 mm) deep.

Spa, Self-Contained. A continuous-duty appliance in which all control, water- heating and water-circulating equipment is an integral part of the product, located entirely under the spa

skirt. A self-contained spa is intended for recreational bathing and contains water over 18 inches (457 mm) deep.

Swimming Pool. Any structure intended for swimming or recreational bathing that contains water over 18 inches (457 mm) deep. This includes in-ground, aboveground and on-ground swimming pools, and fixed-in-place wading pools.

Swimming Pool, Indoor. A swimming pool that is totally contained within a residential structure and surrounded on all four sides by walls of said structure.

Swimming Pool, Outdoor. Any swimming pool that is not an indoor pool.

(c) Barrier Requirements for Outdoor Swimming Pools. An outdoor swimming pool shall be provided with a barrier that shall be installed, inspected and approved prior to plastering or filling with water. The barrier shall comply with the following:

1. Height of Barrier. The top of the barrier shall be at least 60 inches (1524 mm) above grade measured on the side of the barrier that faces away from the swimming pool.
2. Vertical Clearance. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier that faces away from the swimming pool.
3. Horizontal Members. When barriers have horizontal members spaced less than 45 inches (1143 mm) apart, measured between the tops, the horizontal members shall be placed on the pool side of the barrier.
4. Decorative Design Work. Any decorative design work on the side away from the swimming pool, such as protrusions, indentations, cutouts or other physical characteristics, that could serve as handholds or footholds, which renders the barrier easily climbable, is prohibited.
5. Openings. Openings in the barrier shall not allow passage of a 1<sup>3</sup>/<sub>4</sub>-inch-diameter (44.5 mm) sphere, except in the following circumstances:
  - i. When vertical spacing between such openings is 45 inches (1143 mm) or more, the opening size may be increased such that the passage of a 4-inch-diameter (102 mm) sphere is not allowed; or
  - ii. For fencing composed of vertical and horizontal members, the spacing between vertical members may be increased up to 4 inches (102 mm) when the distance between the tops of horizontal members is 45 inches (1143 mm) or more.
6. Gage of Chain Link Fence. Chain link fences used as the barrier shall not be less than 11 gage.
7. Mesh Size of Chain Link Fence. Maximum mesh size for chain link fences shall be a 2.25 inch square (57 mm square) unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to no more than 1.75 inches (44 mm).
8. Access gates. Access gates shall comply with the requirements of subsections 12.10.216(c)1 through 12.10.216(c)7 in addition to the following:
  - i. Pedestrian access gates shall be self-closing and have a self-latching device;
  - ii. Where the release mechanism of the self-latching device is located less than 60 inches (1524 mm) from the bottom of the gate:

- A. the release mechanism shall be located on the pool side of the barrier at least 3 inches (76 mm) below the top of the gate, and
  - B. the gate and barrier shall have no opening greater than ½ inch (12.7 mm) within 18 inches (457) of the release mechanism.
  - iii. Pedestrian gates shall swing away from the pool;
  - iv. Any gates other than pedestrian access gates shall be equipped with lockable hardware or padlocks and shall remain locked at all times when not in use.
9. Wall as Part of Barrier. Where a wall of a Group R, Division 3 Occupancy dwelling unit serves as part of the barrier and contains door or window openings between the dwelling unit and the outdoor swimming pool that provide direct access to the pool, a separation fence meeting the requirements of subsections 12.10.216(a) through 12.10.216(c)8 shall be provided, except when the Building Official approves one of the following alternatives:
- i. Self-closing and self-latching devices installed on all doors with direct access to the pool with the release mechanism located a minimum of 60 inches (1524 mm) above the floor; or
  - ii. An exit alarm installed on all doors and windows with direct access to the pool. The alarm shall sound continuously within seven seconds after the door or window and its screen, if present, are opened, and be capable of providing a sound pressure level of not less than 85 dBA when measured indoors at 10 feet (3048 mm). The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as a touchpad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last no longer than 15 seconds. The deactivation switch shall be located at least 54 inches (1372 mm) above the threshold of the door or window. Exit alarms may be battery operated or may be connected to the electrical wiring of the building; or
  - iii. Other means of protection, such as an approved safety pool cover, may be acceptable so long as the degree of protection afforded is not less than that afforded by any of the devices described above.
10. Aboveground Pool as Part of Barrier. Where an aboveground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then:
- i. The ladder or steps shall be capable of being secured, locked or removed to prevent access; or
  - ii. The ladder or steps shall be a barrier that meets the requirements of subsections 12.10.216(c)1 through 12.10.216(c)8..
  - iii. When the ladder or steps are secured, locked or removed, any openings created shall be protected by a barrier complying with subsections 12.10.216(c)1 through 12.10.216(c)8.

(d) Barrier Requirements for Indoor Swimming Pools. For an indoor swimming pool, protection shall comply with the requirements of subsection 12.10.216(c)9.

(e) Barrier Requirements for Spas and Hot Tubs. For a nonself-contained and self-contained spa or hot tub, protection shall comply with the requirements of c, except in the following circumstance:

1. A self-contained spa or hot tub equipped with a listed safety cover.

(f) Entrapment Avoidance. Whenever a building permit is issued for the construction of a new swimming pool or spa, the pool or spa shall meet all of the following requirements:

1. Suction outlet. The suction outlet of the pool or spa for which the permit is issued shall be equipped to provide circulation throughout the pool or spa, to include:
  - i. The swimming pool or spa shall have at least two circulation drains per pump that shall be hydraulically balanced and symmetrically plumbed through one or more "T" fittings, and that are separated by a distance of at least three feet in any dimension between the drains;
  - ii. Suction outlets that are less than 12 inches (306 mm) across shall be covered with anti-entrapment grates, as specified in the ASME/ANSI Standard A 112.19.8, that cannot be removed except with the use of tools. Slots or openings in the grates or similar protective devices shall be of a shape, area, and arrangement that would prevent physical entrapment and would not pose any suction hazard to bathers.
2. Atmospheric Vacuum Relief System. All pool and spa single- or multiple-outlet circulation systems shall be equipped with an atmospheric vacuum relief should grate covers located therein become missing or broken. Such vacuum relief systems shall include at least one approved or engineered method of the type specified herein, as follows:
  - i. Safety vacuum release systems conforming to ASME A 112.19.17; or
  - ii. Approved gravity drainage system.
3. Pool Cleaner Fittings. Where provided, vacuum or pressure cleaner fitting(s) shall be located in an accessible position(s) at least 6 inches (152 mm) and not greater than 12 inches (305 mm) below the minimum operational water level or as an attachment to the skimmer(s).
4. Additional Backup Safety System. Any backup safety system that an owner of a new swimming pool or spa may choose to install in addition to the requirements set forth in these subsections shall meet the standards as published in the document, "Guidelines for Entrapment Hazards: Making Pools and Spas Safer," Publication Number 363, March 2005, United States Consumer Product Safety Commission.
5. Upgrading Required. Whenever a building permit is issued for the remodel or modification of an existing swimming pool, spa or hot tub, the permit shall require that the suction outlet of the existing swimming pool, spa or hot tub be upgraded so as to be equipped with an anti-entrapment cover meeting current standards of the ASTM or the ASME.

(g) Applicability of Provisions.

1. If Built or Erected Prior to August 14, 1992. Any property owner of a residential pool, spa or hot tub built or erected prior to August 14, 1992 shall:
  - i. Comply with the current barrier regulations found in this Section, including, but not limited to, obtaining any required permits;
  - ii. The barrier shall be maintained in compliant condition;
  - iii. Prior to the sale of residential property containing a swimming pool, spa or hot tub, the owner shall provide the buyer with a written certification, prepared by the Building Official or a certified home inspector, of compliance with the barrier requirements of this Section.

2. If Built or Erected On or After August 14, 1992. Any property owner of a residential pool, spa or hot tub built or erected on or after August 14, 1992 with a valid finaled building permit shall:
  - i. Maintain the pool, spa or hot tub in compliance with the Code requirements in effect when constructed or erected with the exception of 12.10.216 (g) 2 ii;
  - ii. Notwithstanding its compliance with the Code requirements in effect when constructed or erected, the owner of a residential swimming pool without a barrier between the residence and the pool shall comply with the barrier regulations in effect on January 1, 2007 including, but not limited to, obtaining any required permits;
  - iii. Prior to the sale of residential property containing a swimming pool, spa or hot tub, the owner shall provide the buyer with a written certification, prepared by the Building Official or a certified home inspector, of compliance with the barrier requirements in effect when constructed or erected, with the exception of complying with subsection 12.10.216(g)2ii if there is no barrier between the residence and the pool.

(h) Pool Design and Construction.

3. General. Pool design and construction shall be in accordance with accepted engineering practice, shall be in conformity with applicable provisions of the adopted building, electrical, plumbing, and mechanical codes, and shall be structurally suitable for the soil, topographic, and geologic conditions prevailing at the construction site.
4. Expansive Soil Design. Pools constructed below grade shall be designed on the assumption that their construction is to be in an area of moderately expansive soil having an expansion index of 51-90 and an equivalent fluid pressure of not less than 45 pounds per cubic foot (45 p.c.f). Where tests indicate that soils at a pool site are non-expansive or have low expansion characteristics from the ground surface to the full depth of the pool, structural design may be based on an equivalent fluid pressure not less than 30 p.c.f.

In highly expansive soils having an expansion index of 91-130, pools shall be designed for not less than 60 p.c.f. equivalent fluid pressure. In very highly expansive soils having an expansion index over 130, pool design shall be subject to special requirements based on a site investigation, soil testing, and engineering analysis by a registered civil engineer to determine appropriate design parameters for the site.
5. Hydrostatic Uplift. In areas of anticipated high water table or moderate to highly expansive soil and approved hydrostatic relief system or device shall be installed.
6. Thermal Protection for Plastic Piping. Between the inlet of pool water heating equipment and any plastic water piping connected thereto, a check valve shall be installed to prevent thermal damage to such piping due to backflow. When rapid or high-rate filters are employed a check valve may be omitted. Between the outlet of pool heating equipment and any plastic water piping connected thereto, not less than five feet of approved metal pipe shall be installed for the purpose of dissipating heat.

(i) Decks

1. General. A deck shall be provided around below-grade swimming pools except when special engineering design is furnished which indicates that such deck is not necessary for the purpose of maintaining the structural integrity of the pool and/or for controlling surface water and moisture content in the soil adjacent to the pool. Decks shall not be required for spas and hot tubs.

2. Deck Design and Construction. Required decks shall be constructed of concrete or other approved impervious material and shall be sloped to provide positive drainage away from the perimeter of the pool. Except as provided below, decks shall have a minimum width of four feet and shall be at least 3-1/2 inches in thickness. Reinforcement shall be #3 bars spaced not over 24 inches on center each way, or equivalent reinforcing.

Approved joints shall be provided in the deck at corners, at maximum 10-foot intervals, and wherever necessary in order to control cracking, to allow for differential movement, and to minimize damage to the deck from such movement should it occur.

Joints in decks and coping shall be made watertight with an approved permanent resilient sealant.

3. Cutoff Walls. At the outer perimeter of pool decks a cutoff wall of approved Material shall be installed below-grade to a depth of at least 15 inches so as to form a permanent and effective vertical moisture barrier.

i. Exception: A cutoff wall may be omitted when a deck at least six feet wide is installed.

ii. Exception: Decks less than four feet in width may be installed provided that the required cutoff wall is increased in depth beyond the minimum by an amount equal to the reduction in deck width.

4. Pre-saturation, Highly Expansive Soils. When the soil below a deck has an expansion index of 91 or greater it shall be saturated with water to a depth of at least 18 inches prior to installation of the deck.

(j) Drainage and Disposal.

1. Surface water. Surface water from pool decks shall be collected and conducted through non-corrosive devices to a street, storm drain, or other approved watercourse or disposal area.

2. Waste water. Pool waste water shall be disposed of in accordance with the requirements of Environmental Health.

3. Drywells. Drywells shall not be employed for pool wastewater disposal except when specifically approved for the purpose and when it has been determined that such installation is not likely to have an adverse effect on the structural stability of the pool or other structures on the site. The Building Official may require a percolation test, soils report, and/or geological report to make such a determination.

*Findings:*

1. Section 3109 of the CBC contains two provisions that allow local jurisdictions to have alternative standards:
  - a. 3109.4.4.2.5—“Any ordinance governing child access to pools adopted by a political subdivision on or before January 1, 1997, is presumed to afford protection that is equal to or greater than that afforded by any of the devices set forth in Items 1-4, inclusive.” Santa Cruz County has had such an ordinance since 1970.
  - b. 3109.4.4.5.3—Exempt facilities. “Any pool within the jurisdiction of any political subdivision that adopts an ordinance for swimming pool safety that includes requirements that are at least as stringent as this division.” Santa Cruz County, as part of adopting this ordinance, has revised our existing ordinance to include those requirements found in this Section that are more stringent than our existing regulations.
2. Section 3109.5 of the CBC does not include the language of AB 2977 (“Swimming Pool and Spa Safety Act of 2006”), previously incorporated by Santa Cruz County, or AB 382. The text of these laws is included in this ordinance as well as the provisions of 3109.5.2 and 3109.5.4 that are more restrictive.

**(h) Grading Amendment – Appendix J**

Appendix J is adopted in its entirety, and is amended as follows.

**SECTION J101  
GRADING**

**J101.1 Scope.** The provisions of this Appendix chapter apply to grading, excavation and earthwork construction, including fills and embankments, in the context of a Building Permit. Where conflicts occur between the technical requirements of this chapter and the soils or engineering geology report, the approved soils or engineering geology report shall govern. Where conflicts occur between this Appendix and the County Grading Regulations or Erosion Control Ordinance, the Code section that is more restrictive shall apply.

**J101.1.1** The following sections of Appendix J have been modified to refer to the complementary sections of the County Grading Regulations (Chapter 16.20) and Erosion Control ordinance (Chapter 16.22). All other sections of County Code Chapters 16.20 and 16.22 not specifically cited in this Appendix are incorporated as a part of this Appendix.

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category.*

**J101.2 Flood hazard areas.** The provisions of this chapter shall not apply to grading, excavation and earthwork construction, including fills and embankments, in floodways within flood hazard areas established in Section 1612.3 or in flood hazard areas where design flood elevations are specified but floodways have not been designated, unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with

standard engineering practice that the proposed work will not result in any increase in the level of the base flood.

## SECTION J102 DEFINITIONS

**J102.1 Definitions.** For the purposes of this appendix chapter, the terms, phrases and words listed used in this Section and their derivatives shall have the indicated meanings as indicated in this Section and in County Code Section 16.20.030.

~~**BENCH.** A relatively level step excavated into earth material on which fill is to be placed.~~

~~**COMPACTION.** The densification of a fill by mechanical means.~~

~~**CUT.** See "Excavation".~~

~~**EROSION.** The wearing away of the ground surface as a result of the movement of wind, water, or ice.~~

~~**EXCAVATION.** The removal of earth material by artificial means, also referred to as a cut.~~

~~**FILL.** Deposition of earth materials by artificial means.~~

~~**GRADE.** The vertical location of the ground surface.~~

~~**GRADE, EXISTING.** The grade prior to grading.~~

~~**GRADE, FINISHED.** The grade of the site at the conclusion of all grading efforts.~~

~~**GRADING.** An excavation or fill or combination thereof.~~

~~**KEY.** A compacted fill placed in a trench excavated in earth material beneath the toe of a slope.~~

~~**SLOPE.** An inclined ground surface the inclination of which is expressed as a ratio of horizontal distance to vertical distance.~~

~~**TERRACE.** A relatively level step constructed in the face of a graded slope for drainage and maintenance purposes.~~

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category.*

*All of the deleted definitions in Appendix J are defined in the Grading Ordinance.*

## PERMITS REQUIRED

**J103.1 Permits required.** Except as exempted in Section J103.2, no grading shall be performed without first having obtained a permit therefore from the Planning Director or Building Official. A grading permit does not include the construction of retaining walls or other structures. A separate approval shall be required for each site and shall be obtained as specified in County Code Section 16.20.040 – “Approval Required”.

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. Santa Cruz County processes its Grading Permits in conjunction with building permits but under a different administrative process.*

**J103.2 Exemptions.** See County Code Section 16.20.050 – “Exemptions”. A grading permit shall not be required for the following:

- ~~1. Grading in an isolated, self-contained area, provided there is no danger to the public, and that such grading will not adversely affect adjoining properties.~~
- ~~2. Excavation for construction of a structure permitted under this code.~~
- ~~3. Cemetery graves.~~
- ~~4. Refuse disposal sites controlled by other regulations.~~
- ~~5. Excavations for wells, or trenches for utilities.~~
- ~~6. Mining, quarrying, excavating, processing or stockpiling rock, sand, gravel, aggregate, or clay controlled by other regulations, provided such operations do not affect the lateral support of, or significantly increase stresses in, soil on adjoining properties.~~
- ~~7. Exploratory excavations performed under the direction of a registered design professional~~

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

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented a list of exemptions in local Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than exemptions in of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category.*

## SECTION J104

## PERMIT APPLICATION AND SUBMITTALS

**J104.1 Submittal requirements.** In addition to the provisions of Section 105.3 Appendix Chapter 1, ~~the applicant shall state the estimated quantities of excavation and fill. the~~ Grading Permit application shall include all of the materials specified in County Code Section 16.20.060 – “Application”.

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category. Our required application materials are more rigorous than those deleted in this subsection.*

**J104.2 Site plan requirements.** In addition to the provisions of Section 106, Appendix Chapter 1, ~~a grading plan shall show the existing grade and finished grade in contour intervals of sufficient clarity to indicate the nature and extent of the work and show in detail that it complies with the requirements of this code. The plans shall show the existing grade on adjoining properties in sufficient detail to identify how grade changes will conform to the requirements of this code. See Section J104.1.~~

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. We have, therefore, deleted sections of Appendix J that fall within this category. Our required application materials are much more rigorous than those deleted in this subsection.*

**J104.3 Soils Geotechnical Report.** ~~See Section J104.1. A soils report prepared by registered design professionals shall be provided which shall identify the nature and distribution of existing soils; conclusions and recommendations for grading procedures; soil design criteria for any structures or embankments required to accomplish the proposed grading; and, where necessary, slope stability studies, and recommendations and conclusions regarding site geology. In addition, the report shall contain the following:~~

1. Soil design criteria for any structures or embankments required to accomplish the proposed grading; and
2. Where necessary, slope stability studies, and recommendations and conclusions regarding site geology.

**Exception:** A soils report is not required where the Building Official determines that the nature of the work applied for is such that a report is not necessary.

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category. Soils reports are required except when deemed unnecessary by the Planning Director or Building Official.*

**J104.4 Liquefaction study.** For sites with mapped maximum considered earthquake spectral response accelerations at short periods ( $S_s$ ) greater than 0.5g as determined by Section 1613, a study of the liquefaction potential of the site shall be provided, and the recommendations incorporated in the plans.

**Exception:** A liquefaction study is not required where the Building Official or County Geologist determines from established local data that the liquefaction potential is low.

## SECTION J105

### INSPECTION

**J105.1 General.** Inspections shall be governed by Section 109, Chapter 1, Division II of this Code, County Code Section 16.20.200, and as indicated herein.

**J105.2 Special and Supplemental inspections.** The special inspection requirements of Section 1704.7 shall apply to work performed under a grading permit where required by the Building Official.

## SECTION J106

### EXCAVATIONS

**J106.1 Maximum slope.** See County Code Section 16.20.140 - "Design Standards for Excavations". The slope of cut surfaces shall be no steeper than is safe for the intended use, and shall be no steeper than 2 units horizontal to 1 unit vertical (50 percent) unless the owner or authorized agent furnishes a soils report justifying a steeper slope.

**Exceptions:**

1. A cut surface may be at a slope of 1.5 horizontal to 1 vertical (67 percent) provided that all the following are met:
  - 1.1. It is not intended to support structures or surcharges.
  - 1.2. It is adequately protected against erosion.
  - 1.3. It is no more than 8 feet (2438 mm) in height.
  - 1.4. It is approved by the Building Official.

- 1.5. Groundwater is not encountered.
2. A cut surface in bedrock shall be permitted to be at a slope of 1 unit horizontal to 1 unit vertical (100 percent slope), if approved by the Building Official or County Geologist with appropriate geotechnical and, if required by the Building Official, engineering geology reports.

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, The County has made this section more stringent by requiring substantiation through the use of geotechnical and engineering geology reports.*

## SECTION J107 FILLS

**J107.1 General.** Unless otherwise recommended in the soils geotechnical report, fills shall conform to provisions of this Section and with County Code Section 16.20.150 - "Design Standards for Fills".

**J107.2 Surface preparation.** See County Code Section 16.20.150 - "Design Standards for Fills".—The ground surface shall be prepared to receive fill by removing vegetation, topsoil and other unsuitable materials, and scarifying the ground to provide a bond with the fill material.

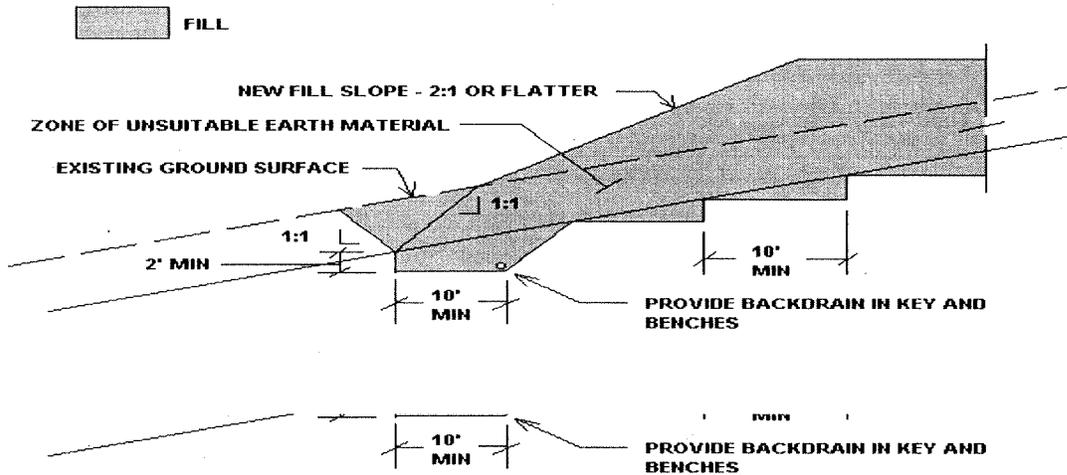
**J107.3 Benching.** Where existing grade is at a slope steeper than 5 horizontal to 1 vertical (20 percent) and the depth of the fill exceeds 5 feet (1524 mm) benching shall be provided in accordance with Figure J107.3. A key shall be provided which is at least 10 feet (3048 mm) in width and 2 feet (610 mm) in depth.

**J107.4 Fill material.** ~~Fill material shall not include organic, frozen or other deleterious materials. No rock or similar irreducible material greater than 12 inches (305 mm) in any dimension shall be included in fills.~~ See County Code Section 16.20.150 - "Design Standards for Fills".

**J107.5 Compaction.** All fill material shall be compacted to 90 percent of maximum density as determined by ASTM D 1557, Modified Proctor, in lifts not exceeding 12 inches (305 mm) in depth.

**J107.6 Maximum slope.** ~~The slope of fill surfaces shall be no steeper than is safe for the intended use. Fill slopes steeper than 2 horizontal to 1 vertical (50 percent) shall be justified by soils reports or engineering data.~~ See County Code Section 16.20.150 - "Design Standards for Fills".

