



Office of the City Manager

PUBLIC HEARING
November 9, 2010

To: Honorable Mayor and Members of the City Council
 From: *PK* Phil Kamlarz, City Manager
 Submitted by: Dan Marks, Director, Planning and Development
 Subject: Adoption of Berkeley Building Codes – Second Reading

RECOMMENDATION:

Conduct a Public Hearing and upon conclusion, adopt second reading of Ordinance No. 7,158–N.S repealing and reenacting the Berkeley Building Code including Appendix J, Electrical, Mechanical and Plumbing Codes in BMC Chapters 19.28, 19.30, 19.32, and 19.36 and adopting new BMC Chapters 19.29, (Residential Code), 19.37 (Green Building Standards Code) and related procedural and stricter provisions.

FISCAL IMPACTS OF RECOMMENDATION

The recommended Codes provide for adoption of fees by a separate City Council resolution (adopted on October 26, 2010) to pay for costs related to administration and enforcement. As part of Enterprise Fund 833, revenues pay for expenditures for building and development related services provided in the Planning and Development Department

The 2010 California Green Code, applicable only to new buildings, will increase workload for plan check and inspection. Substantial changes to the California Energy Code went into effect on January 1, 2010, which, unlike the Green Code, affects all construction, existing and new. An analysis of the increased workload from both codes is expected to require an additional .6 FTE Building Inspectors, already included in this year's budget. In addition, the application of the new code is likely to require additional time from Land Use Planning, Fire, and Public Works staff for project review, inspection and enforcement; however, no increase in staff is anticipated at this time.

CURRENT SITUATION AND ITS EFFECTS

As part of a regular three-year cycle, the State Building Standards Commission has promulgated the 2010 State Codes that must be adopted and go into effect no later than January 1, 2011. The City's building-related codes also include local amendments reflecting operations and local conditions that will need to be maintained as part of the

adoption of the new code. The State Codes include Building, Plumbing, Electrical, Mechanical, and two new codes: the California Residential Code, a separate building code for one and two family dwellings, and the California Green Building Standards Code, known as CALGreen that applies only to new commercial buildings and residential buildings of three stories or less. The Codes provide for minimum uniform standards for health and safety related to construction and for their enforcement through a system of permits, plan review, and inspections.

Under state law, local jurisdictions may adopt other administrative provisions appropriate to the locality and may adopt stricter code provisions if justified by local topographic, geologic or climatic conditions. The proposed local administrative amendments are required for the effective administration of the City's operations. Other proposed amendments provide stricter standards necessitated by particular conditions in Berkeley described in the proposed findings.

The City Council held first reading of the new ordinance on October 26, 2010. Generally, any required public hearing for a new ordinance is held before the first reading of the ordinance. However, in this case State law provides that the hearing occur prior to second reading.

FISCAL IMPACTS

None.

ALTERNATIVE ACTION CONSIDERED

Do not hold the hearing and let the state mandated codes take effect without local amendments designed for Berkeley.

CONTACT PERSON:

Dan Marks, Director Planning and Development Department 981-7401
Joan MacQuarrie, Building Official, Building and Safety Division 981-7441

Attachment:

1: Ordinance No. 7,158–N.S

ORDINANCE NO. 7,158–N.S.

REPEALING AND REENACTING BERKELEY MUNICIPAL CODE CHAPTERS 19.28 (CALIFORNIA BUILDING CODE) INCLUDING APPENDIX J, 19.30 (ELECTRICAL CODE), 19.32 (MECHANICAL CODE); REPEALING 19.36 (PLUMBING CODE) AND REENACTING AS CHAPTER 19.34; AND ADOPTING 19.29 (RESIDENTIAL BUILDING CODE), 19.36 (ENERGY CODE) AND 19.37 (GREEN BUILDING STANDARDS CODE)

BE IT ORDAINED by the Council of the City of Berkeley as follows:

Section 1. That Berkeley Municipal Code Chapter 19.28, is hereby repealed and reenacted to read as follows:

Chapter 19.28

BERKELEY BUILDING CODE*

Sections:

- 19.28.010 Adoption of the California Building Code**
- Article 1. Scope and Administrative Provisions**
- 19.28.020 Adoption of Chapter 1 Scope and Administration**
- Article 2. Restrictions in Fire Zones**
- 19.28.030 Chapter 7A Materials and Construction Methods for Exterior Wildlife Exposure**
- Article 3. Wood Burning Appliances**
- 19.28.040 Wood Burning Appliances**
- Article 4. Construction in the Right of Way**
- 19.28.050 Projection into Public Right of Way - Revocation and Removal Indemnification and Hold Harmless**
- Article 5. Existing Buildings**
- 19.28.060 Adoption of Certain Chapters of the 2006 International Existing Building Code by Reference**
- Article 6. Repairs to Existing Buildings and Structures by the Occurrence of a Natural Disaster**
- 19.28.070 Adoption and Intent. Repairs to Existing Buildings and Structures by the Occurrence of a Natural Disaster.**
- Article 7. Amendments to Structural Standards**
- 19.28.080 Technical Amendments to Structural Standards**

Notes:

* See Ch. 1.24 for abatement of nuisances by City.