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category. In this case the corresponding language in the Grading Ordinance establishes a higher standard.*

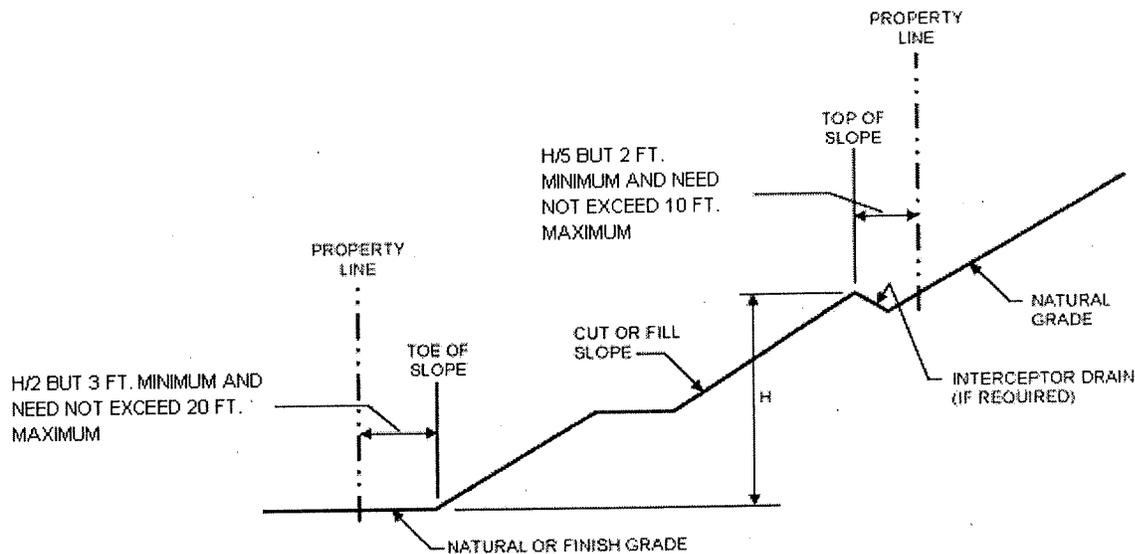


**FIGURE J107.3**  
**KEY AND BENCHING DETAILS**

**SECTION J108**  
**SETBACKS**

**J108.1 General.** Cut and fill slopes shall be set back from the property lines in accordance with this section. Setback dimensions shall be horizontal distances measured perpendicular to the property line and shall be as shown in Figure J108.1, unless substantiating data is submitted justifying reduced setbacks

**J108.2 Top of slope.** The setback at the top of a cut slope shall not be less than that shown in Figure J108.1, or than is required to accommodate any required interceptor drains, whichever is greater.



**FIGURE J108.1  
DRAINAGE SETBACK DIMENSIONS**

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. In this figure, The County has changed the dimensions to reflect a more rigorous application of setbacks.*

**J108.3 Slope Protection.** Where required to protect adjacent properties at the toe of a slope from adverse effects of the grading, additional protection, approved by the Building Official, shall be included. Such protection may include but shall not be limited to:

1. Setbacks greater than those required by Figure J108.1.
2. Provisions for retaining walls or similar construction.
3. Erosion protection of the fill slopes.
4. Provision for the control of surface waters.

**SECTION J109  
DRAINAGE AND TERRACING**

**J109.1 General.** Unless otherwise recommended by a registered design professional, drainage facilities and terracing shall be provided in accordance with the requirements of this section and County Code Section 16.20.170 – “Design Standards for Drainage Facilities and Terraces”.

**Exception:** ~~Drainage facilities and terracing need not be provided where the ground slope is not steeper than 3 horizontal to 1 vertical (33 percent).~~

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category.*

**J109.2 Terraces.** Terraces at least 6 feet (1829 mm) in width shall be established at not more than 30-foot (9144 mm) vertical intervals on all cut or fill slopes to control surface drainage and debris. Suitable access shall be provided to allow for cleaning and maintenance.

Where more than two terraces are required, one terrace, located at approximately mid-height, shall be at least 12 feet (3658 mm) in width.

Swales or ditches shall be provided on terraces. They shall have a minimum gradient of 20 horizontal to 1 vertical (5 percent) and shall be paved with concrete not less than 3 inches (76 mm) in thickness, or with other materials suitable to the application. They shall have a minimum depth of 12 inches (305 mm) and a minimum width of 5 feet (1524 mm).

A single run of swale or ditch shall not collect runoff from a tributary area exceeding 13,500 square feet (1256 m<sup>2</sup>) (projected) without discharging into a down drain.

**J109.3 Interceptor drains.** Interceptor drains shall be installed along the top of cut slopes receiving drainage from a tributary width greater than 40 feet (12192 mm), measured horizontally. They shall have a minimum depth of 1 foot (305 mm) and a minimum width of 3 feet (915 mm). The slope shall be approved by the Building Official, but shall not be less than 50 horizontal to 1 vertical (2 percent). The drain shall be paved with concrete not less than 3 inches (76 mm) in thickness, or by other materials suitable to the application and reinforced as required for drainage terraces. Discharge from the drain shall be accomplished in a manner to prevent erosion and shall be approved by the Building Official.

**J109.4 Drainage across property lines.** Drainage across property lines shall not exceed that which existed prior to grading. Excess or concentrated drainage shall be contained on site or directed to an approved drainage facility. Erosion of the ground in the area of discharge shall be prevented by installation of nonerosive down drains or other devices.

## SECTION J110 EROSION CONTROL

**J110.1 General.** See County Code Chapter 16.22 – “Erosion Control”. The faces of cut and fill slopes shall be prepared and maintained to control erosion. This control shall be permitted to consist of effective planting.

**Exception:** Erosion control measures need not be provided on cut slopes not subject to erosion due to the erosion-resistant character of the materials.

Erosion control for the slopes shall be installed as soon as practicable and prior to calling for final inspection.

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category. In this case, the County’s Erosion Control Ordinance is much more stringent and specific in application than the Appendix.*

**SECTION J111**  
**REFERENCED STANDARDS**

ASTM	Test Method for Laboratory
D	Compaction Characteristics of Soil
1557-	Using Modified Effort [56,000 ft-lb/ft <sup>3</sup>
e01	(2,700 kN-m/m <sup>3</sup> )

J107.6 5

## (i) Appendix C amendment

**Allowable height and area amendment.**

**Section C102.2— One-story unlimited area** - of Appendix C (Group U – Agricultural Buildings) of the California Building Code is hereby amended to read as follows:

**C102.2 One-story unlimited area.** The area of a one-story Group U agricultural building shall not be limited if the building is surrounded and adjoined by public ways or yards not less than 60 feet (18 288mm) in width.

**Exception:** The area of a one-story Group U, Division 3 Occupancy greenhouse which is used exclusively for growing flowers, plants, fruits, vegetables, shrubs, trees, or similar horticultural produce shall not be limited if the setback from all properties zoned for primary agricultural use to the building, or the setback between horticultural buildings located on the same property, is not less than twenty (20) feet and if such setback area is maintained open and accessible for fire fighting purposes. Setbacks between greenhouses as described above and an adjacent property with a zoning designation that is not for primary agricultural use shall not qualify for this exception. In no case shall the distance from property lines be less than that required by zoning regulations. The maximum travel distance to an exit may be increased by 100 feet if the building or structure is provided with an approved fire sprinkler system.

*Finding: The climatic conditions of Santa Cruz County, especially the mild winters and summers, are uniquely conducive to the raising specific agricultural crops, such as berries, brussel sprouts and lettuces. The climatic conditions are also uniquely conducive to the raising of flowers, which must be grown in greenhouses. Conversely, these same climatic conditions have also led to increased population in the area, resulting in increased pressure to convert agricultural land to residential use. Due to these climatic conditions, agricultural land has become more scarce and costly, and it is necessary to allow larger horticultural greenhouses with reduced setbacks between agricultural parcels, and between horticultural buildings located on the same property, in order to allow more farmland to remain in production.*

## II. AMENDMENTS TO THE 2010 CALIFORNIA RESIDENTIAL CODE

### (a) Flood-Resistant Construction Amendments

1. **Protection of Adjacent Properties amendment.** Section R322.1.11 is hereby added to Section R322 of the 2010 California Residential Code, to read as follows:

**R322.1.11 Protection of Adjacent Properties.** Construction in an A or V Zone shall not cause damage to adjacent properties. If requested, information from a registered design professional shall be submitted with supporting information that adjacent properties will not be damaged.

2. **Elevation Certificate amendment.** Section R322.2.4 is hereby added to Section R322 of the 2010 California Residential Code, to read as follows:

**R322.2.4 Elevation Certificate.** Prior to receiving a final inspection for all new and substantially improved structures, an Elevation Certificate (FEMA Form 81-31 Mar 09 or most recent update) shall be submitted to the Planning Department. An Elevation Certificate must indicate compliance with applicable FEMA regulations.

3. **Placement of Fill amendment.** Section R322.2.5 is hereby added to Section R322 of the 2010 California Residential Code, to read as follows:

**322.2.5 Placement of Fill.** A variation to 16.10.070 (f) 7 of the County Code is allowed to place more than 50 cubic yards of fill in the flood fringe if: (i) an equal volume of material (soil) is taken out of the flood fringe on the same or immediately adjacent property, (ii) only the minimum amount of fill necessary is placed and the building site is raised a minimum of 1 foot above the Base Flood Elevation, and (iii) a civil engineered grading plan (with supporting engineering documentation) demonstrates that both fill and related excavations are protected from stream erosion, and that there are no cumulative or other adverse impacts. The applicant must apply for and receive a "Letter of Map Revision – Fill" (LOMR-F) from FEMA before the final inspection of the residence. The approved copy of the LOMR-F must be supplied to the Planning Department.

4. **Location and site preparation amendment.** Section R322.3.1 of the 2010 California Residential Code is hereby amended to read as follows:

**R322.3.1 Location and site preparation.**

1. New buildings and buildings that are determined to be substantially improved pursuant to Section R105.3.1, shall be located landward of the reach of mean high tide.
2. For any alteration of sand dunes and mangrove stands the building official shall require submission of an engineering analysis which demonstrates that the proposed alteration will not increase potential for flood damage or damage to adjacent properties.
3. For existing structures located within the reach of mean high tide, no alterations shall be allowed in the seaward direction.

5. **Construction documents amendment.** Section R322.3.6 of the 2010 California Residential Code is hereby amended to read as follows:

**R322.3.6 Construction documents.** The construction documents shall include documentation that is prepared and sealed by a registered design professional that the design and methods of construction to be used meet the applicable criteria of this section. Santa Cruz County Form "V Zone Cert 2010" shall be used for this purpose.

6. **Final Documents amendment.** Section R322.3.7 is hereby added to Section R322 of the 2010 California Residential Code, to read as follows:

R322.3.7 Final Documents. Prior to receiving a final inspection for all new and substantially improved structures, the following documents shall be submitted to the Planning Department.

1. An Elevation Certificate (FEMA Form 81-31 Mar 09 or most recent update).
2. A Final V-Zone Certificate (Santa Cruz County Form "Final V Zone Cert 2010").

*Finding for amendments (a)1 through (a)6 above: These sections were modified to address special flood resistant construction in areas of the County subject to flood hazards, to protect life, health and safety since many structures in the County currently exist in floodplains, floodways and coastal wave run-up zones. The sections have been modified to provide more clarity on what is required in flood hazard areas and to be consistent with FEMA requirements.*

**(b) Sound Transmission Amendment.**

Section R329 is hereby added to the Residential Building Code, to read as follows:

R329 Sound Transmission. Section 1207 of the California Building Code, relating to sound transmission, shall apply to attached dwelling units.

*Finding: The provisions of the California Residential Code are being amended to clarify that sound transmission requirements in the CBC apply to attached dwellings.*

**(c) Grading Amendment.** Section R329.1 shall be added to Chapter 3 of the 2010 Residential Building Code, to read as follows:

R329.1 Grading. Grading shall be in accordance with the provisions of Appendix J of the 2010 California Building Code, as amended by Section 12.10.217 of this Chapter.

*Finding: Due to the topography and geology in the County, many structures constructed under the Residential Code will require extensive grading. This section has been added for consistency with the Building Code and County Grading Ordinance and to ensure that grading is performed in a manner that provides for the health and safety of the residents of the County.*

**(d) Soils Reports/Geotechnical Investigations Amendments.**

(1) **Soils Reports/Geotechnical Investigations amendment.** Section 401.4 of the Residential Building Code shall be amended to read as follows:

A Soils Report or Geotechnical Investigation shall be required as per Section 1803 of the California Building Code.

**Exceptions:** The Building Official shall be permitted to waive the requirement for a geotechnical investigation where satisfactory data or information is available that demonstrates that an investigation is not necessary; however, a report will be required for projects involving soils that are expansive, compressible, shifting, collapsible, alluvial, or undocumented fill; or for projects with conditions or locations that involve landsliding, debris flows, ridge top shattering, shallow groundwater, adverse drainage conditions, coastal bluff, FEMA floodplain, or on or adjacent to slopes in excess of 30%.

(2) **Geotechnical Report amendment.** Section 401.4.1 of the Residential Building Code shall be amended to read as follows:

**R401.4.1 Geotechnical Report.** When a geotechnical report is not required, the load bearing values in Table R401.4.1 shall be assumed.

*Finding: This section was modified since Santa Cruz County has varying geology, topography, and soils that can negatively affect the health and safety for the occupants of structures if not properly considered. This section was also modified for consistency with the Building Code.*

(3) **Compressible or shifting soil amendment.** Section 401.4.2 of the Residential Building Code shall be amended to read as follows:

**R401.4.2 Compressible or shifting soil.** Instead of a complete geotechnical investigation, when top or subsoils are compressible or shifting, they shall be removed to a depth and width recommended by a soils engineer, or mitigated by alternative methods recommended by a soils engineer.

*Finding: This section was modified since the County has numerous areas that contain soils that are compressible or shifting and can cause extensive damage to structures and affect the health and safety of the occupants. An individual who is not trained identify these soils will not know how to properly mitigate the problem. Additionally, the original language in this section doesn't properly address how to deal with compressible or shifting soils. Removal of and construction on these types of soils should therefore be done under the oversight of a soils engineer.*

(e) Seismic Amendments.

(1) **Seismic reinforcing amendment.** Section R403.1.3 of the 2010 California Residential Code shall be amended to read as follows:

Concrete footings located in Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub>, as established in Table R301.2(1), shall have minimum reinforcement of at least two continuous longitudinal reinforcing bars not smaller than No. 4 bars. Bottom reinforcement shall be located a minimum of 3 inches (76 mm) clear from the bottom of the footing.

In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> where a construction joint is created between a concrete footing and a stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing, have a standard hook and extend a minimum of 14 inches (357 mm) into the stem wall.

In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> where a grouted masonry stem wall is supported on a concrete footing and stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing and have a standard hook.

In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> masonry stem walls without solid grout and vertical reinforcing are not permitted.

**Exception:** In detached one- and two-family dwellings which are three stories or less in height and constructed with stud bearing walls, isolated plain concrete footings supporting columns or pedestals are permitted.

*Finding:*

*Local Geological Conditions – The Santa Cruz County 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 1989 Loma Prieta Earthquake. The proposed modification to ensure that the concrete footings will be reinforced to help minimize damage to the foundation due to a seismic event.*

(2) **Seismic design methods.** Section R602.10.2.1 and Table R602.10.1.2(2) of the 2010 California Residential Code shall be amended as follows:

(i) Add a new subsection R602.10.2.1.1, to read:

**R602.10.2.1.1 Limits on methods GB and PCP.** In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub>, and D<sub>2</sub>, Method GB is not permitted for use as intermittent braced wall panels, but gypsum board is permitted to be installed when required by this Section to be placed on the opposite side of the studs from other types of braced wall panel sheathing. In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub>, and D<sub>2</sub>, the use of Method PCP, DWB, PBS, HPS and SFB is limited to one-story single family dwellings or the top story of two-story single family dwellings, and accessory structures.

(ii) Add a new footnote "d" to the end of CRC Table R602.10.1.2(2), to read:

**TABLE R602.10.1.2(2)<sup>a,b,c,d</sup>**

d. In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub>, and D<sub>2</sub>, Method GB is not permitted and the use of Method PCP, DWB, PBS, HPS and SFB is limited to one-story single family dwellings or the top story of two-story single family dwellings, and accessory structures.

*Finding: Local geological conditions- The Santa Cruz County region is a densely populated area having buildings constructed over and near an array of fault systems capable of producing major earthquakes, including but not limited to the recent 1989 Loma Prieta Earthquake. The proposed amendment addresses the problem of poor performance and/or low shear values of gypsum wallboard and Portland cement plaster, diagonal wall panels, fiberboard siding, and hardboard panel siding as wall bracing materials in high seismic areas. 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 of these bracing materials that were observed in 1994 Northridge earthquake.*

### III. AMENDMENTS TO THE 2010 CALIFORNIA ELECTRICAL CODE

**(a) New construction.**

The following amendment shall be added to the California Electrical Code:

All newly constructed commercial and residential buildings that have electrically supplied systems shall provide a concrete encased grounding electrode per CEC, Art. 250.52(A)(3) to serve as the grounding means for the electrical system.

*Finding: Due to poor soil conditions in our County such as highly expansive soil, sandy soil, etc., a concrete encased grounding electrode provides the safest possible grounding means allowed by the Electrical Code.*

### IV. 2010 CALIFORNIA EXISTING BUILDING CODE ADOPTED

Appendix Chapter A1 of the 2010 California Existing Building Code is hereby adopted.

*Finding: Local geological conditions- The Santa Cruz County 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 1989 Loma Prieta Earthquake. The proposed amendment addresses the problem of poor performance of unreinforced masonry buildings in a seismic event.*

## V. APPENDIX CHAPTERS A2, A3, A4 AND A5 OF THE 2010 INTERNATIONAL EXISTING BUILDING CODE ADOPTED.

The entire content of Appendix Chapters A2, A3, A4 and A5 of the 2010 International Existing Building Code are hereby adopted.

*Finding: Local geological conditions- The Santa Cruz County 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 1989 Loma Prieta Earthquake. The proposed amendment addresses the problem of poor performance of unreinforced masonry buildings in a seismic event.*

## VI AMENDMENTS TO THE 2010 GREEN BUILDING STANDARDS CODE

(a) **Green Building amendment.** Section 101.3 of the California Green Building Standards Code is hereby amended to read as follows:

**101.3 Scope.** The provisions of this code shall apply to the planning, design, operation, construction, use and occupancy of every newly constructed building unless otherwise indicated in this code. Additions 500 square feet or larger to existing buildings shall also be subject to the applicable provisions of this code for all new work. For all remodels, Insulation meeting the mandatory feature requirements in the California Energy Code shall be installed at ceilings, walls, floors and water pipes, when these areas are exposed during remodeling. New appliances installed as part of any remodel, addition or new construction shall be Energy Star appliances. In cases where the Building Official determines that it is infeasible to carry out the provisions of the Green Building Standards Code, he or she has the authority to grant alterations subject to Section 12.10.420 (g) of this Chapter. It is not the intent that this code substitute or be identified as meeting the certification requirements of any green building program.

*Finding: Climatic and Environmental. Due to increase in global temperatures and population increase, our water use has increased, air quality has decreased, and construction material resources have diminished. Santa Cruz County will include green building requirements for remodels and additions in order to alleviate these adverse conditions.*

## CALIFORNIA BUILDING STANDARDS COMMISSION

2525 Natomas Park Drive, Suite 130  
Sacramento, CA 95833  
(916) 263-0916 FAX (916) 263-0959



December 7, 2010

Mr. John Ferreira, Chief  
County Fire Department  
County of Santa Cruz  
P.O Drawer F-2  
6059 Highway 9  
Felton, CA 95018

Dear Mr. Ferreira,

This is to acknowledge receipt of the County of Santa Cruz submittal pertaining to Ordinance No. 5076 with findings on November 8, 2010. As the law states, no local modification or change to the California Building Standards Code (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).

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.

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

Sincerely,

  
Jane G. Taylor  
Senior Architect

cc: Chron  
Local Filings



# County of Santa Cruz

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## COUNTY FIRE DEPARTMENT

P.O. DRAWER F-2, 6059 HIGHWAY 9, FELTON CA 95018  
(831) 335-5353 FAX: (831) 335-4053 TDD: (831) 454-2123

JOHN FERREIRA, CHIEF

November 4, 2010

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

To Whom it May Concern:

As required by Health & Safety Code Section §13869.7, enclosed is a copy of adopted Ordinance Number 5076 amending the Fire Code (Chapter 7.92) of the Santa Cruz County Code. Also enclosed is a copy of adopted Resolution Number 287-2010, Resolution Finding Modification of State Housing Law Reasonably Necessary Because of Local Conditions.

The ordinance amending the Santa Cruz County Fire Code will take effect January 1, 2011. If you have any questions, please contact me at the above address or at (831) 335-6734.

Sincerely,

John Ferreira  
Chief

By: Denise Muir  
Department Analyst

enclosures

2010 NOV -04 PM 10:24  
CALIFORNIA BUILDING STANDARDS COMMISSION



BEFORE THE BOARD OF SUPERVISORS  
OF THE COUNTY OF SANTA CRUZ, STATE OF CALIFORNIA

RESOLUTION NO. 287-2010

On the motion of Supervisor Pirie  
Duly seconded by Supervisor Leopold  
The following resolution is adopted:

**RESOLUTION FINDING MODIFICATION OF STATE  
HOUSING LAW REASONABLY  
NECESSARY BECAUSE OF LOCAL CONDITIONS**

WHEREAS, Health and Safety Code Section 13869.7 provides that a fire protection district organized under the Bergeson Fire District Law may adopt building standards relating to fire and panic safety that are more stringent than those building standards adopted by the State Fire Marshal and contained in the California Building Standards Code, and;

WHEREAS, Health and Safety Code Section 13869.7 provides that any such changes or modifications that are more stringent and relate to fire and panic safety are subject to subdivision (b) of Health and Safety Code Section 18941.5, and;

WHEREAS, subdivision (b) of Health and Safety Code Section 18941.5 allows a city or county to establish more restrictive building standards reasonably necessary because of local climatic, geological or topographical conditions after making the findings required by Health and Safety Code Section 17958.7.

NOW, THEREFORE, BE IT RESOLVED AND ORDERED that insofar as Chapter 7.92 of the Santa Cruz County Code may change or modify the State Housing Standards adopted pursuant to Health and Safety Code Section 17922, as to the requirement for installation of an automatic sprinkler system in all new buildings, the Board of Supervisors of the County of Santa Cruz, after duly noticed and held public meeting, expressly finds that such change or modification to Sections 903.2 through 903.2.10 of Part 9 of the California Building Standards Code is reasonably necessary because of local conditions as more specifically set forth as follows:

1. The Santa Cruz County Fire Department area of response is extraordinarily inaccessible for firefighting purposes due to mountainous topography; or geographical reasons. Development is following the path of least resistance, and over the years has allowed for continued development into areas that do not lend to a good systematic street and road layout. Santa Cruz County as a whole, has limited road access. State Routes 1, 9, 17, and 35 are congested daily, primarily during commute hours and seasonal periods of the year. A single vehicle accident

within the County can affect all routes of travel increasing the response time of fire apparatus and other emergency vehicles.

Most of the roadways connecting the Santa Cruz County Fire area are classified as rural arterial and collectors. These roadways in many cases do not allow for 2-way traffic to safely pass. The number of vehicle miles driven is steadily increasing despite limited growth. Many of the older streets and roads within the County are narrow and hard to negotiate. The impact of additional planned developments and increased traffic flow will continue to create a negative effect on the delivery of fire protection services.

Inherent delays caused by the traffic patterns make it necessary to mitigate this problem by requiring additional built-in automatic fire protection and detection systems that provide early detection and initial control of fires until the arrival of the fire department.

2. The Santa Cruz County Fire Department area is mapped as a moderate to high fire hazard due to the high percentage of forested land (approximately 70%) and vegetation. The interface areas contain trees, dense brush vegetation and a heavy growth of both annual and invasive grasses.
3. The Santa Cruz County Fire Department is subject to major disasters such as earthquakes (most recently - Loma Prieta 1989), flooding (1982, 1983, 1995), landslides, and major wildland fires (Martin, Summit, and Trabing in 2008; and Lockheed and Loma in 2009) that greatly limit traditional fire suppression capabilities for individual property protection. The Santa Cruz County Fire Department is situated on and near the most active seismic zones in California: the San Andreas, San Gregorio, Zayante, and Hayward Faults. The great potential for earthquakes influences the community. A major seismic event will create a demand on fire protection services, but through the use of automatic fire suppression systems, the resultant increase in demand can be partially mitigated.
4. The Santa Cruz County Fire Department is favored with many sources of high quality water, including springs, wells, reservoirs, and surface streams, mutual and municipal water companies. However, the underground water sources are becoming depleted and extensive steps have been taken to reduce the amount of water consumed. The water supply in the Santa Cruz County Fire Department area makes extensive use of automatic fire sprinkler systems feasible as a means to reduce our dependency on large volumes of water for fire suppression.
5. The local climatic conditions affect acceleration, intensity and size of fire in the community. Times of little or no rainfall create extremely hazardous conditions when a fire is introduced to the environment. Fires in structures can easily spread to the wildland as well as a fire in the wildland into a structure.

- 6. The experience of efficiency of automatic fire sprinkler systems within Santa Cruz County fire agencies exceeds those of the National Fire Protection Association, which indicates that automatic fire sprinkler systems have established an efficiency record of approximately 96% satisfactory performance in the United States since 1925. The local statistics show that most fires have been extinguished with fewer than 2 fire sprinkler heads activating, and that minimal additional fire suppression efforts were necessary.

NOW, THEREFORE, BE IT FURTHER RESOLVED AND ORDERED that the Clerk of the Board is directed to mail a copy of these findings together with the modification or change expressly marked and identified to the California Building Standards Commission and obtain a file stamped endorsed copy from the Commission for retention with the Santa Cruz County Fire Department.

PASSED AND ADOPTED by the Board of Supervisors of the County of Santa Cruz, State of California, this 26th day of October, 2010, by the following vote:

AYES: Supervisor Leopold, Pirie, Coonerty, Stone & Campos  
 NOES: Supervisor None  
 ABSENT: Supervisor None  
 ABSTAIN: Supervisor None

**TONY CAMPOS**  
 Chairperson, Board of Supervisors

ATTEST: **TESS FITZGERALD**  
 Clerk of the Board

Approved As To Form:  
 \_\_\_\_\_ 10/14/10  
 County Counsel Date

Distribution: County Fire Department

STATE OF CALIFORNIA )  
 COUNTY OF SANTA CRUZ ) ss  
 I, SUSAN A. MAURIELLO, County Administrative Officer and ex-officio Clerk of the Board of Supervisors of the County of Santa Cruz, State of California do hereby certify that the foregoing is a true and correct copy of the resolution passed and adopted by and entered in the minutes of the said board. In witness whereof, I have hereunto set my hand and affixed the seal of the said Board on October 27, 2010  
 SUSAN A. MAURIELLO County Administrative Officer  
 [Signature]



**ORDINANCE NO. 5076**

**ORDINANCE REPEALING CHAPTER 7.92 OF THE SANTA CRUZ COUNTY  
CODE AND THEREAFTER ADDING NEW CHAPTER 7.92 TO THE SANTA  
CRUZ COUNTY CODE ADOPTING AND THEN AMENDING THE 2009  
EDITION OF THE INTERNATIONAL FIRE CODE**

The Board of Supervisors of the County of Santa Cruz ordains as follows:

**SECTION I**

Chapter 7.92 of the Santa Cruz County Code as enacted by Ordinance No. 4893 is hereby repealed.

**SECTION II**

The Santa Cruz County Code is hereby amended by adding new Chapter 7.92 to read as follows:

**Chapter 7.92  
FIRE CODE**

<b>7.92.010</b>	<b>International Fire Code Adopted.</b>
<b>7.92.010.1</b>	<b>Section 101.1 is amended - Title.</b>
<b>7.92.102.9</b>	<b>Section 102.9 amended - Matters Not Provided For.</b>
<b>7.92.105.1</b>	<b>Section 105.1 amended - General.</b>
<b>7.92.105.1.1</b>	<b>Section 105.1.1 amended - Permit Required.</b>
<b>7.92.105.2</b>	<b>Section 105.2 amended - Application.</b>
<b>7.92.108</b>	<b>Section 108.1 amended - Board of Appeals Established.</b>
<b>7.92.108.3</b>	<b>Section 108.3 deleted - Qualifications.</b>
<b>7.92.108.4</b>	<b>Section 108.4 added - Appeals Process.</b>
<b>7.92.109.3</b>	<b>Section 109.3 is amended - Violation penalties.</b>
<b>7.92.111.4</b>	<b>Section 111.4 is amended - Failure to comply.</b>
<b>7.92.202</b>	<b>Section 202 is amended - Definitions</b>
<b>7.92.304.1.2</b>	<b>Section 304.1.2 is amended - Vegetation.</b>
<b>7.92.307.2</b>	<b>Section 307.2 is amended – Open Burning and Recreational Fires.</b>
<b>7.92.308.1.4</b>	<b>Section 308.1.4 deleted – Open-Flame cooking devices.</b>
<b>7.92.311.5</b>	<b>Section 311.5 is amended - Placards.</b>
<b>7.92.405.2</b>	<b>Table 405.2 Footnote 'a' is amended - Fire and Evacuation Drill Frequency and Participation.</b>
<b>7.92.501.3</b>	<b>Section 501.3 is amended - Construction Documents.</b>
<b>7.92.502.1</b>	<b>Section 502.1 is amended - Definitions.</b>
<b>7.92.503.2.1</b>	<b>Section 503.2.1 is amended - Dimensions.</b>
<b>7.92.503.2.6</b>	<b>Section 503.2.6 is amended - Bridges and Elevated Surfaces.</b>
<b>7.92.503.2.6.1</b>	<b>Section 503.2.6.1 is added - Width.</b>
<b>7.92.503.2.6.2</b>	<b>Section 503.2.6.2 is added - Certification.</b>

7.92.503.2.6.3	Section 503.2.6.3 is added - Recertification.
7.92.503.2.6.4	Section 503.2.6.4 is added - Existing Private Bridges.
7.92.503.2.6.5	Section 503.2.6.5 is added - Fees.
7.92.505.2	Section 505.2 is amended - Street and Road Signs.
7.92.507.1	Section 507.1 is amended - Required Water Supply.
7.92.507.5.7	Section 507.5.7 is added - Painting.
7.92.605.11	Section 605.11 is added - Solar Photovoltaic Power Systems.
7.92.605.12	Section 605.12 is added - Alternate Power Sources.
7.92.903.1	IFC Sections 903.1 through 903.2.10.3 are deleted and replaced- Automatic Sprinkler Systems.
7.92.903.3.1.3	Section 903.3.1.3 is amended - NFPA 13D Sprinkler Systems.
7.92.903.6.1	Section 903.6.1 is amended - Pyroxylin plastics.
7.92.2205.1	Section 2205.1 is amended - Tank filling operations for Class I, II or IIIA liquids.
7.92.2205.1.1	Section 2205.1.1 is amended - Delivery vehicle location.
7.92.2206.2	Section 2206.2 is amended - Method of storage.
7.92.2206.2.1	Section 2206.2.1 is amended - Underground tanks.
7.92.2206.2.2	Section 2206.2.2 is amended - Aboveground tanks located inside buildings.
7.92.2206.2.3	Section 2206.2.3 is amended - Aboveground tanks located outside, above grade.
7.92.2206.2.4	Section 2206.2.4 is amended - Aboveground tanks located in above- grade vaults or below-grade vaults.
7.92.2206.2.4.2	Section 2206.2.4.2 is amended - Fleet vehicle motor fuel-dispensing facilities.
7.92.2206.2.5	Section 2206.2.5 is amended - Portable tanks.
7.92.2206.2.6	Section 2206.2.6 is amended - Special enclosures.
7.92.2206.6.2	Section 2206.6.2 is amended - Piping, valves, fittings and ancillary equipment for aboveground tanks for Class I, II and IIIA liquids.
7.92.2206.7.6	Section 2206.7.6 is amended - Fuel delivery nozzles.
7.92.2206.7.6.1	Section 2206.7.6.1 is amended - Special requirements for nozzles.
7.92.2210.1	Section 2210.1 is amended - General.
7.92.2210.2	Section 2210.2 is amended - Storage and handling.
7.92.2210.2.1	Section 2210.2.1 is amended - Class I, II or III liquid fuel storage.
7.92.2210.2.2	Section 2210.2.2 is amended - Class II or IIIA liquid storage and dispensing.
7.92.2210.2.3	Section 2210.2.3 is amended - Heating equipment.
7.92.2210.3.2	Section 2210.3.2 is amended - Supervision.
7.92.2210.3.3	Section 2210.3.3 is amended - Hoses and nozzles.
7.92.2210.3.4	Section 2210.3.4 is amended - Portable containers.
7.92.2210.5.2	Section 2210.5.2 is amended - Spills.
7.92.3003.5.3	Section 3003.5.3 is amended - Securing compressed gas containers, cylinders and tanks.
7.92.3300	IFC Chapter 33 is deleted and replaced - Explosives and Fireworks.
7.92.3301.1	Section 3301.1 is added - Scope
7.92.3302	Section 3302 is added - Display Fireworks.

7.92.503.2.6.3	Section 503.2.6.3 is added - Recertification.
7.92.503.2.6.4	Section 503.2.6.4 is added - Existing Private Bridges.
7.92.503.2.6.5	Section 503.2.6.5 is added - Fees.
7.92.505.2	Section 505.2 is amended - Street and Road Signs.
7.92.507.1	Section 507.1 is amended - Required Water Supply.
7.92.507.5.7	Section 507.5.7 is added - Painting.
7.92.605.11	Section 605.11 is added - Solar Photovoltaic Power Systems.
7.92.605.12	Section 605.12 is added - Alternate Power Sources.
7.92.903.1	IFC Sections 903.1 through 903.2.10.3 are deleted and replaced- Automatic Sprinkler Systems.
7.92.903.3.1.3	Section 903.3.1.3 is amended - NFPA 13D Sprinkler Systems.
7.92.903.6.1	Section 903.6.1 is amended - Pyroxylin plastics.
7.92.2205.1	Section 2205.1 is amended - Tank filling operations for Class I, II or IIIA liquids.
7.92.2205.1.1	Section 2205.1.1 is amended - Delivery vehicle location.
7.92.2206.2	Section 2206.2 is amended - Method of storage.
7.92.2206.2.1	Section 2206.2.1 is amended - Underground tanks.
7.92.2206.2.2	Section 2206.2.2 is amended - Aboveground tanks located inside buildings.
7.92.2206.2.3	Section 2206.2.3 is amended - Aboveground tanks located outside, above grade.
7.92.2206.2.4	Section 2206.2.4 is amended - Aboveground tanks located in above-grade vaults or below-grade vaults.
7.92.2206.2.4.2	Section 2206.2.4.2 is amended - Fleet vehicle motor fuel-dispensing facilities.
7.92.2206.2.5	Section 2206.2.5 is amended - Portable tanks.
7.92.2206.2.6	Section 2206.2.6 is amended - Special enclosures.
7.92.2206.6.2	Section 2206.6.2 is amended - Piping, valves, fittings and ancillary equipment for aboveground tanks for Class I, II and IIIA liquids.
7.92.2206.7.6	Section 2206.7.6 is amended - Fuel delivery nozzles.
7.92.2206.7.6.1	Section 2206.7.6.1 is amended - Special requirements for nozzles.
7.92.2210.1	Section 2210.1 is amended - General.
7.92.2210.2	Section 2210.2 is amended - Storage and handling.
7.92.2210.2.1	Section 2210.2.1 is amended - Class I, II or III liquid fuel storage.
7.92.2210.2.2	Section 2210.2.2 is amended - Class II or IIIA liquid storage and dispensing.
7.92.2210.2.3	Section 2210.2.3 is amended - Heating equipment.
7.92.2210.3.2	Section 2210.3.2 is amended - Supervision.
7.92.2210.3.3	Section 2210.3.3 is amended - Hoses and nozzles.
7.92.2210.3.4	Section 2210.3.4 is amended - Portable containers.
7.92.2210.5.2	Section 2210.5.2 is amended - Spills.
7.92.3003.5.3	Section 3003.5.3 is amended - Securing compressed gas containers, cylinders and tanks.
7.92.3300	IFC Chapter 33 is deleted and replaced - Explosives and Fireworks.
7.92.3301.1	Section 3301.1 is added - Scope
7.92.3302	Section 3302 is added - Display Fireworks.

7.92.3804.2	Section 3804.2 is amended - Maximum Capacity.
7.92.5000	Chapter 50 [Reserved for future]
7.92.5100	Chapter 51 [Reserved for future]
7.92.5200	Chapter 52, starting with Section 5201, is added - Suppression and Control of Hazardous Fire Areas.
7.92.5300	Chapter 53 [Reserved for future]

**7.92.010 International Fire Code Adopted.**

That portion of the California Building Standards Code that imposes substantially the same requirements as are contained in the International Fire Code, 2009 Edition published by the International Code Council and the California Building Standards Commission with errata, together with those portions of the International Fire Code, 2009 Edition, including Appendix Chapters B, C, and J published by the International Code Council not included in the California Building Standards Code, as modified and amended by this ordinance, are adopted by this reference into code, and are hereby collectively declared to be the Fire Code of Santa Cruz County.

**7.92.101.1 Section 101.1 is amended – Title.**

Section 101.1 of Chapter 1 of the Fire Code of Santa Cruz County is amended to read as follows:

**101.1 Title.** These regulations shall be known as the Fire Code of Santa Cruz County, hereinafter referred to as “this code.”

**7.92.102.9 Section 102.9 amended - Matters Not Provided For.**

Section 102.9 of Chapter 1 of the Fire Code of Santa Cruz County is amended to read as follows:

**102.9 - Matters Not Provided For.** Requirements that are essential for the public safety of an existing or proposed activity, building or structure, or for the safety of the occupants thereof, which are not specifically provided for by this code shall be determined by the fire code official.

The fire chief is authorized to render interpretations of this code and to make and enforce rules, supplemental regulations and standards in order to carry out the application and intent of its provisions. Such interpretations, rules, regulations and standards shall be in conformance with the intent and purpose of this code and shall be available to the public during normal business hours. Those standards promulgated by the Santa Cruz County Fire Chiefs Association shall be deemed as prima facie evidence of compliance with this code.

**7.92.105.1 Section 105.1 amended – General.**

Section 105 of Chapter 1 of the Fire Code of Santa Cruz County is amended to read as follows:

**105.1 - General.** Permits shall be in accordance with Sections 105.1.1 through 105.7.13 or other provisions of this code as required by the jurisdiction having authority.

**7.92.105.1.1 Section 105.1.1 amended - Permit Required.**

Section 105.1.1 of Chapter 1 of the Fire Code of Santa Cruz County is amended to read as follows:

**105.1.1 – Permit Required.** When required by the fire code official, a permit shall be obtained. Permit fees, if any, shall be paid prior to issuance of the permit. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the fire code official.

**7.92.105.2 Section 105.2 amended - Application.**

Section 105.2 of Chapter 1 of the Fire Code of Santa Cruz County is amended to read as follows:

**105.2 – Application.** Application for a permit, when required by the fire code official, shall be made in such form and detail as prescribed by the fire code official. Applications for permits shall be accompanied by such plans as prescribed by the fire code official.

**7.92.108.1 Section 108.1 amended - Board of Appeals Established.**

Section 108.1 of Chapter 1 of the Fire Code of Santa Cruz County is amended to read as follows:

**108.1 - Board of Appeals Established.** In order to hear and decide appeals of orders, decisions or determinations made by the fire code official relative to the application and interpretation of this code, there shall be and is hereby created a Board of Appeals. The Board of Appeals shall be the Board of Supervisors. The fire code official shall be an ex-officio member of said board but shall have no vote on any matter before the board. The board may adopt additional rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the fire code official.

**7.92.108.3 Section 108.3 deleted – Qualifications**

Section 108.3 of Chapter 1 of the Fire Code of Santa Cruz County is deleted.

**7.92.108.4 Section 108.4 added – Appeals Process**

Section 108.4 of Chapter 1 of the Fire Code of Santa Cruz County is added to read as follows:

**108.4.1 - Initiating Appeal.** Any beneficially interested party has the right to appeal the order served by the fire code official by filing a written “NOTICE OF APPEAL” with the office of the fire code official within fourteen calendar days after service of such order. The notice shall state the order appealed from, the identity and mailing address of the appellant, and the specific grounds upon which the appeal is made.

**108.4.2 - Stay of Order.** The filing of a properly completed notice of appeal shall have the effect of staying the implementation of the order appealed from, until the final decision of appeal.

**EXCEPTION:** Orders affecting acts or conditions which in the opinion of the fire code official, pose an immediate threat to life, property, or the environment as a result of panic, fire, explosion, or release.

**108.4.3 - Hearing of Appeal.** Following is the process for establishing and hearing appeals:

1. The Board of Appeals, or the secretary thereof, shall set the matter to be heard at a date within thirty days of receipt of such notice of appeal. Written notice of the time and place set for hearing shall be served on the appellant by first class mail to the mailing address given in the notice of appeal at least five days prior to the date set for the hearing. The fire code official shall transmit to the Board of Appeals all records related to the appeal.
2. At the hearing on the appeal, the appellant shall, in the first instance present evidence in support of the grounds enumerated in her/his notice of appeal. The fire code official shall next present evidence in support of her/his order. The appellant and the fire code official shall each have one opportunity to rebut the evidence presented by the other. The hearing shall be de novo in all respects.

**108.4.4 - Decision of the Board of Appeals.** Upon hearing the appeal, the Board of Appeals may issue a decision affirming, modifying or vacating the order of the fire code official. The decision shall be in writing and shall be served upon the appellant by first class mail to the mailing address given in the notice of appeal.

**108.4.5 - Time of Decision.** The Board of Appeals shall have the power to continue any hearing and may, in its discretion, take the appeal under submission. The Board of Appeals shall render a decision not later than the seventh day following the date the matter was taken under submission, and forthwith notify the interested parties as previously set forth.

**7.92.109.3 Section 109.3 is amended – Violation penalties.**

Section 109.3 of Chapter 1 of the Fire Code of Santa Cruz County is amended to read as follows:

**109.3 – Violation Penalties.** Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction documents, or of a permit or certificate used under provisions of this code, shall be guilty of an infraction, punishable as set forth in Section 1.12.040 of the Santa Cruz County Code, plus court assigned fees. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

**7.92.109.3.1 Section 109.3.1 is amended – Abatement of violation.**

Section 109.3.1 of Chapter 1 of the Fire Code of Santa Cruz County is amended to read as follows:

**109.3.1 – Abatement of violation.** In addition to the imposition of the penalties herein described, the fire code official is authorized to institute appropriate action to prevent unlawful construction or to restrain, correct or abate a violation; or to prevent illegal occupancy of a structure or premises; or to stop an illegal act, conduct of business or occupancy of a structure on or about any premises. Any violation of this code shall be deemed a public nuisance pursuant to Santa Cruz County Code Section 1.12.030 and/or the Fire Code of Santa Cruz County. In the event that a public nuisance is not abated in accordance with the fire code official's order or the order of the Board of Appeals, if any, the fire code official may, upon securing approval of the

Board of Supervisors of Santa Cruz County, proceed to abate the nuisance by force account, contract, or any other method deemed most expedient by the Board. The cost of such abatement may be charged to the owner of record, or assessed to the property in a manner provided in Sections 1.14.040 through 1.14.080 of the Santa Cruz County Code.

**7.92.109.3.2 Section 109.3.2 is added – Enforcement.**

Section 109.3.2 of Chapter 1 of the Fire Code of Santa Cruz County is added to read as follows:

**109.3.2 - Enforcement.** The fire code official and her/his delegated subordinates, pursuant to the provisions of Section 836.5 of the Penal Code of the State of California, are hereby authorized to arrest a person without a warrant whenever they have reasonable cause to believe that the person has committed a violation of any of the provisions of this code in their presence. Upon making such an arrest, the fire code official or her/his delegated subordinate shall prepare a citation and release the person arrested pursuant to Section 853.6 of the Penal Code of the State of California, the provisions of which are hereby adopted by reference as part of this Section.

**7.92.111.4 Section 111.4 is amended – Failure to comply.**

Section 111.4 of Chapter 1 of the Fire Code of Santa Cruz County is amended to read as follows:

**111.4 Failure to comply.** It is unlawful for any person, firm or corporation to violate or fail to comply with any lawful order of the fire code official; fail to comply with an order by the Board of Appeals; or, fail to comply with an order of the court of competent jurisdiction within the time fixed therein. Every such violation shall be deemed a misdemeanor and shall be punishable as set forth in Section 1.12.030 of the Santa Cruz County Code.

**7.92.202 Section 202 is amended – Definition of Building Area.**

Definition of Building Area in Section 202 of Chapter 2 of the Fire Code of Santa Cruz County is added after British Thermal Unit to read as follows:

**BUILDING AREA.** The area included within surrounding exterior walls (or exterior walls and firewalls) exclusive of vent shafts and courts. Areas of the building not provided with surrounding walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above.

**Section 202 is amended – Definition of De Novo.**

Definition of De Novo in Section 202 of Chapter 2 of the Fire Code of Santa Cruz County is added after Deluge System to read as follows:

**DE NOVO.** adj. Latin for "anew," which means starting over, as in a trial de novo. For example, a decision in a small claims case may be appealed to a local trial court, which may try the case again, de novo.

**Section 202 is amended – Definition of Fire Chief.**

Definition of Fire Chief in Section 202 of Chapter 2 of the Fire Code of Santa Cruz County is amended to read as follows:

**FIRE CHIEF.** The Chief of the Santa Cruz County Fire Department.

**Section 202 is amended – Definition of Hazardous Fire Area.**

Definition of Hazardous Fire Area in Section 202 of Chapter 2 of the Fire Code of Santa Cruz County is added after Handrail to read as follows:

**HAZARDOUS FIRE AREA.** Land that is covered with grass, grain, brush, or forest, whether privately or publicly owned, which is so situated or is of such inaccessible location that a fire originating upon such land would present an abnormally difficult job of suppression or would result in great and unusual damage through fire or resulting erosion. The declaration of a hazardous fire area shall be made by the fire chief for purposes of this code and shall not contradict with hazardous fire areas as defined by the California Public Resources Code.

**Section 202 is amended – Definition of Public Nuisance.**

Definition of Public Nuisance in Section 202 of Chapter 2 of the Fire Code of Santa Cruz County is added after Proximate Audience to read as follows:

**PUBLIC NUISANCE.** The unreasonable, unwarranted and/or unlawful use of property, which causes inconvenience, danger or damage to others, either to individuals and/or to the general public. Nuisances may include, but not be limited to noxious smells, noise, burning, unauthorized collections or storage of hazardous materials.

**Section 202 is amended – Definition of Stage.**

Definition of Stage in Section 202 of Chapter 2 of the Fire Code of Santa Cruz County is added after Spraying Space to read as follows:

**STAGE.** A space within a building utilized for entertainment or presentations, which includes overhead hanging curtains, drops, scenery or stage effects other than lighting and sound. Stage area shall be measured to include the entire performance area and adjacent backstage and support areas not separated from the performance area by fire-resistance rated construction. Stage height shall be measured from the lowest point on the stage floor to the highest point of the roof or floor deck above the stage.

**Section 202 is amended – Definition of State Responsibility Area (SRA).**

Definition of State Responsibility Area (SRA) in Section 202 of Chapter 2 of the Fire Code of Santa Cruz County is added after Stage to read as follows:

**STATE RESPONSIBILITY AREA (SRA)** shall mean lands that are classified by the Board of Forestry pursuant to Public Resources Code Section 4125 where the financial responsibility of preventing and suppressing forest fires is primarily the responsibility of the State of California.

**Section 202 is amended – Yard.**

Definition of Yard in Section 202 of Chapter 2 of the Fire Code of Santa Cruz County is added after State Responsibility Area (SRA) to read as follows:

**YARD.** An open space, other than a court, unobstructed from the ground to the sky on the lot on which a building is situated.

**7.92.304.1.2 Section 304.1.2 is amended – Vegetation.**

Section 304.1.2 of Chapter 3 of the Fire Code of Santa Cruz County is amended to read as follows:

**304.1.2 – Vegetation.** Weeds, grass, vines or other growth that is capable of being ignited and endangering property, shall be cut down and removed by the owner or occupant of the premises. Vegetation clearance requirements in urban-wildland interface areas shall be maintained around and adjacent to buildings and structures. A firebreak shall be made by removing and clearing away, for a distance of not less than 30 feet on each side of the building or structure or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This does not apply to single specimens of trees or other vegetation that is well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to any building or structure.

When required by state law, or local ordinance, rule or regulation, an additional fire protection zone or firebreak may be made by removing all brush, flammable vegetation, or combustible growth that is located within 100 feet from the building or structure or to the property line. This section does not prevent an insurance company that insures a building or structure from requiring the owner of the building or structure to maintain a firebreak of more than 100 feet around the building or structure. Grass and other vegetation located more than 30 feet from the building or structure and less than 18 inches in height above the ground may be maintained where necessary to stabilize the soil and prevent erosion. This does not apply to single specimens of trees or other vegetation that is well-pruned and maintained so as to effectively manage fuels and not form a means of rapidly transmitting fire from other nearby vegetation to a dwelling or structure.

**7.92.307.2 Section 307.2 is amended - Open Burning and Recreational Fires.**

Section 307.2 of Chapter 3 of the Fire Code of Santa Cruz County is amended to read as follows:

**307.2 Permit required.** When required by the fire chief, a permit shall be obtained prior to kindling a fire for recognized silvicultural or range or wildlife management practices, prevention or control of disease or pests, or a bonfire. Application for such permit shall only be presented by and permits issued to the owner of the land upon which the fire is to be kindled.

The open burn season for Santa Cruz County unless otherwise declared shall be December 1<sup>st</sup> through April 30<sup>th</sup> of the calendar year. The dates may only be changed by the Monterey Bay Area Unified Air Pollution Control District.

**Exceptions:**

1. During the “declared open burn season” (as declared by the Monterey Bay Area Unified Air Pollution Control District) pile burning is allowed, at the discretion of the fire chief, when the “Guidelines for Pile Burning” (published by the California Department of Forestry and Fire Protection or the Monterey Bay Area Unified Air Pollution Control District) are strictly adhered to.

**7.92.308.1.4 Section 308.1.4 is deleted – Open-Flame cooking devices.**

Section 308.1.4 of Chapter 3 of the Fire Code of Santa Cruz County is hereby deleted.

**7.92.311.5 Section 311.5 is amended – Placards.**

Section 311.5 of Chapter 3 of the Fire Code of Santa Cruz County is amended to read as follows:

**311.5 – Placards.** When required by the fire code official, any building or structure determined to be unsafe pursuant to Section 110 of this code shall be marked as required by Sections 311.5 through 311.5.5.

**7.92.405.2 Table 405.2 Footnote ‘a’ is amended - Fire and Evacuation Drill Frequency and Participation**

Footnote ‘a’ to Table 405.2 of Chapter 4 of the Fire Code of Santa Cruz County is amended to read as follows:

**a.** The frequency in all school levels shall be allowed to be modified in accordance with Section 408.3.2. Secondary level schools need only conduct evacuation drills twice each school year.

**7.92.501.3 Section 501.3 is amended – Construction Documents.**

Section 501.3 of Chapter 5 of the Fire Code of Santa Cruz County is amended to read as follows:

**501.3 – Construction Documents.** Construction documents for proposed fire apparatus access, location of fire lanes and construction documents and hydraulic calculations for fire hydrant systems shall be submitted to the fire department for review and approval prior to construction. When grading work is needed for the access road(s) within the jurisdiction of Santa Cruz County, application for a grading permit shall be made with the Santa Cruz County Planning Department pursuant to the Santa Cruz County Grading Ordinance. Such Permits shall be reviewed by the Santa Cruz County Environmental Coordinator as required.

**7.92.502.1 Section 502.1 is amended – Definitions.**

Section 502.1 of Chapter 5 of the Fire Code of Santa Cruz County is amended adding the definition of All Weather Surface to read as follows:

**ALL WEATHER SURFACE.** An all weather surface shall be a minimum of 6" of compacted Class II base rock for grades up to and including 5%, oil and screened for grades up to and including 15%, and asphaltic concrete for grades exceeding 15%. No grade shall be allowed to exceed 20%.

**7.92.502.1 Section 502.1 is amended – Definitions.**

Section 502.1 of Chapter 5 of the Fire Code of Santa Cruz County is amended adding the definition of Bridge to read as follows:

**BRIDGE.** A bridge shall be defined as a structure designed to carry a roadway over a depression or obstacle.

**7.92.503.2.1 Section 503.2.1 is amended – Dimensions.**

Section 503.2.1 of Chapter 5 of the Fire Code of Santa Cruz County is amended to read as follows:

**503.2.1 – Dimensions.** Fire Apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm) except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm).

**EXCEPTIONS: 1.** Outside of the Urban Services Line as established by the County of Santa Cruz, access roads shall be a minimum of 18 feet wide for all access roads or driveways serving more than two habitable structures, and 12 feet for an access road or driveway serving two or fewer habitable structures. Where it is environmentally inadvisable to meet these criteria (due to excessive grading, tree removal or other environmental impacts), a 12-foot wide all-weather surface access road with 12-foot wide by 35-foot long turnouts located approximately every 500 feet may be provided with the approval of the fire code official.

**NOTE:** Title 19 of the California Administrative Code requires that access roads from every state governed building to a public street shall be all-weather hard-surface (suitable for use by fire apparatus) roadway not less than 20 feet in width. Such roadway shall be unobstructed and maintained only as access to the public street.

**2.** Vertical clearance may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance when approved by the fire code official.

**7.92.503.2.6 Section 503.2.6 is amended – Bridges and Elevated Surfaces.**

Section 503.2.6 of Chapter 5 of the Fire Code of Santa Cruz County is amended to read as follows:

**503.2.6 - Bridges and elevated surfaces.** When a bridge or an elevated surface is part of a fire apparatus access road, the bridge shall be constructed and maintained in accordance with AASHTO HS-20 (25 ton). Bridges and elevated surfaces shall be designed for a live load sufficient to carry the imposed loads of fire apparatus. Vehicle load limits shall be posted at both entrances to bridges when required by the fire code official. Where elevated surfaces designed for emergency vehicle use are adjacent to surfaces which are not designed for such use, approved barriers, approved signs or both shall be installed and maintained when required by the fire code official.

**7.92.503.2.6.1 Section 503.2.6.1 is added – Width.**

Section 503.2.6.1 of Chapter 5 of the Fire Code of Santa Cruz County is added to read as follows:

**503.2.6.1 - Width.** All bridges shall be a minimum of 20 feet of clear width. The fire code official may allow the width to be reduced for access to U-1, U-2 or R-3 occupancies in accordance with Objective 6.5 – Fire Hazards of the Santa Cruz County General Plan.

**7.92.503.2.6.2 Section 503.2.6.2 is added – Certification.**

Section 503.2.6.2 of Chapter 5 of the Fire Code of Santa Cruz County is added to read as follows:

**503.2.6.2 - Certification.** Every private bridge hereafter constructed shall be engineered by a licensed civil or structural engineer and approved by the fire code official. Certification shall be provided by the licensed engineer in writing that the bridge complies with the design standard required by this section to the fire code official.

**7.92.503.2.6.3 Section 503.2.6.3 is added – Recertification.**

Section 503.2.6.3 of Chapter 5 of the Fire Code of Santa Cruz County is added to read as follows:

**503.2.6.3 - Recertification.** Every private bridge shall be recertified every ten years or whenever deemed necessary by the fire code official. Such recertification shall be in accordance with the requirements of 503.2.6.2.

**7.92.503.2.6.4 Section 503.2.6.4 is added – Existing Private Bridges.**

Section 503.2.6.4 of Chapter 5 of the Fire Code of Santa Cruz County is added to read as follows:

**503.2.6.4 - Existing Private Bridges.** An existing private bridge not conforming to these regulations may be required to conform when in the opinion of the fire code official, such repairs are necessary for public safety.

**7.92.503.2.6.5 Section 503.2.6.5 is added – Fees.**

Section 503.2.6.5 of Chapter 5 of the Fire Code of Santa Cruz County is added to read as follows:

**503.2.6.5 - Fees.** All fees charged for the purpose of certification or recertification shall be at the owners' expense.

**7.92.505.2 Section 505.2 is amended – Street and Road Signs.**

Section 505.2 of Chapter 5 of the Fire Code of Santa Cruz County is amended to read as follows:

**505.2 - Street and Road Signs.** Streets and roads shall be identified with approved signs. Temporary signs shall be installed at each street intersection when construction of new roadways

allows passage by vehicles. Signs shall be of an approved size, weather resistant and be maintained until replaced by permanent signs. Posting of any road names and numbers not authorized by the Office of Street Naming and Numbering of the County of Santa Cruz, and the fire code official is prohibited.

**7.92.507.1 Section 507.1 is amended – Required Water Supply.**

Section 507.1 of Chapter 5 of the Fire Code of Santa Cruz County is amended to read as follows:

**507.1 - Required Water Supply.** An approved water supply capable of supplying the required fire flow for fire protection shall be provided to premises upon which facilities, buildings or portions of buildings are hereafter constructed or moved into or within the jurisdiction.

The minimum water supply for all new dwellings within State Responsibility Areas (SRA) shall be capable of supplying a flow of 500 gallons per minute for 20 minutes (10,000 gallons) for each parcel. Privately owned water that is not supplied by a licensed water purveyor shall: (1) serve no more than two dwellings and no more than 10,000 square feet of habitable dwelling space, and (2) be provided pursuant to a recorded covenant that runs with the land if the water supply originates from another parcel. If a water purveyor supplies the water, the applicant must submit with the building plan written verification from the licensed purveyor that the water supply meets the flow requirement.

**Exceptions:**

1. A 2% reduction will be allowed for flow supplied by approved stationary water tanks, to account for the nominal standardized capacity of such tanks.
2. The fire chief may reduce the flow requirement to 250 gallons per minute for 20 minutes by substituting approved enhanced access, defensible space, and/or ignition-resistant material requirements.

**7.92.507.5.7 Section 507.5.7 is added – Painting.**

Section 507.5.7 of Chapter 5 of the Fire Code of Santa Cruz County is added to read as follows:

**507.5.7 – Painting.** When required by the fire code official, fire hydrants shall be painted in accordance with NFPA 291.

**7.92.605.11 Section 605.11 is added – Photovoltaic Power Systems.**

Section 605.11 of Chapter 6 of the Fire Code of Santa Cruz County is added to read as follows:

**605.11 Solar Photovoltaic Power Systems**

Solar photovoltaic power systems shall be installed in accordance with this code and NFPA 70 National Electric Code.

**Exception:** Detached Group U non-habitable structures such as parking shade structures, carports, solar trellises, and similar type structures are not subject to the requirements of this section.

**605.11.1 Marking.** Marking is required on all interior and exterior dc conduit, enclosures, raceways, cable assemblies, junction boxes, combiner boxes, and disconnects.

**605.11.1.1 Materials.** The materials used for marking shall be reflective, weather resistant and suitable for the environment. Marking as required in sections 605.11.1.1 through 605.11.1.4 shall have all letters capitalized with a minimum height of 3/8 inch (9.5 mm) white on red background.

**605.11.1.2 Marking content.** The marking shall contain the words "WARNING: PHOTOVOLTAIC POWER SOURCE".

**605.11.1.3 Marking.** Marking shall be placed on all interior and exterior dc conduit, raceways, enclosures and cable assemblies every 10 feet (3048 mm) within 1 foot (305 mm) of all turns or bends and within 1 foot (305 mm) above and below all penetrations of roof/ceiling assemblies and all walls and /or barriers.

**605.11.1.4 Main service disconnect.** The marking shall be placed adjacent to the main service disconnect in a location clearly visible from the location where the disconnect is operated.

**605.11.2 Locations of DC conductors.** Conduit, wiring systems, and raceways for photovoltaic circuits shall be located as close as possible to the ridge or hip or valley and from the hip or valley as directly as possible to an outside wall to reduce trip hazards and maximize ventilation opportunities. Conduit runs between sub arrays and to DC combiner boxes shall be installed in a manner that minimizes total amount of conduit on the roof by taking the shortest path from the array to the DC combiner box. The DC combiner boxes shall be located such that conduit runs are minimized in the pathways between arrays. DC wiring shall be run in metallic conduit or raceways when located within enclosed spaces in a building. Conduit shall run along the bottom of load bearing members.

**605.11.3 Access and pathways.** Roof access, pathways and spacing requirements shall be provided in order to ensure access to the roof; provide pathways to specific areas of the roof; provide for smoke ventilation operations; and to provide emergency egress from the roof.

**Exceptions:**

1. Requirements relating to ridge, hip, and valleys do not apply to roofs slopes of two units vertical in twelve units horizontal (2:12) or less.
2. Residential structures shall be designed so that each array is no greater than 150 feet (45 720 mm) by 150 feet (45 720 mm) in either axis.
3. The fire chief may allow panels/modules to be located up to the ridge when an alternative ventilation method acceptable to the fire chief has been provided or where the fire chief has determined vertical ventilation techniques will not be employed.

**605.11.3.1 Roof access points.** Roof access points shall be defined as an area that does not place ground ladders over openings such as windows or doors, and are located at strong points of building construction in locations where the access point does not conflict with overhead obstructions such as tree limbs, wires, or signs.

**605.11.3.2 Residential systems for one- and two-family residential dwellings.** Access shall be provided in accordance with Sections 605.11.3.2.1 through 605.11.3.2.4.

**605.11.3.2.1 Residential buildings with hip roof layouts.** Panels /modules shall be located in a manner that provides a 3 foot (914 mm) wide clear access pathway from the eave to the ridge on each roof slope where panels/modules are located. The access pathway shall be located at a structurally strong location on the building capable of supporting the live load of fire fighters accessing the roof.

**605.11.3.2.2 Residential buildings with a single ridge.** Panels/modules shall be located in a manner that provides two 3 foot (914 mm) wide access pathways from the eave to the ridge on each roof slope where panels/modules are located.

**605.11.3.2.3 Hips and Valleys:** Panels/modules shall be located no closer than 18 inches (457 mm) to a hip or a valley if panels/modules are to be placed on both sides of a hip or valley. If the panels are to be located on only one side of a hip or valley that is of equal length then the panels shall be permitted to be placed directly adjacent to the hip or valley.

**605.11.3.2.4 Smoke Ventilation.** Panels/modules shall be located no higher than 3 feet (914 mm) below the ridge in order to allow for fire department smoke ventilation operations.

**605.11.3.3 All other occupancies.** Access shall be provided in accordance with Sections 605.11.3.3.1 through 605.11.3.3.3.

**Exception:** Where it is determined by the fire code official that the roof configuration is similar to a one- or two-family dwelling, the fire code official may approve the residential access and ventilation requirements provided in 605.11.3.2.1 through 605.11.3.2.4.

**605.11.3.3.1 Access.** There shall be a minimum 6 foot (1829 mm) wide clear perimeter around the edges of the roof.

**Exception:** If either axis of the building is 250 feet (76 200 mm) or less, there shall be a minimum 4 foot (1290 mm) wide clear perimeter around the edges of the roof.

**605.11.3.3.2 Pathways.** The solar installation shall be designed to provide designated pathways. The pathways shall meet the following requirements:

1. The pathway shall be over areas capable of supporting the live load of fire fighters accessing the roof.

2. The center line axis pathways shall be provided in both axis of the roof. Center line axis pathways shall run where the roof structure is capable of supporting the live load of firefighters accessing the roof.
3. Shall be straight line not less than 4 feet (1290 mm) clear to skylights and/or ventilation hatches.
4. Shall be straight line not less than 4 feet (1290 mm) clear to roof standpipes.
5. Shall provide not less than 4 feet (1290 mm) clear around roof access hatch with at least one not less than 4 feet (1290 mm) clear pathway to parapet or roof edge.

**605.11.3.3.3 Smoke Ventilation.** The solar installation shall be designed to meet the following requirements:

1. Arrays shall be no greater than 150 feet (45 720 mm) by 150 feet (45 720 mm) in distance in either axis in order to create opportunities for smoke ventilation operations.
2. Smoke ventilation options between array sections shall be one of the following:
  - 2.1. A pathway 8 feet (2438 mm) or greater in width,
  - 2.2. A 4 feet (1290 mm) or greater in width pathway and bordering roof skylights or smoke and heat vents,
  - 2.3. A 4 feet (1290 mm) or greater in width pathway and bordering 4 foot (1290 mm) x 8 foot (2438 mm) "venting cutouts" every 20 feet (6096 mm) on alternating sides of the pathway.

**605.11.4 Ground mounted photovoltaic arrays.** Ground mounted photovoltaic arrays shall comply with Sections 605.12 through 605.12.2 and this section. Setback requirements do not apply to ground-mounted, free standing photovoltaic arrays. Vegetation shall be kept clear for a minimum distance of 10 feet (3048 mm) from ground mounted photovoltaic arrays and associated equipment.

**7.92.605.12 Section 605.12 is added – Alternate Power Sources.**

Section 605.12 of Chapter 6 of the Fire Code of Santa Cruz County is added to read as follows:

**605.12 - Alternate Power Sources.** All permanent installations of electrical generators, wind generators, solar photovoltaic cells, or other power sources shall be approved by the building code official. In addition to all applicable provisions of Title 24 CCR for any such installation, a sign reading:

**“WARNING – This premise is provided with an Alternate Power Source.  
Disconnection of commercial power may not disable the electrical power  
source”**

shall be permanently affixed. Sign shall be red in color with a minimum of ½” tall contrasting lettering and shall be permanently affixed on each electrical panel subject to back-feed from alternate power sources. Any and all power disabling switches shall be clearly labeled.

**7.92.903.1 IFC Sections 903.1 through 903.2.10.1 are Deleted – Automatic Sprinkler Systems**

Sections 903.1 through 903.2.10.1 of Chapter 9 of the Fire Code of Santa Cruz County are deleted and replaced to read as follows:

**903.1 General.** Automatic sprinkler systems shall comply with this section.

**903.1.1 Alternative Protection.** Alternative automatic fire-extinguishing systems complying with Section 904 shall be permitted in lieu of automatic sprinkler protection where recognized by the applicable standard and approved by the fire code official.

**903.2 Where required.** Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.

**903.2.1 New Structures.** An automatic fire sprinkler system shall be provided in all new occupancies as defined in Chapter 3 of the California Building Code, regardless of type of construction and/or floor area, unless otherwise pre-empted by the California Health and Safety Code. Any occupancy not specifically mentioned shall be included in the group that it most nearly resembles based on the proposed life and fire hazard.

**EXCEPTIONS:** 1. Private garages, carports, sheds not more than 1,000 square feet (93 m<sup>2</sup>) of total floor area shall not require fire sprinklers where they are detached and separate from other structures and provided with exterior wall and opening protection as per the California Building Code.

2. Sheds exceeding 1,000 square feet, (93 m<sup>2</sup>) but not exceeding 3,000 square feet (278 m<sup>2</sup>) shall not require fire sprinklers at the discretion of the fire chief when the applicant demonstrates that the applicant's proposal does not increase the fire hazard or fire load.

3. Agricultural buildings as defined in Appendix Chapter C, of the California Building Code not exceeding 2,000 square feet (186 m<sup>2</sup>), not exceeding 25 feet (7620 mm) in height, having a clear unobstructed side yard exceeding 60 feet (18,280 mm) in all directions, and located within an Agricultural zoned district, as defined in the Santa Cruz County Planning Code, or as exempted by the fire chief, shall not require fire sprinklers.

Additionally, agricultural buildings exceeding 2,000 square feet (186 m<sup>2</sup>) but not exceeding 5,000 square feet, not exceeding 25 feet (7620 mm) in height, having a clear unobstructed side yard exceeding 60 feet (18,280 mm) in all directions, and located within an Agricultural zoned district, as defined in the Santa Cruz County Planning Code, shall not require fire sprinklers at the discretion of the fire chief when the applicant demonstrates the applicant's proposal does not increase the fire hazard or fire load.

4. Group B and Group M Occupancies not more than 500 square feet (46.5 m<sup>2</sup>) shall not require fire sprinklers where they are detached and separate from other structures and provided with exterior wall and opening protection as per the California Building Code, Table 508.3.3.

5. Greenhouses of non-combustible construction shall not require fire sprinklers.

**903.2.2 Existing Structures.** An automatic sprinkler system shall be provided in existing structures when, after the effective date of this code, a building permit is issued to allow additions to be made to existing structures which either:

1. already are six thousand (6,000) square feet or greater in total floor area; or
2. When additions are made to a structure which contains an existing fire sprinkler system, the fire sprinkler system shall be extended, thus creating fire sprinkler protection throughout the entire structure.

**Exceptions:**

1. Group U occupancies not more than one thousand (1,000) square feet.
2. Group B and Group M occupancies not more than five hundred (500) square feet.
3. Group R-3 dwellings where additions do not increase the total existing square footage by more than 50%. Additions 500 square feet and less are exempt from fire sprinkler requirements unless the structure is already protected by a fire sprinkler system.
4. Group A-2 occupancies not more than five thousand (5,000) square feet.

**903.2.3 During construction.** Automatic sprinkler systems required during construction, alteration and demolition operations shall be provided in accordance with Section 1413.

**903.2.4 Other hazards.** Automatic sprinkler protection shall be provided for the hazards indicated in Sections 903.2.4.1 through 903.2.4.8.

**903.2.4.1 Windowless stories in all occupancies.** An automatic sprinkler system shall be installed in the locations set forth in Sections 903.2.4.1.1 through 903.2.4.1.4.

**Exception:** Group R-3 and Group U.

**903.2.4.1.1 Stories and basements without openings.** An automatic sprinkler system shall be installed in every story or basement of all buildings where the floor area exceeds 1,500 square feet (139.4m<sup>2</sup>) and where there is not provided at least one of the following types of exterior wall openings:

1. Openings below grade that lead directly to ground level by an exterior stairway complying with Section 1009 or an outside ramp complying with Section 1010. Openings shall be located in each 50 linear feet (15 240 mm), or fraction thereof, of exterior wall in the story on at least one side.
2. Openings entirely above the adjoining ground level totaling at least 20 square feet (1.86 m<sup>2</sup>) in each 50 linear feet (15 240 mm), or fraction thereof, of exterior wall

in the story on at least one side.

**903.2.4.1.2 Opening dimensions and access.** Openings shall have a minimum dimension of not less than 30 inches (762 mm). Such openings shall be accessible to the fire department from the exterior and shall not be obstructed in a manner that fire fighting or rescue cannot be accomplished from the exterior.

**903.2.4.1.3 Openings on one side only.** Where openings in a story are provided on only one side and the opposite wall of such story is more than 75 feet (22 860 mm) from such openings, the story shall be equipped throughout with an approved automatic sprinkler system or openings as specified above shall be provided on at least two sides of the story.

**903.2.4.1.4 Basements.** Where any portion of a basement is located more than 75 feet (22 860 mm) from openings required by Section 903.2.4.1.1, the basement shall be equipped throughout with an approved automatic sprinkler system.

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

**903.2.4.3 Buildings 55 feet or more in height.** An automatic sprinkler system shall be installed throughout buildings with a floor level having an occupant load of 30 or more that is located 55 feet (16 764 mm) or more above the lowest level of fire department vehicle access.

**Exceptions:**

1. Airport control towers.
2. Open parking structures.
3. Occupancies in Group F-2.

**903.2.4.4 Ducts conveying hazardous exhausts.** Where required by the California Mechanical Code, automatic sprinklers shall be provided in ducts conveying hazardous exhausts, flammable or combustible materials.

**Exception:** Ducts where the largest cross-sectional diameter of the duct is less than 10 inches (254 mm).

**903.2.4.5 Commercial cooking operations.** An automatic sprinkler system shall be installed in a commercial kitchen exhaust hood and duct system where an automatic sprinkler system is used to comply with Section 904.

**903.2.4.6 Change of hazard.** The fire code official may require the installation of an automatic fire system when there is a change in the character of the occupancy or use of any building which increases or may cause to increase the hazard of fire or threat to life or safety.

**903.2.4.7 Change in access.** The fire code official may require the installation of an automatic fire system when any alteration or change in the use of a building or portion thereof changes access to property so as to impede the fire department's ability to control a fire.

**903.2.4.8 Other required suppression systems.** In addition to the requirements of Section 903.2, the provisions indicated in Table 903.2.4.8 also require the installation of a suppression system for certain buildings and areas.

**TABLE 903.2.4.8  
ADDITIONAL REQUIRED FIRE-EXTINGUISHING SYSTEMS**

SECTION	SUBJECT
914.2.1	Covered malls
914.3.1	High rise buildings
914.4.1	Atriums
914.5.1	Underground structures
914.6.1	Stages
914.7.1	Special amusement buildings
914.8.2, 914.8.5	Aircraft hangars
914.9	Flammable finishes
914.10	Drying rooms
1028.6.2.3	Smoke-protected seating
1208.2	Dry cleaning plants
1208.3	Dry cleaning machines
1504.2	Spray finishing in Group A, E, I or R
1504.4	Spray booths and spray rooms
1505.2	Dip-tank rooms in Group A, I or R
1505.4.1	Dip tanks
1505.9.4	Hardening and tempering tanks
1803.10	HPM facilities
1803.10.1.1	HPM work station exhaust
1803.10.2	HPM gas cabinets and exhausted enclosures
1803.10.3	HPM exit access corridor
1803.10.4	HPM exhaust ducts
1803.10.4.1	HPM noncombustible ducts
1803.10.4.2	HPM combustible ducts
1907.3	Lumber production conveyor enclosures
1908.7	Recycling facility conveyor enclosures
2106.1	Class A and B ovens
2106.2	Class C and D ovens
2209.3.2.6.2	Hydrogen motor fuel-dispensing area canopies

Table 2306.2	Storage fire protection
2306.4	Storage
2703.8.4.1	Gas rooms
2703.8.5.3	Exhausted enclosures
2704.5	Indoor storage of hazardous materials
2705.1.8	Indoor dispensing of hazardous materials
2804.4.1	Aerosol warehouses
2806.3.2	Aerosol display and merchandising areas
2904.5	Storage of more than 1,000 cubic feet of loose combustible fibers
3306.5.2.1	Storage of smokeless propellant
3306.5.2.3	Storage of small arms primers
3404.3.7.5.1	Flammable and combustible liquid storage rooms
3404.3.8.4	Flammable and combustible liquid storage warehouses
3405.3.7.3	Flammable and combustible liquid Group H-2 or H-3 areas
3704.1.2	Gas cabinets for highly toxic and toxic gas
3704.1.3	Exhausted enclosures for highly toxic and toxic gas
3704.2.2.6	Gas rooms for highly toxic and toxic gas
3704.3.3	Outdoor storage for highly toxic and toxic gas
4204.1.1	Pyroxylin plastic storage cabinets
4204.1.3	Pyroxylin plastic storage vaults
4204.2	Pyroxylin plastic storage and manufacturing
4603.4.1	Pyroxylin plastic storage in existing buildings
4603.4.2	Existing Group I-2 Occupancies

**7.92.903.3.1.3 Section 903.3.1.3 is amended – NFPA 13D Sprinkler Systems.**

Section 903.3.1.3 of Chapter 9 of the Fire Code of Santa Cruz County is amended to read as follows:

**903.3.1.3 NFPA 13D sprinkler systems.** Where allowed, automatic sprinkler systems installed in one and two-family dwellings shall be installed throughout in accordance with NFPA 13D, and installation guidelines as promulgated by the Santa Cruz County Fire Chiefs Association.

**7.92.903.6.1 Section 903.6.1 is amended – Pyroxylin plastics.**

Section 903.6.1 of Chapter 9 of the Fire Code of Santa Cruz County is amended to read as follows:

**903.6.1 Pyroxylin plastics.** An automatic sprinkler system shall be provided in all existing buildings where cellulose nitrate film or pyroxylin plastics are manufactured, stored or handled in quantities exceeding 100 pounds (45 kg). Vaults located within buildings for the storage of

raw pyroxylin shall be protected with an approved automatic sprinkler system capable of discharging 1.66 gallons per minute per square foot (68 L/min/m<sup>2</sup>) over the area of the vault.

**7.92.2205.1 Section 2205.1 is amended – Tank filling operations for Class I, II or IIIA liquids.**

Section 2205.1 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2205.1 Tank filling operations for Class I, II or III liquid fuels.** Delivery operations to tanks for Class I, II or III liquid fuels shall comply with Sections 2205.1.1 through 2205.1.3 and the applicable requirements of Chapter 34.

**7.92.2205.1.1 Section 2205.1.1 is amended – Delivery vehicle location.**

Section 2205.1.1 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2205.1.1 Delivery vehicle location.** Where liquid delivery to above-ground storage tanks is accomplished by positive-pressure operation, tank vehicles shall be positioned a minimum of 25 feet (7620 mm) from tanks receiving Class I liquids and 15 feet (4572 mm) from tanks receiving Class II and III liquid fuels.

**7.92.2206.2 Section 2206.2 is amended – Method of storage.**

Section 2206.2 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2206.2 Method of storage.** Approved methods of storage for Class I, II and III liquid fuels at motor fuel-dispensing facilities shall be in accordance with Sections 2206.2.1 through 2206.2.5.

**7.92.2206.2.1 Section 2206.2.1 is amended – Underground tanks.**

Section 2206.2.1 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2206.2.1 Underground tanks.** Underground tanks for the storage of Class I, II and III liquid fuels shall comply with Chapter 34.

**7.92.2206.2.2 Section 2206.2.2 is amended – Aboveground tanks located inside buildings.**

Section 2206.2.2 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2206.2.2 Aboveground tanks located inside buildings.** Aboveground tanks for the storage of Class I, II and III liquid fuels are allowed to be located in buildings. Such tanks shall be located in special enclosures complying with Section 2206.2.6, in a liquid storage room or a liquid storage warehouse complying with Chapter 34, or shall be listed and labeled as protected aboveground tanks.

**7.92.2206.2.3 Section 2206.2.3 is amended – Aboveground tanks located outside, above grade.**

Section 2206.2.3 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2206.2.3 Aboveground tanks located outside, above grade.** Aboveground tanks shall not be used for the storage of Class I, II or III liquid motor fuels except as provided by this section.

1. Above-ground tanks used for outside, above-grade storage of Class I, II or III liquid fuels shall be listed and labeled as protected aboveground tanks and be in accordance with Chapter 34. Such tanks shall be located in accordance with Table 2206.2.3.
2. Tanks containing fuels shall not exceed 12,000 gallons (45 420 L) in individual capacity or 48,000 gallons (181 680 L) in aggregate capacity. Installations with the maximum allowable aggregate capacity shall be separated from other such installations by not less than 100 feet (30 480 mm).
3. Tanks located at farms, construction projects, or rural areas shall comply with Section 3406.2.

**7.92.2206.2.4 Section 2206.2.4 is amended – Aboveground tanks located in above-grade vaults or below-grade vaults.**

Section 2206.2.4 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2206.2.4 Aboveground tanks located in above-grade vaults or below-grade vaults.** Aboveground tanks used for storage of Class I, II or III liquid motor fuels are allowed to be installed in vaults located above grade or below grade in accordance with Section 3404.2.8 and shall comply with Sections 2206.2.4.1 and 2206.2.4.2. Tanks in above-grade vaults shall also comply with Table 2206.2.3.

**7.92.2206.2.4.2 Section 2206.2.4.2 is amended – Fleet vehicle motor fuel-dispensing facilities.**

Section 2206.2.4.2 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2206.2.4.2 Fleet vehicle motor fuel-dispensing facilities.** Tanks storing Class II and Class III liquid fuels at a fleet vehicle motor fuel-dispensing facility shall be limited to a maximum individual capacity of 20,000 gallons (75 700 L) and an aggregate capacity of 80,000 gallons (302 800 L).

**7.92.2206.2.5 Section 2206.2.5 is amended – Portable tanks.**

Section 2206.2.5 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2206.2.5 Portable tanks.** Where approved by the fire code official, portable tanks are allowed to be temporarily used in conjunction with the dispensing of Class I, II or III liquid fuels into the fuel tanks of motor vehicles or motorized equipment on premises not normally accessible to the public. The approval shall include a definite time limit.

**7.92.2206.2.6 Section 2206.2.6 is amended – Special enclosures.**

Section 2206.2.6 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2206.2.6 Special enclosures.** Where installation of tanks in accordance with Section 3404.2.11 is impractical, or because of property or building limitations, tanks for liquid motor fuels are allowed to be installed in buildings in special enclosures in accordance with all of the following:

1. The special enclosure shall be liquid tight and vapor tight.
2. The special enclosure shall not contain backfill.
3. Sides, top and bottom of the special enclosure shall be of reinforced concrete at least 6 inches (152 mm) thick, with openings for inspection through the top only.
4. Tank connections shall be piped or closed such that neither vapors nor liquid can escape into the enclosed space between the special enclosure and any tanks inside the special enclosure.
5. Means shall be provided whereby portable equipment can be employed to discharge to the outside any vapors which might accumulate inside the special enclosure should leakage occur.
6. Tanks containing Class I, II or III liquids inside a special enclosure shall not exceed 6,000 gallons (22 710 L) in individual capacity or 18,000 gallons (68 130 L) in aggregate capacity.
7. Each tank within special enclosures shall be surrounded by a clear space of not less than 3 feet (910 mm) to allow for maintenance and inspection.

**7.92.2206.6.2 Section 2206.6.2 is amended – Piping, valves, fittings and ancillary equipment for aboveground tanks for Class I, II and IIIA liquids.**

Section 2206.6.2 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2206.6.2 Piping, valves, fittings and ancillary equipment for aboveground tanks for Class I, II and III liquid fuels.** Piping, valves, fittings and ancillary equipment for aboveground tanks shall comply with Sections 2206.6.2.1 through 2206.6.2.6.

**7.92.2206.7.6 Section 2206.7.6 is amended – Fuel delivery nozzles.**

Section 2206.7.6 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2206.7.6 Fuel delivery nozzles.** A listed automatic-closing-type hose nozzle valve with or without a latch-open device shall be provided on island-type dispensers used for dispensing Class I, II or III liquid fuels.

Overhead-type dispensing units shall be provided with a listed automatic-closing-type hose nozzle valve without a latch-open device.

**Exception:** A listed automatic-closing-type hose nozzle valve with latch-open device is allowed to be used on overhead-type dispensing units where the design of the system is

such that the hose nozzle valve will close automatically in the event the valve is released from a fill opening or upon impact with a driveway.

**7.92.2206.7.6.1 Section 2206.7.6.1 is amended – Special requirements for nozzles.**

Section 2206.7.6.1 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2206.7.6.1 Special requirements for nozzles.** Where dispensing of Class I, II or III liquid fuels is performed, a listed automatic-closing-type hose nozzle valve shall be used incorporating all of the following features:

1. The hose nozzle valve shall be equipped with an integral latch-open device.
2. When the flow of product is normally controlled by devices or equipment other than the hose nozzle valve, the hose nozzle valve shall not be capable of being opened unless the delivery hose is pressurized. If pressure to the hose is lost, the nozzle shall close automatically.

**Exception:** Vapor recovery nozzles incorporating insertion interlock devices designed to achieve shutoff on disconnect from the vehicle fill pipe.

3. The hose nozzle shall be designed such that the nozzle is retained in the fill pipe during the filling operation.
4. The system shall include listed equipment with a feature that causes or requires the closing of the hose nozzle valve before the product flow can be resumed or before the hose nozzle valve can be replaced in its normal position in the dispenser.

**7.92.2210.1 Section 2210.1 is amended – General.**

Section 2210.1 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2210.1 General.** The construction of marine motor fuel-dispensing facilities shall be in accordance with the International Building Code and NFPA 30A. The storage of Class I, II or III liquid fuels at marine motor fuel-dispensing facilities shall be in accordance with this chapter and Chapter 34.

**7.92.2210.2 Section 2210.2 is amended – Storage and handling.**

Section 2210.2 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2210.2 Storage and handling.** The storage and handling of Class I, II or III liquid fuels at marine motor fuel-dispensing facilities shall be in accordance with Sections 2210.2.1 through 2210.2.3.

**7.92.2210.2.1 Section 2210.2.1 is amended – Class I, II or III liquid fuel storage.**

Section 2210.2.1 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2210.2.1 Class I, II or III liquid fuel storage.** Class I, II or III liquid fuels stored inside of buildings used for marine motor fuel-dispensing facilities shall be stored in approved containers or portable tanks. Storage of Class I liquids shall not exceed 10 gallons (38 L).

**Exception:** Storage in liquid storage rooms in accordance with Section 3404.3.7.

**7.92.2210.2.2 Section 2210.2.2 is amended – Class II or III liquid storage and dispensing.**

Section 2210.2.2 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2210.2.2 Class II or III liquid fuel storage and dispensing.** Class II or III liquid fuels stored or dispensed inside of buildings used for marine motor fuel-dispensing facilities shall be stored in and dispensed from approved containers or portable tanks. Storage of Class II and III liquids shall not exceed 120 gallons (454 L).

**7.92.2210.2.3 Section 2210.2.3 is amended – Heating equipment.**

Section 2210.2.3 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2210.2.3 Heating equipment.** Heating equipment installed in Class I, II or III liquid storage or dispensing areas shall comply with Section 2201.6.

**7.92.2210.3.2 Section 2210.3.2 is amended – Supervision.**

Section 2210.3.2 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2210.3.2 Supervision.** Marine motor fuel-dispensing facilities shall have an attendant or supervisor who is fully aware of the operation, mechanics and hazards inherent to fueling of boats on duty whenever the facility is open for business. The attendant's primary function shall be to supervise, observe and control the dispensing of Class I, II or III liquids or flammable gases.

**7.92.2210.3.3 Section 2210.3.3 is amended – Hoses and nozzles.**

Section 2210.3.3 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2210.3.3 Hoses and nozzles.** Dispensing of Class I, II or III liquid fuels into the fuel tanks of marine craft shall be by means of an approved-type hose equipped with a listed automatic-closing nozzle without a latch-open device.

Hoses used for dispensing or transferring Class I, II or III liquid fuels, when not in use, shall be reeled, racked or otherwise protected from mechanical damage.

**7.92.2210.3.4 Section 2210.3.4 is amended – Portable containers.**

Section 2210.3.4 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2210.3.4 Portable containers.** Class I, II or III liquid fuels shall not be dispensed into a portable container unless such container is approved.

**7.92.2210.5.2 Section 2210.5.2 is amended – Spills.**

Section 2210.5.2 of Chapter 22 of the Fire Code of Santa Cruz County is amended to read as follows:

**2210.5.2 Spills.** Spills of Class I, II or III liquid fuels at or on the water shall be reported immediately to the fire department and jurisdictional authorities.

**7.92.3003.5.3 Section 3003.5.3 is amended – Securing compressed gas containers, cylinders and tanks.**

Section 3003.5.3 of Chapter 30 of the Fire Code of Santa Cruz County is amended to read as follows:

**3003.5.3 Securing compressed gas containers, cylinders and tanks.** Compressed gas containers, cylinders and tanks shall be secured to prevent falling caused by contact, vibration or seismic activity. Securing of compressed gas containers, cylinders and tanks shall be by one of the following methods:

1. Securing containers, cylinders and tanks to a fixed object with two or more non-combustible restraints.
2. Securing containers, cylinders and tanks on a cart or other mobile device designed for the movement of compressed gas containers, cylinders or tanks.
3. Nesting of compressed gas containers, cylinders and tanks at container filling or servicing facilities or in seller's warehouses not accessible to the public. Nesting shall be allowed provided the nested containers, cylinders or tanks, if dislodged, do not obstruct the required means of egress.
4. Securing of compressed gas containers, cylinders and tanks to or within a rack, framework, cabinet or similar assembly designed for such use.

**Exception:** Compressed gas containers, cylinders and tanks in the process of examination, filling, transport or servicing.

**7.92.3300 IFC Chapter 33 is deleted and replaced – Explosives and Fireworks**

IFC Chapter 33 is deleted in entirety. The following shall become Chapter 33 of the Fire Code of Santa Cruz County.

**3301.1 Scope.** For explosives requirements see California Code of Regulations, Title 19, Division 1, Chapter 10. For fireworks requirements see California Code of Regulations, Title 19, Division 1, Chapter 6.

**Exceptions:**

1. The Armed Forces of the United States, Coast Guard or National Guard.
2. Explosives in forms prescribed by the official United States Pharmacopoeia.
3. The possession, storage and use of small arms ammunition when packaged in accordance with DOTn packaging requirements.
4. The use of explosive materials by federal, state and local regulatory, law enforcement and fire agencies acting in their official capacities.
5. Items preempted by federal regulations.

**3301.1.2 – Fireworks.** The possession, manufacture, storage, sale, handling and use of fireworks are prohibited.

**Exceptions:**

1. The use of fireworks for display as allowed in Section 3302.

**3302 – Display Fireworks**

**3302.1 Permit Restrictions.** The fire code official is authorized to limit the quantity of fireworks permitted at a given location. No person, possessing a permit for storage of fireworks at any place, shall keep or store an amount greater than authorized in such permit.

**3302.2 – Financial Responsibility.** The permit holder shall furnish a bond or certificate of insurance in an amount deemed adequate by the fire code official for the payment of all potential damages to a person or persons or to property by reason of the permitted display, and arising from any acts of the permit holder, the agent, employees or subcontractors. The permit holder shall comply with all provisions of Title 19 California Code of Regulations, Chapter 6.

**3302.3 – Special Effects and other Proximate Displays.** The display of fireworks, including proximate audience displays and pyrotechnic special effects in motion picture, television, theatrical, and group entertainment productions, shall comply with all provisions of Title 19 California Code of Regulations, Chapter 6.

**7.92.3804.2 Section 3804.2 is amended – Maximum Capacity.**

Section 3804.2 of Chapter 38 of the Fire Code of Santa Cruz County is amended to read as follows:

**3804.2 - Maximum Capacity** For the protection of heavily populated or congested areas, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons (7570 L).

**Chapter 50 – [Reserved for future]**

**Chapter 51 – [Reserved for future]**

**7.92.5200 Chapter 52 is added – Suppression and Control of Hazardous Fire Areas.**

Chapter 52 of the Fire Code of Santa Cruz County is added to read as follows:

**5201— SCOPE.** The unrestricted use of grass-, grain-, brush- or forest-covered land in hazardous fire areas is a potential menace to life and property from fire and resulting erosion. Safeguards to prevent the occurrence of fires and to provide adequate fire-protection facilities to control the spread of fire which might be caused by recreational, residential, commercial, industrial or other activities shall be in accordance with Chapter 52.

**5202— DEFINITIONS.** For the purpose of this chapter, certain terms are defined as follows:  
**TRACER** is any bullet or projectile incorporating a feature which marks or traces the flight of said bullet or projectile by flame, smoke or other means which results in fire or heat.  
**TRACER CHARGE** is any bullet or projectile incorporating a feature designed to create a visible or audible effect by means which result in fire or heat and shall include any incendiary bullets and projectiles.

**5203— PERMITS.** The fire code official is authorized to stipulate conditions for permits. Permits shall not be issued when public safety would be at risk, as determined by the fire code official.

**5204 — RESTRICTED ENTRY.** The fire code official shall determine and publicly announce when hazardous fire areas shall be closed to entry and when such areas shall again be opened to entry. Entry on and occupation of hazardous fire areas, except public roadways, inhabited areas or established trails and camp sites which have not been closed during such time when the hazardous fire area is closed to entry, is prohibited.

**EXCEPTIONS:**

1. Residents and owners of private property within hazardous fire areas and their invitees and guests going to or being upon their lands.
2. Entry, in the course of duty, by peace or police officers, and other duly authorized public officers, members of a fire department and members of the United States Forest Service.

**5205 — TRESPASSING ON POSTED PROPERTY.**

**5205.1 General.** When the fire code official determines that a specific area within a hazardous fire area presents an exceptional and continuing fire danger because of the density of natural growth, difficulty of terrain, proximity to structures or accessibility to the public, such areas shall be closed until changed conditions warrant termination of closure. Such areas shall be posted as hereinafter provided.

**5205.2 Signs.** Approved signs prohibiting entry by unauthorized persons and referring to Appendix II-A shall be placed on every closed area.

**5205.3 Trespassing.** Entering and remaining within areas closed and posted is prohibited.

**EXCEPTION:** Owners and occupiers of private or public property within closed and posted areas, their guests or invitees, and local, state and federal public officers and their authorized agents acting in the course of duty.

**5206— SMOKING.** Lighting, igniting or otherwise setting fire to or smoking tobacco, cigarettes, pipes or cigars in hazardous fire areas is prohibited.

**EXCEPTION:** Places of habitation or within the boundaries of established smoking areas or campsites as designated by the fire code official.

**5207— SPARK ARRESTERS.** Chimneys used in conjunction with fireplaces, barbecues, incinerators or heating appliances in which solid or liquid fuel is used, upon buildings, structures or premises located within 200 feet (60 960 mm) of hazardous fire areas, shall be provided with a spark arrester constructed with heavy wire mesh or other noncombustible material with openings not to exceed  $\frac{1}{2}$  inch (12.7 mm).

**5208 — TRACER BULLETS, TRACER CHARGES, ROCKETS AND MODEL AIRCRAFT.** Tracer bullets and tracer charges shall not be possessed, fired or caused to be fired into or across hazardous fire areas.

Rockets, model planes, gliders and balloons powered with an engine, propellant or other feature liable to start or cause fire shall not be fired or projected into or across hazardous fire areas.

**5209 — APIARIES.** Lighted and smoldering material shall not be used in connection with smoking bees in or upon hazardous fire areas except by permit from the fire code official.

**5210 — OPEN-FLAME DEVICES.** Welding torches, tar pots, decorative torches and other devices, machines or processes liable to start or cause fire shall not be operated or used in or upon hazardous fire areas, except by permit from the fire code official.

**EXCEPTION:** Use within habited premises or designated campsites which are a minimum of 30 feet (9144 mm) from grass-, grain-, brush- or forest-covered areas.

Flame-employing devices, such as lanterns or kerosene road flares, shall not be operated or used as a signal or marker in or upon hazardous fire areas.

**EXCEPTION:** The proper use of fusees at the scenes of emergencies or as required by standard railroad operating procedures.

**5211 — OUTDOOR FIRES.** Outdoor fires shall not be built, ignited or maintained in or upon hazardous fire areas, except by permit from the fire code official.

**EXCEPTION:** Outdoor fires within habited premises or designated campsites where such fires are built in a permanent barbecue, portable barbecue, outdoor fireplace,

incinerator or grill and are a minimum of 30 feet (9144 mm) from a grass-, grain-, brush- or forest-covered area.

Permits shall incorporate such terms and conditions which will reasonably safeguard public safety and property. Outdoor fires shall not be built, ignited or maintained in or upon hazardous fire areas under the following conditions:

1. When high winds are blowing,
2. When a person age 17 or over is not present at all times to watch and tend such fire, or
3. When public announcement is made that open burning is prohibited.

Permanent barbecues, portable barbecues, outdoor fireplaces or grills shall not be used for the disposal of rubbish, trash or combustible waste material.

**5212 — INCINERATORS AND FIREPLACES.** Incinerators, outdoor fireplaces, permanent barbecues and grills shall not be built, installed or maintained in hazardous fire areas without prior approval of the fire code official.

Incinerators, outdoor fireplaces, permanent barbecues and grills shall be maintained in good repair and in a safe condition at all times. Openings in such appliances shall be provided with an approved spark arrester, screen or door.

**EXCEPTION:** When approved, unprotected openings in barbecues and grills necessary for proper functioning.

### **5213 — CLEARANCE OF BRUSH AND VEGETATIVE GROWTH FROM ELECTRICAL TRANSMISSION LINE**

**5213.1 General.** Clearance of brush and vegetative growth from electrical transmission and distribution lines shall be in accordance with Section 5213.

**EXCEPTION:** Section 5213 does not authorize persons not having legal right of entry to enter on or damage the property of others without consent of the owner.

**5213.2 Support Clearance.** Persons owning, controlling, operating or maintaining electrical transmission or distribution lines shall have an approved program in place that identifies poles or towers with equipment and hardware types that have a history of becoming an ignition source, and provides a combustible free space consisting of a clearing of not less than 10 feet (3048 mm) in each direction from the outer circumference of such pole or tower during such periods of time as designated by the fire chief.

**EXCEPTION:** Lines used exclusively as telephone, telegraph, messenger call, alarm transmission or other lines classed as communication circuits by a public utility.

### **5213.3 Electrical Distribution and Transmission Line Clearances.**

**5213.3.1 General.** Clearances between vegetation and electrical lines shall be in accordance with Section 5213.3.

**5213.3.2 Trimming clearance.** At the time of trimming, clearances not less than those established by Table 5213-A should be provided. The radial clearances shown below are minimum clearances that should be established, at time of trimming, between the vegetation and the energized conductors and associated live parts.

**EXCEPTION:** The fire code official is authorized to establish minimum clearances different than those specified in Table 5213-A when evidence substantiating such other clearances is submitted to the fire code official and approved.

**5213.3.3 Minimum clearance to be maintained.** Clearances not less than those established by Table 5213-B shall be maintained during such periods of time as designated by the fire code official. The site specific clearance achieved, at time of pruning, shall vary based on species growth rates, the utility company specific trim cycle, the potential line sway due to wind, line sway due to electrical loading and ambient temperature, and the tree's location in proximity to the high voltage lines.

**EXCEPTION:** The fire code official is authorized to establish minimum clearances different than those specified by Table 5213-B when evidence substantiating such other clearances is submitted to the fire code official and approved.

**TABLE 5213-A—MINIMUM CLEARANCES BETWEEN VEGETATION AND ELECTRICAL LINES AT TIME OF TRIMMING**

LINE VOLTAGE	MINIMUM CLEARANCE CONDUCTOR (feet)	RADIAL FROM
	× 304.8 mm	
2,400- 72,000	4	
72,001- 110,000	6	
110,001- 300,000	10	
300,001 or more	15	

**TABLE 5213-B—MINIMUM CLEARANCES BETWEEN VEGETATION AND ELECTRICAL LINES TO BE MAINTAINED**

LINE VOLTAGE	MINIMUM CLEARANCE (inches)
	× 25.4 MM
750-35,000	6
35,001-60,000	12
60,001-115,000	19
115,001-230,000	30 <sup>1/2</sup>
230,001-500,000	115

**5213.3.4 Electrical power line emergencies.** During emergencies, the utility company shall perform the required work to the extent necessary to clear the hazard. An emergency can include situations such as trees falling into power lines, or trees in violation of Table 5213-B.

**5213.4 Correction of Condition.** The fire code official is authorized to give notice to the owner of the property on which conditions regulated by Section 5213 exist to correct such conditions. If the owner fails to correct such conditions, the legislative body of the jurisdiction is authorized to cause the same to be done and make the expense of such correction a lien on the property where such condition exists.

#### **5214 — CLEARANCE OF BRUSH OR VEGETATIVE GROWTH FROM STRUCTURES**

**5214.1 General.** Persons owning, leasing, controlling, operating or maintaining buildings or structures in, upon or adjoining hazardous fire areas, and persons owning, leasing or controlling land adjacent to such buildings or structures, shall:

**5214.1.1 Clearance.** Maintain an effective firebreak through clearance of brush and vegetation in accordance with Section 304.1.2.

**5214.1.2 Trees and Deadwoods.** Maintain trees adjacent to or overhanging a building free of deadwood.

**5214.2 Corrective Actions.** The executive body is authorized to instruct the fire chief to give notice to the owner of the property upon which conditions regulated by Section 5214.1 exist to correct such conditions. If the owner fails to correct such conditions, the executive body is authorized to cause the same to be done and make the expense of such correction a lien upon the property where such condition exists.

#### **5215 — CLEARANCE OF BRUSH OR VEGETATIVE GROWTH FROM ROADWAYS.**

The fire code official is authorized to cause areas within 10 feet (3048 mm) on each side of portions of highways and private streets which are improved, designed or ordinarily used for vehicular traffic to be cleared of flammable vegetation and other combustible growth. The fire code official is authorized to enter upon private property to do so.

**EXCEPTION:** Single specimens of trees, ornamental shrubbery or cultivated ground cover such as green grass, ivy, succulents or similar plants used as ground covers, provided that they do not form a means of readily transmitting fire.

**5216 — UNUSUAL CIRCUMSTANCES.** If the fire code official determines that difficult terrain, danger of erosion or other unusual circumstances make strict compliance with the clearance of vegetation provisions of Sections 5213, 5214 or 5215 of Chapter 51 undesirable or impractical, enforcement thereof may be suspended and reasonable alternative measures shall be provided.

**5217 — DUMPING.** Garbage, cans, bottles, papers, ashes, refuse, trash, rubbish or combustible waste material shall not be placed, deposited or dumped in or upon hazardous fire areas or in, upon or along trails, roadways or highways in hazardous fire areas.

**EXCEPTION:** Approved public and private dumping areas.

**5218 — DISPOSAL OF ASHES.** Ashes and coals shall not be placed, deposited or dumped in or upon hazardous fire areas.

**EXCEPTIONS:**

1. In the hearth of an established fire pit, camp stove or fireplace.
2. In a noncombustible container with a tight-fitting lid, which is kept or maintained in a safe location not less than 10 feet (3048 mm) from combustible vegetation or structures.
3. Where such ashes or coals are buried and covered with 1 foot (304.8 mm) of mineral earth not less than 25 feet (7620 mm) from combustible vegetation or structures.

**5219 — USE OF FIRE ROADS AND FIREBREAKS.** Motorcycles, motor scooters and motor vehicles shall not be driven or parked upon, and trespassing is prohibited upon, fire roads or firebreaks beyond the point where travel is restricted by a cable, gate or sign, without the permission of the property owners. Vehicles shall not be parked in a manner which obstructs the entrance to a fire road or firebreak.

**EXCEPTION:** Public officers acting within their scope of duty.

Radio and television aerials, guy wires thereto, and other obstructions shall not be installed or maintained on fire roads or firebreaks unless located 16 feet (4877 mm) or more above such fire road or firebreak.

**5220 — USE OF MOTORCYCLES, MOTOR SCOOTERS AND MOTOR VEHICLES.** Motorcycles, motor scooters and motor vehicles shall not be operated within hazardous fire areas, without a permit by the fire code official, except upon clearly established public or private roads. Permission from the property owner shall be presented when requesting a permit.

**5221 — TAMPERING WITH FIRE DEPARTMENT LOCKS, BARRICADES AND SIGNS.** Locks, barricades, seals, cables, signs and markers installed within hazardous fire areas,

by or under the control of the fire code official, shall not be tampered with, mutilated, destroyed or removed.

Gates, doors, barriers and locks installed by or under the control of the fire code official shall not be unlocked.

**5222 — LIABILITY FOR DAMAGE.** The expenses of fighting fires which result from a violation of this chapter shall be a charge against the person whose violation caused the fire. Damages caused by such fires shall constitute a debt of such person and are collectable by the fire code official in the same manner as in the case of an obligation under a contract, expressed or implied.

### Chapter 53 – [Reserved for future]

### SECTION III

The geographic limits referred to in certain sections of the Fire Code of Santa Cruz County are hereby established as follows:

**Establishment of limits of districts in which storage of flammable or combustible liquids in outside aboveground tanks is prohibited.** The limits referred to in Sections 3404.2.9.5.1 and 3406.2.4.4 of the Fire Code of Santa Cruz County in which the storage of Class I flammable liquids or Class II combustible liquids in aboveground tanks outside of buildings is restricted are hereby established as the political boundary of the Santa Cruz County Fire Department.

**Exceptions:** Such use is allowed in the following zoning districts:

1. The storage of Class I flammable liquids or Class II combustible liquids in aboveground tanks outside of buildings is allowed in A or A-1 Zones;
2. The storage of Class I flammable liquids or Class II combustible liquids in aboveground tanks outside of buildings is allowed in M-1, M-2 or M-3 Zones;
3. The storage of Class I flammable liquids or Class II combustible liquids in aboveground tanks outside of buildings is allowed in NR Zones.

**Establishment of limits of districts in which storage of flammable cryogenic fluids in stationary containers is to be prohibited.** The limits referred to in Section 3506.2 of the Fire Code of Santa Cruz County in which storage of flammable cryogenic fluids in stationary containers is prohibited are hereby established as the political boundary of the Santa Cruz County Fire Department.

- Exceptions:**
1. The storage of flammable cryogenic fluids in stationary containers is allowed in an M-2 Zone with a Conditional Use Permit issued by the Planning Department.
  2. The storage of flammable cryogenic fluids in stationary containers is allowed in an M-3 Zone.

**Establishment of limits for storage of Liquefied Petroleum Gas.** The limits referred to in Section 3804.2 of the Fire Code of Santa Cruz County are hereby limited to a maximum of 2,000 gallons water capacity within the political boundary of the Santa Cruz County Fire Department.

**SECTION IV**

That if any section, subsection, sentence, clause or phrase of this ordinance is, for any reason, held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this ordinance. The Board of Supervisors of the Santa Cruz County hereby declares that it would have passed this ordinance, and each section, subsection, clause or phrase thereof, irrespective of the fact that any one or more sections, subsections, sentences, clauses and phrases be declared unconstitutional.

**SECTION V**

This ordinance shall take effect and be in full force and effect on January 1, 2011 pursuant to Health and Safety Code Section 18941.5.

PASSED AND ADOPTED this 26th day of October, 2010, by the Board of Supervisors of Santa Cruz County by the following vote:

AYES: Pirie, Leopold, Coonerty, Stone and Campos  
NOES: None  
ABSENT: None  
ABSTAIN: None

TONY CAMPOS  
Chair, Board of Supervisors

Attest:

**TESS FITZGERALD**

Clerk of the Board

APPROVED AS TO FORM:

[Signature]  
10/14/10  
County Counsel

DISTRIBUTION: County Administrative Office  
Planning Department  
General Services Department/O.E.S.  
State of California Housing & Community Development  
Office of the California State Fire Marshal

I HEREBY CERTIFY THAT THE FOREGOING INSTRUMENT IS A CORRECT COPY OF THE ORIGINAL ON FILE IN THE OFFICE AT TEST MY HAND AND SEAL THIS 27 DAY OF October 2010  
SUSAN A. MAURIELLO, COUNTY ADMINISTRATIVE OFFICER AND EX-OFFICIO CLERK OF THE BOARD OF SUPERVISORS  
OF THE COUNTY OF SANTA CRUZ, CALIFORNIA

Page 35 of 35

BY [Signature] DEPUTY

**BUILDING STANDARDS COMMISSION**

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



January 27, 2011

Ms. Annie Murphy, Planning II  
Planning Department  
County of Santa Cruz  
701 Ocean Street, 4<sup>th</sup> Floor  
Santa Cruz, California 95060

Dear Ms. Annie Murphy:

This letter is to acknowledge receipt on December 24, 2010 of the County of Santa Cruz submittal pertaining to Resolution No. 292-2010 with findings and is acceptable for filing. Per Health and Safety Code Section 17958.8 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



# COUNTY OF SANTA CRUZ

## PLANNING DEPARTMENT

701 OCEAN STREET, 4<sup>TH</sup> FLOOR, SANTA CRUZ, CA 95060  
(831) 454-2580 FAX: (831) 454-2131 TDD: (831) 454-2123  
KATHLEEN MOLLOY PREVISICH, PLANNING DIRECTOR

December 22, 2010

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

Attn: Jim McGowan, Deputy Executive Director

Dear Mr. McGowan:

On November 16, 2010, following a duly noticed public hearing, the Board of Supervisors of the County of Santa Cruz enacted an ordinance adopting by reference the 2010 California Building Standards, also know as Title 24 of the California Code of Regulations. As permitted by Sections 18941.5 and 17958.7 of the Health and Safety Code, the Board of Supervisors also adopted amendments to several building standards in the 2010 California Building Code that establish more restrictive building standards for Santa Cruz County. As required by Section 17958 of the Health and Safety Code, each amendment is expressly marked with an appropriate finding explaining why the amendment is necessary because of local climatic, topographic, or geological conditions. In a resolution, the Board of Supervisors adopted the amendments to the building standards in the 2010 California Building Standards Code along with their express findings.

As required by State Law, Santa Cruz County is filing with your Commission a copy of the resolution of the Board of Supervisors adopting the amendments to the building standards in the 2010 California Building Standards Code along with their express findings (Attachment 1), and is also filing a copy of the Technical Amendments to the 2010 Building Standards Codes with their express findings (Attachment 2).

The ordinance adopting the 2010 California Building Standards and adopting local amendments to the State Codes will become effective locally on January 1<sup>st</sup>, 2011. Please contact us should you have any questions or concerns our local amendments to the State Codes, or with the express findings.

RECEIVED  
CALIFORNIA BUILDING  
STANDARDS COMMISSION  
DEC 24 A 10 59



Sincerely,

*Annie Murphy*

Annie Murphy

Planner II

(831) 454-3111

[pln400@co.santa-cruz.ca.us](mailto:pln400@co.santa-cruz.ca.us)

Attachments:

1. Resolution approving the amendments to the Building Standards Code with their express findings
2. Technical Amendments to the 2010 Building Standards Codes with their express findings



BEFORE THE BOARD OF SUPERVISORS  
OF THE COUNTY OF SANTA CRUZ, STATE OF CALIFORNIA

RESOLUTION NO. 292-2010

On the motion of Supervisor Pirie  
duly seconded by Supervisor Coonerty

the following is adopted:

BOARD OF SUPERVISORS RESOLUTION APPROVING THE AMENDMENTS TO THE BUILDING STANDARDS CODE, ALSO KNOWN AS TITLE 24 OF THE CALIFORNIA CODE OF REGULATIONS, WITH THEIR EXPRESS FINDINGS, FOR FILING WITH THE CALIFORNIA BUILDING STANDARDS COMMISSION, AS REQUIRED BY CALIFORNIA HEALTH AND SAFETY CODE SECTION 17958.7.

---

WHEREAS, the State of California has adopted a new 2010 Building Standards Code, also known as Title 24 of the California Code of Regulations, which will become effective at the local government level on January 1, 2011; and

WHEREAS, the State allows local governments to amend State Building Standards with more restrictive building standards if the local government can make express findings that the amended building standards are necessary because of local climatic, geological, or topographical conditions and are more restrictive than the State Building Standards; and

WHEREAS, any amendments adopted by a local government are neither effective nor operative until copies of both the express findings and the amendments have been filed with the California Building Standards Commission; and

WHEREAS, it is necessary for the County of Santa Cruz to adopt amendments to the 2010 Building Standards Code; and

WHEREAS, for each of the amendments to the State Building Standards, express findings have been made that the amendments are appropriate and necessary due to local climatic, geological, or topographical conditions.

NOW, THEREFORE, BE IT RESOLVED AND ORDERED, that as part of the process of adopting the 2010 California Building Standards, the Board of Supervisors hereby adopts the amendments to the 2010 Building Standards Code, also known as Title 24 of the California Code of Regulations, and adopts the express findings for each amendment, as contained in Attachment 3, to be filed with the California Building Standards Commission.



Attachment 1

PASSED AND ADOPTED by the Board of Supervisors of the County of Santa Cruz, State of California, this 9th day of November, 2010 by the following vote:

AYES:	SUPERVISORS	Leopold, Pirie, Coonerty, Stone & Campos
NOES:	SUPERVISORS	None
ABSENT:	SUPERVISORS	None
ABSTAIN:	SUPERVISORS	None

**TONY CAMPOS**

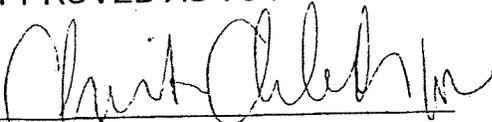
Chairperson of the Board of Supervisors

ATTEST:

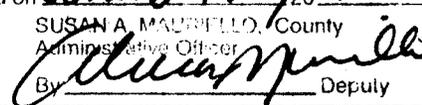
**TESS FITZGERALD**

Clerk of the Board of Supervisors

APPROVED AS TO FORM:

  
 \_\_\_\_\_  
 County Counsel

DISTRIBUTION: County Counsel  
Planning Department

STATE OF CALIFORNIA	)	ss
COUNTY OF SANTA CRUZ	)	
I, SUSAN A. MAURIELLO, County Administrative Officer and ex-officio Clerk of the Board of Supervisors of the County of Santa Cruz, State of California do hereby certify that the foregoing is a true and correct copy of the resolution passed and adopted by and entered in the minutes of the said board. In witness whereof I have hereunto set my hand and affixed the seal of the said Board on <u>November 10, 2010</u>		
SUSAN A. MAURIELLO, County Administrative Officer		
By 		Deputy



**TECHNICAL AMENDMENTS TO THE 2010 BUILDING STANDARDS CODES WITH THEIR EXPRESS FINDINGS**

**Key:** Underlined text represents an amendment to the 2010 Building Standard Code.  
 Strike-out text is language being deleted from the 2010 Building Standard Code.  
 Text boxes with *italics* include the findings required for local amendments.

**I. AMENDMENTS TO THE 2010 CALIFORNIA BUILDING CODE**

**(a) Roof assemblies amendments.**

(1) Section 1505.1 of the 2010 California Building Code is hereby amended as follows:

**1505.1 General.** Roof assemblies shall be divided into the classes defined below. Class A and B roof assemblies and roof coverings required to be listed by this Section shall be tested in accordance with ASTM E 108 or UL 790.

Table 1505.1a, shall be amended to read as follows:

TABLE 1505.1 a  
 MINIMUM ROOF COVERING CLASSIFICATION FOR TYPES OF CONSTRUCTION

1A	1B	11A	11B	111A	111B	1V	VA	VB
B	B	B	<u>B G</u>	B	<u>B G</u>	B	B	<u>B G</u>

For SI: 1 ft = 304.8mm, 1 square foot = 0.0929m<sup>2</sup>.

a. Unless otherwise required in accordance with Chapter 7A.

(2) Section 1505.1.3 of the California Building Code shall be amended as follows:

**15.5.1.3 Roof coverings within all other areas.** The entire roof covering of every existing structure where more than 50% of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair, or replacement of the roof of every existing structure, shall be a fire retardant roof covering that is at least a Class B G.

*Finding: Because of the steep, environmentally constrained and remote topography of Santa Cruz County it is necessary to amend the requirements for roof coverings to eliminate Class C roofing to require more restrictive non-combustible materials.*

**(b) Structural amendments**

**(1) Earthquake Loads amendment.**

Section 1613 of the 2010 Building Code is hereby amended, by adding subsection 1613.8 to read as follows:

1613.8 ASCE 7, Section 12.8.7. Modify ASCE 7, Section 12.8.7 by amending Equation 12.8-16 as follows:

$$\Theta = P \times \Delta I / V \times h \times C_d$$

(12.8-16)

*Finding: This amendment is necessary due to local geology and seismic conditions. Results from studies after the 1994 Northridge earthquake indicated that much of the damage was attributed to lack of quality control during construction. The proposed amendment improves quality control during construction and therefore needs to be incorporated into the Code.*

## **(2) Special Inspections for Concrete Construction Amendment**

Section 1704.4 of the California Residential Code is hereby amended to read as follows:

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

Exceptions: Special inspections shall not be required for:

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

*Finding: This amendment is necessary due to local geology and seismic conditions. Results from studies after the 1994 Northridge earthquake indicated that much of the damage was attributed to lack of quality control during construction. The proposed amendment improves quality control during construction and therefore needs to be incorporated into the Code.*

## **(3) Concrete Amendment**

Section 1908.1.8 ACI 318 of the 2010 California Building Code shall be amended as follows:

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

- 22.10 – Plain concrete in structures assigned to seismic design category C, D, E or F.
- 22.10.1 – Structures assigned to Seismic Design Category C, D, E, or F shall not have elements of structural plain concrete, except as follows:

~~Structural plain concrete basement, foundation or other walls below the base are permitted in detached one and two family dwellings three stories or less in height constructed with stud bearing walls. In dwellings assigned to seismic design category D or E, the height of the wall shall not exceed 8 feet (2438 mm), the thickness shall not be less than 7 1/2 inches (190 mm), and the wall shall retain no more than 4 feet (1219 mm) of unbalanced fill. Walls shall have reinforcement in accordance with 22.6.6.5.~~

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

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

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

Exception:

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

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

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

*Finding:*

*Local Geological Conditions – The Santa Cruz County region is a densely populated area having buildings constructed over and near an array of fault systems capable of producing major earthquakes, including but not limited to the recent 1989 Loma Prieta Earthquake. The proposed modification to ensure that the concrete footings will be reinforced to help minimize damage to the foundation due to a seismic event.*

**(c) Shear wall amendments.**

**(1) Aspect ratios.**

Section 2306.3 of the California Building Code is amended as follows:

Gypsum wallboard and Portland cement plaster, along with footnote 2 are hereby deleted from reference Standard AF&PA SDPWS Table 4.3.4.

**(2) Shear walls sheathed with other materials.**

Section 2306.7 of the California Building Code is hereby amended so that the last sentence in this section reads as follows:

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

**(3) Allowable Shear.**

Table 2306.7 of the California Building Code is hereby deleted.

**(4) Bracing.**

Table 2308.12.4 is hereby amended to read as follows:

In footnotes 'b' and 'c' of Table 2308.12.4, delete all references to "gypsum board", "lath and plaster", "Portland cement plaster", and "gypsum sheathing boards".

**(5) Resistance to shear.**

Section 2505.1 is hereby deleted.

*Findings for amendments 12.10.215 (c) 1 through (c) 5 above:*

*Local Geological Conditions – The Santa Cruz County region is a densely populated area having buildings constructed over and near an array of fault systems capable of producing major earthquakes, including but not limited to the recent 1989 Loma Prieta Earthquake. Due to the experience that gypsum wall board, fiberboard, and gypsum plaster, and stucco did not perform well during seismic events in large numbers of buildings in this region and the increased risk associated with such a seismic failure, the proposed modification to have a higher minimum standard for braced wall panels need to be incorporated into the code to assure that new buildings and additions to existing buildings are designed and constructed in a manner that does not result in significant damage.*

**(d) Accessibility amendment - Width Standards for Doorways.**

Exception 7 of Section 1008.1.1 of Chapter 10 of the 2010 California Building Code is hereby amended to read as follows:

In other than Group R-1 occupancies, the minimum widths for interior egress doors within a dwelling unit or sleeping unit that is not required to be adaptable or accessible as specified in Chapter 11A or 11B, as applicable, shall be 30 inches clear width. If, and to the extent that, this Subsection is inconsistent with any provision of the California Building Code currently or hereafter adopted by the County of Santa Cruz, the more restrictive provisions shall prevail.

*Finding: Santa Cruz County is comprised of many areas with steep slopes and is subject to a variety of geologic hazards including flooding, storm surge, landsliding and earthquakes. The County contains several fault zones including the San Andreas, Butano, Zayante, Corralitos Complex, and San Gregorio. The Loma Prieta Earthquake of 1989 was centered in Santa Cruz County and caused widespread damage to structures. Based on these topographic and geologic features in Santa Cruz County and the need for the public--including those with mobility issues--to quickly exit structures from all exits, a minimum 30-inch width for doorways, hallways and stairways is necessary.*

**(e) Accessibility amendment - Alterations**

Title 24 California Code of Regulations (State Building Code) Part 2, Chapter 11B, Section 1134B.2 requires that building owners, property owners, and commercial landlords make buildings and facilities accessible to persons with disabilities when performing renovation, structural repair, alterations, and additions to existing buildings and facilities. The provisions of Section 1134B.2 also apply to alterations to portions of the facility that are outside areas serving the building, included but not limited to parking lots, sidewalks, and walkways. For the purposes of Section 1134B.2, slurry sealing, top dressing, overlaying, and restriping shall not be considered an alteration. However, repaving, reconstructing or replacing a parking lot shall constitute an alteration.

*Finding: The County's previous amendment has been modified to be consistent with the state Building Code regarding what would be considered an alteration that would trigger compliance with accessibility requirements for existing buildings.*

**(f) Existing Structures Amendment.** Sections 3401, 3402, 3403, 3404, 3405, 3407, 3408, and 3410 of Chapter 34, entitled "Existing Structures", of the 2010 California Building Code are hereby adopted in their entirety.

*Finding: Santa Cruz County is in a seismically active area and has areas subject to flooding. The provisions above from Chapter 34 are necessary to preserve the structural integrity of existing buildings within the County in the event of flooding or seismic activity. Adoption of these Sections will also ensure that the County remains eligible for FEMA funding in the event of a natural disaster.*

**(g) Swimming Pool enclosures amendment.**

**Section 3109—Swimming Pool Enclosures and Safety Devices**—of the California Building Code is hereby deleted in its entirety and replaced with Section 12.10.216 to read as follows:

(a) Scope. The provisions of this Section shall apply to the design and construction of barriers and entrapment avoidance devices for swimming pools, spas and hot tubs located on the premises of Group R, Division 3 Occupancies, and to pool design and construction, pool decks, and pool drainage and disposal.

1. Application to Facilities Regulated by Department of Social Services. This Section does not apply to any facility regulated by the State Department of Social Services even if the facility is also used as a private residence of the operator. Pool safety in those facilities shall be regulated pursuant to regulations adopted by the State Department of Social Services.

(b) Definitions. For the purpose of this Section, certain terms, words and phrases are defined as follows:

Aboveground/On-Ground Pool. See definition of "Swimming Pool."

Approved Safety Pool Cover. A manually or power-operated safety pool cover that meets all of the performance standards of the ASTM, in compliance with Standard F 1346-91

ANSI. American National Standards Institute.

ASME. The American Society of Mechanical Engineers.

ASTM. The American Society for Testing and Materials.

Barrier. A fence, wall, building wall or combination thereof that completely surrounds the swimming pool and obstructs access to the swimming pool.

Exit Alarm. A device or devices that make audible, continuous alarm sounds when any door or window that permits access from a residence to the pool area, that is without any intervening barrier, is opened or is left ajar.

Grade. The underlying surface, such as earth or a walking surface.

Hot Tub. See definition of "Spa, Nonself-Contained" and "Spa, Self-Contained."

In-ground Pool. See definition of "Swimming Pool."

Separation Fence. A barrier that separates all doors of a dwelling unit with direct access to a swimming pool from the swimming pool.

Spa, Nonself-Contained. A hydromassage pool or tub for recreational or therapeutic use, not located in health-care facilities, designed for immersion of users and usually having a filter, heater and motor-driven blower. It may be installed indoors or outdoors, on the ground or on a supporting structure, or in the ground or in a supporting structure. A nonself-contained spa is intended for recreational bathing and contains water over 18 inches (457 mm) deep.

Spa, Self-Contained. A continuous-duty appliance in which all control, water- heating and water-circulating equipment is an integral part of the product, located entirely under the spa

skirt. A self-contained spa is intended for recreational bathing and contains water over 18 inches (457 mm) deep.

Swimming Pool. Any structure intended for swimming or recreational bathing that contains water over 18 inches (457 mm) deep. This includes in-ground, aboveground and on-ground swimming pools, and fixed-in-place wading pools.

Swimming Pool, Indoor. A swimming pool that is totally contained within a residential structure and surrounded on all four sides by walls of said structure.

Swimming Pool, Outdoor. Any swimming pool that is not an indoor pool.

(c) Barrier Requirements for Outdoor Swimming Pools. An outdoor swimming pool shall be provided with a barrier that shall be installed, inspected and approved prior to plastering or filling with water. The barrier shall comply with the following:

1. Height of Barrier. The top of the barrier shall be at least 60 inches (1524 mm) above grade measured on the side of the barrier that faces away from the swimming pool.
2. Vertical Clearance. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier that faces away from the swimming pool.
3. Horizontal Members. When barriers have horizontal members spaced less than 45 inches (1143 mm) apart, measured between the tops, the horizontal members shall be placed on the pool side of the barrier.
4. Decorative Design Work. Any decorative design work on the side away from the swimming pool, such as protrusions, indentations, cutouts or other physical characteristics, that could serve as handholds or footholds, which renders the barrier easily climbable, is prohibited.
5. Openings. Openings in the barrier shall not allow passage of a 1 $\frac{3}{4}$ -inch-diameter (44.5 mm) sphere, except in the following circumstances:
  - i. When vertical spacing between such openings is 45 inches (1143 mm) or more, the opening size may be increased such that the passage of a 4-inch-diameter (102 mm) sphere is not allowed; or
  - ii. For fencing composed of vertical and horizontal members, the spacing between vertical members may be increased up to 4 inches (102 mm) when the distance between the tops of horizontal members is 45 inches (1143 mm) or more.
6. Gage of Chain Link Fence. Chain link fences used as the barrier shall not be less than 11 gage.
7. Mesh Size of Chain Link Fence. Maximum mesh size for chain link fences shall be a 2.25 inch square (57 mm square) unless the fence is provided with slats fastened at the top or the bottom which reduce the openings to no more than 1.75 inches (44 mm).
8. Access gates. Access gates shall comply with the requirements of subsections 12.10.216(c)1 through 12.10.216(c)7 in addition to the following:
  - i. Pedestrian access gates shall be self-closing and have a self-latching device;
  - ii. Where the release mechanism of the self-latching device is located less than 60 inches (1524 mm) from the bottom of the gate:

- A. the release mechanism shall be located on the pool side of the barrier at least 3 inches (76 mm) below the top of the gate, and
  - B. the gate and barrier shall have no opening greater than ½ inch (12.7 mm) within 18 inches (457) of the release mechanism.
  - iii. Pedestrian gates shall swing away from the pool;
  - iv. Any gates other than pedestrian access gates shall be equipped with lockable hardware or padlocks and shall remain locked at all times when not in use.
9. Wall as Part of Barrier. Where a wall of a Group R, Division 3 Occupancy dwelling unit serves as part of the barrier and contains door or window openings between the dwelling unit and the outdoor swimming pool that provide direct access to the pool, a separation fence meeting the requirements of subsections 12.10.216(a) through 12.10.216(c)8 shall be provided, except when the Building Official approves one of the following alternatives:
- i. Self-closing and self-latching devices installed on all doors with direct access to the pool with the release mechanism located a minimum of 60 inches (1524 mm) above the floor; or
  - ii. An exit alarm installed on all doors and windows with direct access to the pool. The alarm shall sound continuously within seven seconds after the door or window and its screen, if present, are opened, and be capable of providing a sound pressure level of not less than 85 dBA when measured indoors at 10 feet (3048 mm). The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as a touchpad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last no longer than 15 seconds. The deactivation switch shall be located at least 54 inches (1372 mm) above the threshold of the door or window. Exit alarms may be battery operated or may be connected to the electrical wiring of the building; or
  - iii. Other means of protection, such as an approved safety pool cover, may be acceptable so long as the degree of protection afforded is not less than that afforded by any of the devices described above.
10. Aboveground Pool as Part of Barrier. Where an aboveground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then:
- i. The ladder or steps shall be capable of being secured, locked or removed to prevent access; or
  - ii. The ladder or steps shall be a barrier that meets the requirements of subsections 12.10.216(c)1 through 12.10.216(c)8..
  - iii. When the ladder or steps are secured, locked or removed, any openings created shall be protected by a barrier complying with subsections 12.10.216(c)1 through 12.10.216(c)8.

(d) Barrier Requirements for Indoor Swimming Pools. For an indoor swimming pool, protection shall comply with the requirements of subsection 12.10.216(c)9.

(e) Barrier Requirements for Spas and Hot Tubs. For a nonself-contained and self-contained spa or hot tub, protection shall comply with the requirements of c, except in the following circumstance:

- 1. A self-contained spa or hot tub equipped with a listed safety cover.

(f) Entrapment Avoidance. Whenever a building permit is issued for the construction of a new swimming pool or spa, the pool or spa shall meet all of the following requirements:

1. Suction outlet. The suction outlet of the pool or spa for which the permit is issued shall be equipped to provide circulation throughout the pool or spa, to include:
  - i. The swimming pool or spa shall have at least two circulation drains per pump that shall be hydraulically balanced and symmetrically plumbed through one or more "T" fittings, and that are separated by a distance of at least three feet in any dimension between the drains;
  - ii. Suction outlets that are less than 12 inches (306 mm) across shall be covered with anti-entrapment grates, as specified in the ASME/ANSI Standard A 112.19.8, that cannot be removed except with the use of tools. Slots or openings in the grates or similar protective devices shall be of a shape, area, and arrangement that would prevent physical entrapment and would not pose any suction hazard to bathers.
2. Atmospheric Vacuum Relief System. All pool and spa single- or multiple-outlet circulation systems shall be equipped with an atmospheric vacuum relief should grate covers located therein become missing or broken. Such vacuum relief systems shall include at least one approved or engineered method of the type specified herein, as follows:
  - i. Safety vacuum release systems conforming to ASME A 112.19.17; or
  - ii. Approved gravity drainage system.
3. Pool Cleaner Fittings. Where provided, vacuum or pressure cleaner fitting(s) shall be located in an accessible position(s) at least 6 inches (152 mm) and not greater than 12 inches (305 mm) below the minimum operational water level or as an attachment to the skimmer(s).
4. Additional Backup Safety System. Any backup safety system that an owner of a new swimming pool or spa may choose to install in addition to the requirements set forth in these subsections shall meet the standards as published in the document, "Guidelines for Entrapment Hazards: Making Pools and Spas Safer," Publication Number 363, March 2005, United States Consumer Product Safety Commission.
5. Upgrading Required. Whenever a building permit is issued for the remodel or modification of an existing swimming pool, spa or hot tub, the permit shall require that the suction outlet of the existing swimming pool, spa or hot tub be upgraded so as to be equipped with an anti-entrapment cover meeting current standards of the ASTM or the ASME.

(g) Applicability of Provisions.

1. If Built or Erected Prior to August 14, 1992. Any property owner of a residential pool, spa or hot tub built or erected prior to August 14, 1992 shall:
  - i. Comply with the current barrier regulations found in this Section, including, but not limited to, obtaining any required permits;
  - ii. The barrier shall be maintained in compliant condition;
  - iii. Prior to the sale of residential property containing a swimming pool, spa or hot tub, the owner shall provide the buyer with a written certification, prepared by the Building Official or a certified home inspector, of compliance with the barrier requirements of this Section.

2. If Built or Erected On or After August 14, 1992. Any property owner of a residential pool, spa or hot tub built or erected on or after August 14, 1992 with a valid finalized building permit shall:
  - i. Maintain the pool, spa or hot tub in compliance with the Code requirements in effect when constructed or erected with the exception of 12.10.216 (g) 2 ii;
  - ii. Notwithstanding its compliance with the Code requirements in effect when constructed or erected, the owner of a residential swimming pool without a barrier between the residence and the pool shall comply with the barrier regulations in effect on January 1, 2007 including, but not limited to, obtaining any required permits;
  - iii. Prior to the sale of residential property containing a swimming pool, spa or hot tub, the owner shall provide the buyer with a written certification, prepared by the Building Official or a certified home inspector, of compliance with the barrier requirements in effect when constructed or erected, with the exception of complying with subsection 12.10.216(g)2ii if there is no barrier between the residence and the pool.

(h) Pool Design and Construction.

3. General. Pool design and construction shall be in accordance with accepted engineering practice, shall be in conformity with applicable provisions of the adopted building, electrical, plumbing, and mechanical codes, and shall be structurally suitable for the soil, topographic, and geologic conditions prevailing at the construction site.
4. Expansive Soil Design. Pools constructed below grade shall be designed on the assumption that their construction is to be in an area of moderately expansive soil having an expansion index of 51-90 and an equivalent fluid pressure of not less than 45 pounds per cubic foot (45 p.c.f). Where tests indicate that soils at a pool site are non-expansive or have low expansion characteristics from the ground surface to the full depth of the pool, structural design may be based on an equivalent fluid pressure not less than 30 p.c.f.

In highly expansive soils having an expansion index of 91-130, pools shall be designed for not less than 60 p.c.f. equivalent fluid pressure. In very highly expansive soils having an expansion index over 130, pool design shall be subject to special requirements based on a site investigation, soil testing, and engineering analysis by a registered civil engineer to determine appropriate design parameters for the site.
5. Hydrostatic Uplift. In areas of anticipated high water table or moderate to highly expansive soil and approved hydrostatic relief system or device shall be installed.
6. Thermal Protection for Plastic Piping. Between the inlet of pool water heating equipment and any plastic water piping connected thereto, a check valve shall be installed to prevent thermal damage to such piping due to backflow. When rapid or high-rate filters are employed a check valve may be omitted. Between the outlet of pool heating equipment and any plastic water piping connected thereto, not less than five feet of approved metal pipe shall be installed for the purpose of dissipating heat.

(i) Decks

1. General. A deck shall be provided around below-grade swimming pools except when special engineering design is furnished which indicates that such deck is not necessary for the purpose of maintaining the structural integrity of the pool and/or for controlling surface water and moisture content in the soil adjacent to the pool. Decks shall not be required for spas and hot tubs.

2. Deck Design and Construction. Required decks shall be constructed of concrete or other approved impervious material and shall be sloped to provide positive drainage away from the perimeter of the pool. Except as provided below, decks shall have a minimum width of four feet and shall be at least 3-1/2 inches in thickness. Reinforcement shall be #3 bars spaced not over 24 inches on center each way, or equivalent reinforcing.

Approved joints shall be provided in the deck at corners, at maximum 10-foot intervals, and wherever necessary in order to control cracking, to allow for differential movement, and to minimize damage to the deck from such movement should it occur.

Joints in decks and coping shall be made watertight with an approved permanent resilient sealant.

3. Cutoff Walls. At the outer perimeter of pool decks a cutoff wall of approved Material shall be installed below-grade to a depth of at least 15 inches so as to form a permanent and effective vertical moisture barrier.

i. Exception: A cutoff wall may be omitted when a deck at least six feet wide is installed.

ii. Exception: Decks less than four feet in width may be installed provided that the required cutoff wall is increased in depth beyond the minimum by an amount equal to the reduction in deck width.

4. Pre-saturation, Highly Expansive Soils. When the soil below a deck has an expansion index of 91 or greater it shall be saturated with water to a depth of at least 18 inches prior to installation of the deck.

(j) Drainage and Disposal.

1. Surface water. Surface water from pool decks shall be collected and conducted through non-corrosive devices to a street, storm drain, or other approved watercourse or disposal area.

2. Waste water. Pool waste water shall be disposed of in accordance with the requirements of Environmental Health.

3. Drywells. Drywells shall not be employed for pool wastewater disposal except when specifically approved for the purpose and when it has been determined that such installation is not likely to have an adverse effect on the structural stability of the pool or other structures on the site. The Building Official may require a percolation test, soils report, and/or geological report to make such a determination.

**Findings:**

1. Section 3109 of the CBC contains two provisions that allow local jurisdictions to have alternative standards:
  - a. 3109.4.4.2.5—“Any ordinance governing child access to pools adopted by a political subdivision on or before January 1, 1997, is presumed to afford protection that is equal to or greater than that afforded by any of the devices set forth in Items 1-4, inclusive.” Santa Cruz County has had such an ordinance since 1970.
  - b. 3109.4.4.5.3—Exempt facilities. “Any pool within the jurisdiction of any political subdivision that adopts an ordinance for swimming pool safety that includes requirements that are at least as stringent as this division.” Santa Cruz County, as part of adopting this ordinance, has revised our existing ordinance to include those requirements found in this Section that are more stringent than our existing regulations.
2. Section 3109.5 of the CBC does not include the language of AB 2977 (“Swimming Pool and Spa Safety Act of 2006”), previously incorporated by Santa Cruz County, or AB 382. The text of these laws is included in this ordinance as well as the provisions of 3109.5.2 and 3109.5.4 that are more restrictive.

**(h) Grading Amendment – Appendix J**

Appendix J is adopted in its entirety, and is amended as follows.

**SECTION J101  
GRADING**

**J101.1 Scope.** The provisions of this Appendix chapter apply to grading, excavation and earthwork construction, including fills and embankments, in the context of a Building Permit. Where conflicts occur between the technical requirements of this chapter and the soils or engineering geology report, the approved soils or engineering geology report shall govern. Where conflicts occur between this Appendix and the County Grading Regulations or Erosion Control Ordinance, the Code section that is more restrictive shall apply.

**J101.1.1** The following sections of Appendix J have been modified to refer to the complementary sections of the County Grading Regulations (Chapter 16.20) and Erosion Control ordinance (Chapter 16.22). All other sections of County Code Chapters 16.20 and 16.22 not specifically cited in this Appendix are incorporated as a part of this Appendix.

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category.*

**J101.2 Flood hazard areas.** The provisions of this chapter shall not apply to grading, excavation and earthwork construction, including fills and embankments, in floodways within flood hazard areas established in Section 1612.3 or in flood hazard areas where design flood elevations are specified but floodways have not been designated, unless it has been demonstrated through hydrologic and hydraulic analyses performed in accordance with

standard engineering practice that the proposed work will not result in any increase in the level of the base flood.

## SECTION J102 DEFINITIONS

**J102.1 Definitions.** For the purposes of this appendix chapter, the terms, phrases and words listed used in this Section and their derivatives shall have the indicated meanings as indicated in this Section and in County Code Section 16.20.030.

~~**BENCH.** A relatively level step excavated into earth material on which fill is to be placed.~~

~~**COMPACTION.** The densification of a fill by mechanical means.~~

~~**CUT.** See "Excavation".~~

~~**EROSION.** The wearing away of the ground surface as a result of the movement of wind, water, or ice.~~

~~**EXCAVATION.** The removal of earth material by artificial means, also referred to as a cut.~~

~~**FILL.** Deposition of earth materials by artificial means.~~

~~**GRADE.** The vertical location of the ground surface.~~

~~**GRADE, EXISTING.** The grade prior to grading.~~

~~**GRADE, FINISHED.** The grade of the site at the conclusion of all grading efforts.~~

~~**GRADING.** An excavation or fill or combination thereof.~~

~~**KEY.** A compacted fill placed in a trench excavated in earth material beneath the toe of a slope.~~

~~**SLOPE.** An inclined ground surface the inclination of which is expressed as a ratio of horizontal distance to vertical distance.~~

~~**TERRACE.** A relatively level step constructed in the face of a graded slope for drainage and maintenance purposes.~~

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category.*

*All of the deleted definitions in Appendix J are defined in the Grading Ordinance.*

## PERMITS REQUIRED

**J103.1 Permits required.** Except as exempted in Section J103.2, no grading shall be performed without first having obtained a permit therefore from the Planning Director or Building Official. A grading permit does not include the construction of retaining walls or other structures. A separate approval shall be required for each site and shall be obtained as specified in County Code Section 16.20.040 – “Approval Required”.

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. Santa Cruz County processes its Grading Permits in conjunction with building permits but under a different administrative process.*

**J103.2 Exemptions.** See County Code Section 16.20.050 – “Exemptions”. A grading permit shall not be required for the following:

1. ~~Grading in an isolated, self-contained area, provided there is no danger to the public, and that such grading will not adversely affect adjoining properties.~~
2. ~~Excavation for construction of a structure permitted under this code.~~
3. ~~Cemetery graves.~~
4. ~~Refuse disposal sites controlled by other regulations.~~
5. ~~Excavations for wells, or trenches for utilities.~~
6. ~~Mining, quarrying, excavating, processing or stockpiling rock, sand, gravel, aggregate, or clay controlled by other regulations, provided such operations do not affect the lateral support of, or significantly increase stresses in, soil on adjoining properties.~~
7. ~~Exploratory excavations performed under the direction of a registered design professional~~

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

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented a list of exemptions in local Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than exemptions in of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category.*

## SECTION J104

## PERMIT APPLICATION AND SUBMITTALS

**J104.1 Submittal requirements.** In addition to the provisions of Section 105.3 Appendix Chapter 1, the applicant shall state the estimated quantities of excavation and fill. the Grading Permit application shall include all of the materials specified in County Code Section 16.20.060 – “Application”.

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category. Our required application materials are more rigorous than those deleted in this subsection.*

**J104.2 Site plan requirements.** In addition to the provisions of Section 106, Appendix Chapter 1, a grading plan shall show the existing grade and finished grade in contour intervals of sufficient clarity to indicate the nature and extent of the work and show in detail that it complies with the requirements of this code. The plans shall show the existing grade on adjoining properties in sufficient detail to identify how grade changes will conform to the requirements of this code. See Section J104.1.

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. We have, therefore, deleted sections of Appendix J that fall within this category. Our required application materials are much more rigorous than those deleted in this subsection.*

**J104.3 Soils Geotechnical Report.** See Section J104.1. A soils report prepared by registered design professionals shall be provided which shall identify the nature and distribution of existing soils; conclusions and recommendations for grading procedures; soil design criteria for any structures or embankments required to accomplish the proposed grading; and, where necessary, slope stability studies, and recommendations and conclusions regarding site geology. In addition, the report shall contain the following:

1. Soil design criteria for any structures or embankments required to accomplish the proposed grading; and
2. Where necessary, slope stability studies, and recommendations and conclusions regarding site geology.

**Exception:** A soils report is not required where the Building Official determines that the nature of the work applied for is such that a report is not necessary.

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category. Soils reports are required except when deemed unnecessary by the Planning Director or Building Official.*

**J104.4 Liquefaction study.** For sites with mapped maximum considered earthquake spectral response accelerations at short periods ( $S_s$ ) greater than 0.5g as determined by Section 1613, a study of the liquefaction potential of the site shall be provided, and the recommendations incorporated in the plans.

**Exception:** A liquefaction study is not required where the Building Official or County Geologist determines from established local data that the liquefaction potential is low.

## SECTION J105

### INSPECTION

**J105.1 General.** Inspections shall be governed by Section 109, Chapter 1, Division II of this Code, County Code Section 16.20.200, and as indicated herein.

**J105.2 Special and Supplemental inspections.** The special inspection requirements of Section 1704.7 shall apply to work performed under a grading permit where required by the Building Official.

## SECTION J106

### EXCAVATIONS

**J106.1 Maximum slope.** See County Code Section 16.20.140 - "Design Standards for Excavations". The slope of cut surfaces shall be no steeper than is safe for the intended use, and shall be no steeper than 2 units horizontal to 1 unit vertical (50 percent) unless the owner or authorized agent furnishes a soils report justifying a steeper slope.

**Exceptions:**

1. A cut surface may be at a slope of 1.5 horizontal to 1 vertical (67 percent) provided that all the following are met:
  - 1.1. It is not intended to support structures or surcharges.
  - 1.2. It is adequately protected against erosion.
  - 1.3. It is no more than 8 feet (~~2438 mm~~) in height.
  - 1.4. It is approved by the Building Official.

- 1.5. Groundwater is not encountered.
2. A cut surface in bedrock shall be permitted to be at a slope of 1 unit horizontal to 1 unit vertical (100 percent slope), if approved by the Building Official or County Geologist with appropriate geotechnical and, if required by the Building Official, engineering geology reports.

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, The County has made this section more stringent by requiring substantiation through the use of geotechnical and engineering geology reports.*

## SECTION J107

### FILLS

**J107.1 General.** Unless otherwise recommended in the soils geotechnical report, fills shall conform to provisions of this Section and with County Code Section 16.20.150 - "Design Standards for Fills".

**J107.2 Surface preparation.** See County Code Section 16.20.150 - "Design Standards for Fills".—The ground surface shall be prepared to receive fill by removing vegetation, topsoil and other unsuitable materials, and scarifying the ground to provide a bond with the fill material.

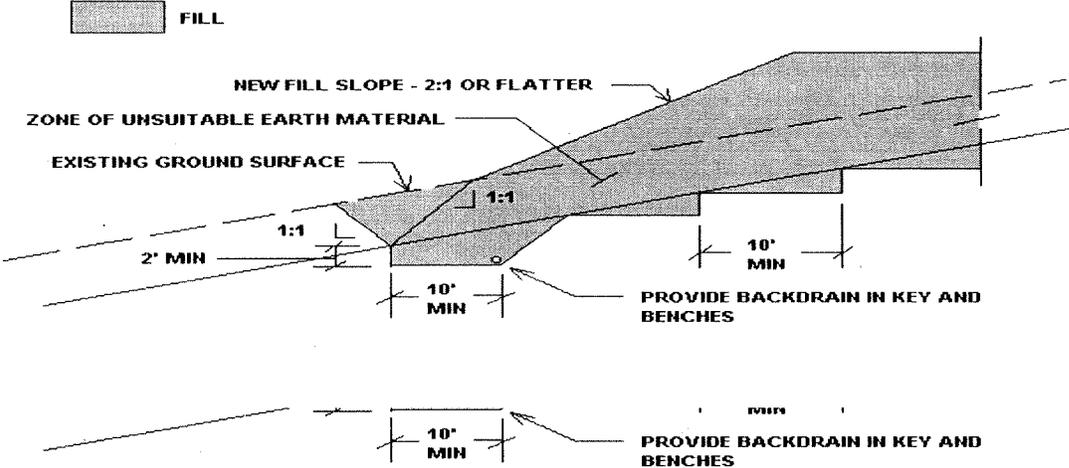
**J107.3 Benching.** Where existing grade is at a slope steeper than 5 horizontal to 1 vertical (20 percent) and the depth of the fill exceeds 5 feet (1524 mm) benching shall be provided in accordance with Figure J107.3. A key shall be provided which is at least 10 feet (3048 mm) in width and 2 feet (610 mm) in depth.

**J107.4 Fill material.** ~~Fill material shall not include organic, frozen or other deleterious materials. No rock or similar irreducible material greater than 12 inches (305 mm) in any dimension shall be included in fills.~~ See County Code Section 16.20.150 - "Design Standards for Fills".

**J107.5 Compaction.** All fill material shall be compacted to 90 percent of maximum density as determined by ASTM D 1557, Modified Proctor, in lifts not exceeding 12 inches (305 mm) in depth.

**J107.6 Maximum slope.** ~~The slope of fill surfaces shall be no steeper than is safe for the intended use. Fill slopes steeper than 2 horizontal to 1 vertical (50 percent) shall be justified by soils reports or engineering data.~~ See County Code Section 16.20.150 - "Design Standards for Fills".

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category. In this case the corresponding language in the Grading Ordinance establishes a higher standard.*

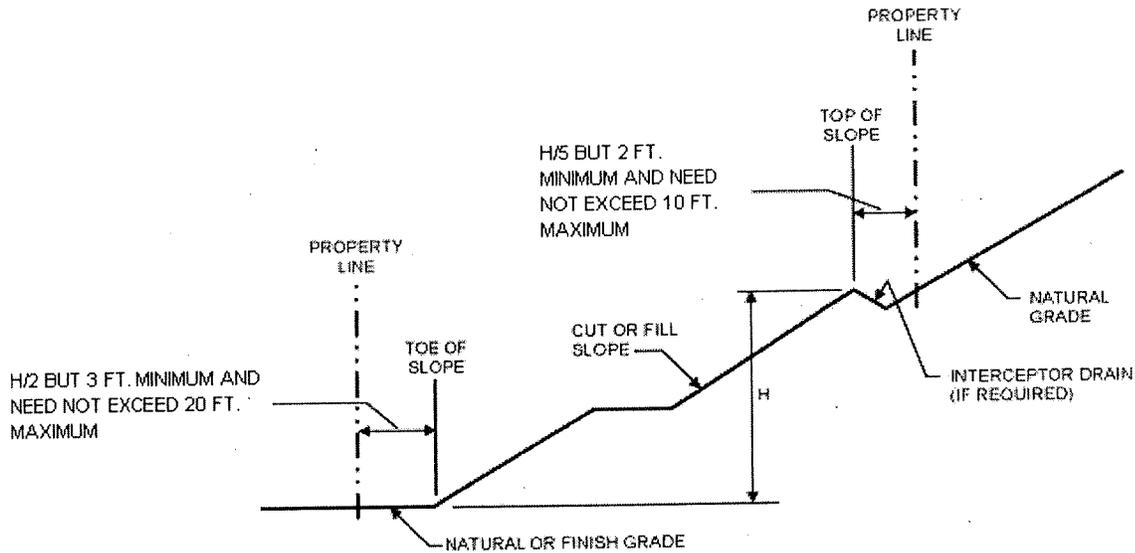


**FIGURE J107.3**  
**KEY AND BENCHING DETAILS**

**SECTION J108**  
**SETBACKS**

**J108.1 General.** Cut and fill slopes shall be set back from the property lines in accordance with this section. Setback dimensions shall be horizontal distances measured perpendicular to the property line and shall be as shown in Figure J108.1, unless substantiating data is submitted justifying reduced setbacks

**J108.2 Top of slope.** The setback at the top of a cut slope shall not be less than that shown in Figure J108.1, or than is required to accommodate any required interceptor drains, whichever is greater.



**FIGURE J108.1  
DRAINAGE SETBACK DIMENSIONS**

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. In this figure, The County has changed the dimensions to reflect a more rigorous application of setbacks.*

**J108.3 Slope Protection.** Where required to protect adjacent properties at the toe of a slope from adverse effects of the grading, additional protection, approved by the Building Official, shall be included. Such protection may include but shall not be limited to:

1. Setbacks greater than those required by Figure J108.1.
2. Provisions for retaining walls or similar construction.
3. Erosion protection of the fill slopes.
4. Provision for the control of surface waters.

**SECTION J109  
DRAINAGE AND TERRACING**

**J109.1 General.** Unless otherwise recommended by a registered design professional, drainage facilities and terracing shall be provided in accordance with the requirements of this section and County Code Section 16.20.170 – “Design Standards for Drainage Facilities and Terraces”.

**Exception:** ~~Drainage facilities and terracing need not be provided where the ground slope is not steeper than 3 horizontal to 1 vertical (33 percent).~~

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category.*

**J109.2 Terraces.** Terraces at least 6 feet (~~1829 mm~~) in width shall be established at not more than 30-foot (~~9144 mm~~) vertical intervals on all cut or fill slopes to control surface drainage and debris. Suitable access shall be provided to allow for cleaning and maintenance.

Where more than two terraces are required, one terrace, located at approximately mid-height, shall be at least 12 feet (~~3658 mm~~) in width.

Swales or ditches shall be provided on terraces. They shall have a minimum gradient of 20 horizontal to 1 vertical (5 percent) and shall be paved with concrete not less than 3 inches (~~76 mm~~) in thickness, or with other materials suitable to the application. They shall have a minimum depth of 12 inches (~~305 mm~~) and a minimum width of 5 feet (~~1524 mm~~).

A single run of swale or ditch shall not collect runoff from a tributary area exceeding 13,500 square feet (~~1256 m<sup>2</sup>~~) (projected) without discharging into a down drain.

**J109.3 Interceptor drains.** Interceptor drains shall be installed along the top of cut slopes receiving drainage from a tributary width greater than 40 feet (~~12192 mm~~), measured horizontally. They shall have a minimum depth of 1 foot (~~305 mm~~) and a minimum width of 3 feet (~~915 mm~~). The slope shall be approved by the Building Official, but shall not be less than 50 horizontal to 1 vertical (2 percent). The drain shall be paved with concrete not less than 3 inches (~~76 mm~~) in thickness, or by other materials suitable to the application and reinforced as required for drainage terraces. Discharge from the drain shall be accomplished in a manner to prevent erosion and shall be approved by the Building Official.

**J109.4 Drainage across property lines.** Drainage across property lines shall not exceed that which existed prior to grading. Excess or concentrated drainage shall be contained on site or directed to an approved drainage facility. Erosion of the ground in the area of discharge shall be prevented by installation of nonerosive down drains or other devices.

## SECTION J110 EROSION CONTROL

**J110.1 General.** See County Code Chapter 16.22 – “Erosion Control”. The faces of cut and fill slopes shall be prepared and maintained to control erosion. This control shall be permitted to consist of effective planting.

**Exception:** Erosion control measures need not be provided on cut slopes not subject to erosion due to the erosion-resistant character of the materials.

Erosion control for the slopes shall be installed as soon as practicable and prior to calling for final inspection.

*Finding: Due to the topographic and geologic characteristics of Santa Cruz County, the County has, since 1977 and 1980, respectively, maintained and implemented Grading and Erosion Control Ordinances that are equivalent to or, in many instances, more rigorous than certain sections of Appendix J. The County has, therefore, deleted sections of Appendix J that fall within this category. In this case, the County's Erosion Control Ordinance is much more stringent and specific in application than the Appendix.*

**SECTION J111**  
**REFERENCED STANDARDS**

ASTM	Test Method for Laboratory	J107.6 5
D	Compaction Characteristics of Soil	
1557-	Using Modified Effort [56,000 ft-lb/ft <sup>3</sup>	
e01	(2,700 kN-m/m <sup>3</sup> )	

## (i) Appendix C amendment

**Allowable height and area amendment.**

**Section C102.2— One-story unlimited area** - of Appendix C (Group U – Agricultural Buildings) of the California Building Code is hereby amended to read as follows:

**C102.2 One-story unlimited area.** The area of a one-story Group U agricultural building shall not be limited if the building is surrounded and adjoined by public ways or yards not less than 60 feet (18 288mm) in width.

**Exception:** The area of a one-story Group U, Division 3 Occupancy greenhouse which is used exclusively for growing flowers, plants, fruits, vegetables, shrubs, trees, or similar horticultural produce shall not be limited if the setback from all properties zoned for primary agricultural use to the building, or the setback between horticultural buildings located on the same property, is not less than twenty (20) feet and if such setback area is maintained open and accessible for fire fighting purposes. Setbacks between greenhouses as described above and an adjacent property with a zoning designation that is not for primary agricultural use shall not qualify for this exception. In no case shall the distance from property lines be less than that required by zoning regulations. The maximum travel distance to an exit may be increased by 100 feet if the building or structure is provided with an approved fire sprinkler system.

*Finding: The climatic conditions of Santa Cruz County, especially the mild winters and summers, are uniquely conducive to the raising specific agricultural crops, such as berries, brussel sprouts and lettuces. The climatic conditions are also uniquely conducive to the raising of flowers, which must be grown in greenhouses. Conversely, these same climatic conditions have also led to increased population in the area, resulting in increased pressure to convert agricultural land to residential use. Due to these climatic conditions, agricultural land has become more scarce and costly, and it is necessary to allow larger horticultural greenhouses with reduced setbacks between agricultural parcels, and between horticultural buildings located on the same property, in order to allow more farmland to remain in production.*

## II. AMENDMENTS TO THE 2010 CALIFORNIA RESIDENTIAL CODE

### (a) Flood-Resistant Construction Amendments

1. **Protection of Adjacent Properties amendment.** Section R322.1.11 is hereby added to Section R322 of the 2010 California Residential Code, to read as follows:

**R322.1.11 Protection of Adjacent Properties.** Construction in an A or V Zone shall not cause damage to adjacent properties. If requested, information from a registered design professional shall be submitted with supporting information that adjacent properties will not be damaged.

2. **Elevation Certificate amendment.** Section R322.2.4 is hereby added to Section R322 of the 2010 California Residential Code, to read as follows:

**R322.2.4 Elevation Certificate.** Prior to receiving a final inspection for all new and substantially improved structures, an Elevation Certificate (FEMA Form 81-31 Mar 09 or most recent update) shall be submitted to the Planning Department. An Elevation Certificate must indicate compliance with applicable FEMA regulations.

3. **Placement of Fill amendment.** Section R322.2.5 is hereby added to Section R322 of the 2010 California Residential Code, to read as follows:

**322.2.5 Placement of Fill.** A variation to 16.10.070 (f) 7 of the County Code is allowed to place more than 50 cubic yards of fill in the flood fringe if: (i) an equal volume of material (soil) is taken out of the flood fringe on the same or immediately adjacent property, (ii) only the minimum amount of fill necessary is placed and the building site is raised a minimum of 1 foot above the Base Flood Elevation, and (iii) a civil engineered grading plan (with supporting engineering documentation) demonstrates that both fill and related excavations are protected from stream erosion, and that there are no cumulative or other adverse impacts. The applicant must apply for and receive a "Letter of Map Revision – Fill" (LOMR-F) from FEMA before the final inspection of the residence. The approved copy of the LOMR-F must be supplied to the Planning Department.

4. **Location and site preparation amendment.** Section R322.3.1 of the 2010 California Residential Code is hereby amended to read as follows:

**R322.3.1 Location and site preparation.**

1. New buildings and buildings that are determined to be substantially improved pursuant to Section R105.3.1, shall be located landward of the reach of mean high tide.
2. For any alteration of sand dunes and mangrove stands the building official shall require submission of an engineering analysis which demonstrates that the proposed alteration will not increase potential for flood damage or damage to adjacent properties.
3. For existing structures located within the reach of mean high tide, no alterations shall be allowed in the seaward direction.

5. **Construction documents amendment.** Section R322.3.6 of the 2010 California Residential Code is hereby amended to read as follows:

**R322.3.6 Construction documents.** The construction documents shall include documentation that is prepared and sealed by a registered design professional that the design and methods of construction to be used meet the applicable criteria of this section. Santa Cruz County Form "V Zone Cert 2010" shall be used for this purpose.

6. **Final Documents amendment.** Section R322.3.7 is hereby added to Section R322 of the 2010 California Residential Code, to read as follows:

R322.3.7 Final Documents. Prior to receiving a final inspection for all new and substantially improved structures, the following documents shall be submitted to the Planning Department.

1. An Elevation Certificate (FEMA Form 81-31 Mar 09 or most recent update).
2. A Final V-Zone Certificate (Santa Cruz County Form "Final V Zone Cert 2010").

*Finding for amendments (a)1 through (a)6 above: These sections were modified to address special flood resistant construction in areas of the County subject to flood hazards, to protect life, health and safety since many structures in the County currently exist in floodplains, floodways and coastal wave run-up zones. The sections have been modified to provide more clarity on what is required in flood hazard areas and to be consistent with FEMA requirements.*

**(b) Sound Transmission Amendment.**

Section R329 is hereby added to the Residential Building Code, to read as follows:

R329 Sound Transmission. Section 1207 of the California Building Code, relating to sound transmission, shall apply to attached dwelling units.

*Finding: The provisions of the California Residential Code are being amended to clarify that sound transmission requirements in the CBC apply to attached dwellings.*

**(c) Grading Amendment.** Section R329.1 shall be added to Chapter 3 of the 2010 Residential Building Code, to read as follows:

R329.1 Grading. Grading shall be in accordance with the provisions of Appendix J of the 2010 California Building Code, as amended by Section 12.10.217 of this Chapter.

*Finding: Due to the topography and geology in the County, many structures constructed under the Residential Code will require extensive grading. This section has been added for consistency with the Building Code and County Grading Ordinance and to ensure that grading is performed in a manner that provides for the health and safety of the residents of the County.*

**(d) Soils Reports/Geotechnical Investigations Amendments.**

(1) **Soils Reports/Geotechnical Investigations amendment.** Section 401.4 of the Residential Building Code shall be amended to read as follows:

A Soils Report or Geotechnical Investigation shall be required as per Section 1803 of the California Building Code.

**Exceptions:** The Building Official shall be permitted to waive the requirement for a geotechnical investigation where satisfactory data or information is available that demonstrates that an investigation is not necessary; however, a report will be required for projects involving soils that are expansive, compressible, shifting, collapsible, alluvial, or undocumented fill; or for projects with conditions or locations that involve landsliding, debris flows, ridge top shattering, shallow groundwater, adverse drainage conditions, coastal bluff, FEMA floodplain, or on or adjacent to slopes in excess of 30%.

(2) **Geotechnical Report amendment.** Section 401.4.1 of the Residential Building Code shall be amended to read as follows:

**R401.4.1 Geotechnical Report.** When a geotechnical report is not required, the load bearing values in Table R401.4.1 shall be assumed.

*Finding: This section was modified since Santa Cruz County has varying geology, topography, and soils that can negatively affect the health and safety for the occupants of structures if not properly considered. This section was also modified for consistency with the Building Code.*

(3) **Compressible or shifting soil amendment.** Section 401.4.2 of the Residential Building Code shall be amended to read as follows:

**R401.4.2 Compressible or shifting soil.** Instead of a complete geotechnical investigation, when top or subsoils are compressible or shifting, they shall be removed to a depth and width recommended by a soils engineer, or mitigated by alternative methods recommended by a soils engineer.

*Finding: This section was modified since the County has numerous areas that contain soils that are compressible or shifting and can cause extensive damage to structures and affect the health and safety of the occupants. An individual who is not trained identify these soils will not know how to properly mitigate the problem. Additionally, the original language in this section doesn't properly address how to deal with compressible or shifting soils. Removal of and construction on these types of soils should therefore be done under the oversight of a soils engineer.*

(e) Seismic Amendments.

(1) **Seismic reinforcing amendment.** Section R403.1.3 of the 2010 California Residential Code shall be amended to read as follows:

Concrete footings located in Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub>, as established in Table R301.2(1), shall have minimum reinforcement of at least two continuous longitudinal reinforcing bars not smaller than No. 4 bars. Bottom reinforcement shall be located a minimum of 3 inches (76 mm) clear from the bottom of the footing.

In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> where a construction joint is created between a concrete footing and a stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing, have a standard hook and extend a minimum of 14 inches (357 mm) into the stem wall.

In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> where a grouted masonry stem wall is supported on a concrete footing and stem wall, a minimum of one No. 4 bar shall be installed at not more than 4 feet (1219 mm) on center. The vertical bar shall extend to 3 inches (76 mm) clear of the bottom of the footing and have a standard hook.

In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub> and D<sub>2</sub> masonry stem walls without solid grout and vertical reinforcing are not permitted.

**Exception:** In detached one- and two-family dwellings which are three stories or less in height and constructed with stud bearing walls, isolated plain concrete footings supporting columns or pedestals are permitted.

*Finding:*

*Local Geological Conditions – The Santa Cruz County 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 1989 Loma Prieta Earthquake. The proposed modification to ensure that the concrete footings will be reinforced to help minimize damage to the foundation due to a seismic event.*

(2) **Seismic design methods.** Section R602.10.2.1 and Table R602.10.1.2(2) of the 2010 California Residential Code shall be amended as follows:

(i) Add a new subsection R602.10.2.1.1, to read:

**R602.10.2.1.1 Limits on methods GB and PCP.** In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub>, and D<sub>2</sub>, Method GB is not permitted for use as intermittent braced wall panels, but gypsum board is permitted to be installed when required by this Section to be placed on the opposite side of the studs from other types of braced wall panel sheathing. In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub>, and D<sub>2</sub>, the use of Method PCP, DWB, PBS, HPS and SFB is limited to one-story single family dwellings or the top story of two-story single family dwellings, and accessory structures.

(ii) Add a new footnote “d” to the end of CRC Table R602.10.1.2(2), to read:

**TABLE R602.10.1.2(2)<sup>a,b,c,d</sup>**

d. In Seismic Design Categories D<sub>0</sub>, D<sub>1</sub>, and D<sub>2</sub>, Method GB is not permitted and the use of Method PCP, DWB, PBS, HPS and SFB is limited to one-story single family dwellings or the top story of two-story single family dwellings, and accessory structures.

*Finding: Local geological conditions- The Santa Cruz County region is a densely populated area having buildings constructed over and near an array of fault systems capable of producing major earthquakes, including but not limited to the recent 1989 Loma Prieta Earthquake. The proposed amendment addresses the problem of poor performance and/or low shear values of gypsum wallboard and Portland cement plaster, diagonal wall panels, fiberboard siding, and hardboard panel siding as wall bracing materials in high seismic areas. 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 of these bracing materials that were observed in 1994 Northridge earthquake.*

**III. AMENDMENTS TO THE 2010 CALIFORNIA ELECTRICAL CODE**

**(a) New construction.**

The following amendment shall be added to the California Electrical Code:

All newly constructed commercial and residential buildings that have electrically supplied systems shall provide a concrete encased grounding electrode per CEC, Art. 250.52(A)(3) to serve as the grounding means for the electrical system.

*Finding: Due to poor soil conditions in our County such as highly expansive soil, sandy soil, etc., a concrete encased grounding electrode provides the safest possible grounding means allowed by the Electrical Code.*

**IV. 2010 CALIFORNIA EXISTING BUILDING CODE ADOPTED**

Appendix Chapter A1 of the 2010 California Existing Building Code is hereby adopted.

*Finding: Local geological conditions- The Santa Cruz County 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 1989 Loma Prieta Earthquake. The proposed amendment addresses the problem of poor performance of unreinforced masonry buildings in a seismic event.*

## V. APPENDIX CHAPTERS A2, A3, A4 AND A5 OF THE 2010 INTERNATIONAL EXISTING BUILDING CODE ADOPTED.

The entire content of Appendix Chapters A2, A3, A4 and A5 of the 2010 International Existing Building Code are hereby adopted.

*Finding: Local geological conditions- The Santa Cruz County 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 1989 Loma Prieta Earthquake. The proposed amendment addresses the problem of poor performance of unreinforced masonry buildings in a seismic event.*

## VI AMENDMENTS TO THE 2010 GREEN BUILDING STANDARDS CODE

(a) **Green Building amendment.** Section 101.3 of the California Green Building Standards Code is hereby amended to read as follows:

**101.3 Scope.** The provisions of this code shall apply to the planning, design, operation, construction, use and occupancy of every newly constructed building unless otherwise indicated in this code. Additions 500 square feet or larger to existing buildings shall also be subject to the applicable provisions of this code for all new work. For all remodels, Insulation meeting the mandatory feature requirements in the California Energy Code shall be installed at ceilings, walls, floors and water pipes, when these areas are exposed during remodeling. New appliances installed as part of any remodel, addition or new construction shall be Energy Star appliances. In cases where the Building Official determines that it is infeasible to carry out the provisions of the Green Building Standards Code, he or she has the authority to grant alterations subject to Section 12.10.420 (g) of this Chapter. It is not the intent that this code substitute or be identified as meeting the certification requirements of any green building program.

*Finding: Climatic and Environmental. Due to increase in global temperatures and population increase, our water use has increased, air quality has decreased, and construction material resources have diminished. Santa Cruz County will include green building requirements for remodels and additions in order to alleviate these adverse conditions.*