Section 19.28.010 Adoption of the California Building Code.

A. The California Building Code, 2010 edition, as adopted in Title 24 Part 2 of the California Code of Regulations, including Appendix J, is hereby adopted and made a

part of this Chapter as though fully set forth herein, subject to the modifications thereto which are set forth in this Chapter. One copy of this Code is on file in the office of the City Clerk of the City of Berkeley.

B. This chapter shall be known as the "Berkeley Building Code" and shall be referred to in this Chapter as "this code." Article 1 provides for the local administration of all California Codes.

C. This chapter will become effective on January 1, 2011, and shall not apply to any building permit submitted by December 31, 2010.

Article 1. Administrative Provisions and Definitions

Section 19.28.020 Adoption of Chapter 1 Scope and Administration

Chapter 1 of the 2010 California Building Code is adopted in its entirety subject to the modifications thereto which are set forth below.

CHAPTER 1 SCOPE AND ADMINISTRATION

SECTION 101 – GENERAL

101.1 Title. These regulations shall be known as the Berkeley Building Code, hereinafter referred to as "this code."

101.4 Referenced codes. Other codes listed in Chapter 1, Division II Sections 101.4.1 through 101.4.8 and referenced elsewhere in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference.

101.4.1 Gas. The provisions of the Berkeley Mechanical Code, based on the 2010 California Mechanical Code, and the Berkeley Plumbing Code, based upon the 2010 California Plumbing Code, shall apply to the installation of gas piping from the point of delivery, gas appliances and related accessories as covered in this code. These requirements apply to gas piping systems extending from the point of delivery to the inlet connections of appliances and the installation and operation of residential and commercial gas appliances and related accessories.

101.4.2 Mechanical. The provisions of the Berkeley Mechanical Code, based upon the 2010 California Mechanical Code as amended herein, shall apply to the installation, alterations, repairs and replacement of mechanical systems, including equipment, appliances, fixtures, fittings and/or appurtenances, including ventilating, heating, cooling, air-conditioning and refrigeration systems, incinerators and other energy-related systems.

101.4.3 Plumbing. The provisions of the Berkeley Plumbing Code, based upon the 2010 California Plumbing Code as amended

herein, shall apply to the installation, alteration, repair and replacement of plumbing systems, including equipment, appliances, fixtures, fittings and appurtenances, and where connected to a water or sewage system and all aspects of a medical gas system. The provisions of the Berkeley Plumbing Code shall apply to private sewage disposal systems.

101.4.4 Electrical. The provisions of the Berkeley Electrical Code, based on the 2010 California Electrical Code as amended herein, shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

101.4.5 Property maintenance. The provisions of the Berkeley Housing Code, based upon the 1997 Uniform Housing code as amended in Chapter 19.40 shall apply to existing structures and premises; equipment and facilities; light, ventilation, space heating, sanitation, life and fire safety hazards; responsibilities of owners, operators and occupants; and occupancy of existing premises and structures.

101.4.6 Fire prevention. The provisions of the Berkeley Fire Code shall apply to matters affecting or relating to structures, processes and premises from the hazard of fire and explosion arising from the storage, handling or use of structures, materials or devices; from conditions hazardous to life, property or public welfare in the occupancy of structures or premises; and from the construction, extension, repair, alteration or removal of fire suppression and alarm systems or fire hazards in the structure or on the premises from occupancy or operation.

101.4.7 Energy. The provisions of the California Energy Code, Title 24, Part 6, Berkeley Municipal Code Section 19.16 and Chapter 19.72 shall apply to matters governing the design and construction of buildings for energy efficiency.

SECTION 103 – DIVISION OF BUILDING AND SAFETY

103.1 Creation of enforcement agency. The Division of Building and Safety is hereby created and the official in charge thereof shall be known as the building official.

103.2 Appointment. The building official shall be appointed by the City Manager.

SECTION 104 – DUTIES AND POWERS OF BUILDING OFFICIAL

104.7 Division records. The building official shall keep official records of applications received, permits and certificates issues, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for retention of public records.

SECTION 105 - PERMITS

105.3.2 Expiration of application. An application for a permit for any proposed work shall expire 180 days after the date of filing, unless it can be demonstrated by the applicant that such application has been pursued in good faith or a permit has been issued; except that the Permit Service Center Coordinator is authorized to grant one or more extensions of time for additional periods not exceeding a 180 days per extension. The extension shall be requested in writing and justifiable cause demonstrated. Prior to the application being deemed abandoned, further extensions of time for a period of one year may be granted by the Permit Service Center Coordinator on a case-by- case basis if demonstrated in writing by the applicant that such application has been pursued in good faith.

105.5 Expiration of Permit. Permits issued by the building official shall expire one year from the date of issuance. Prior to expiration of the permit, the building official may grant an extension of time of one year to complete the work, upon receipt of a written request from the permit holder. On a case-by–case basis, permits may be extended more than once when accompanied by a written request demonstrating good cause for the request. Written requests for time extensions shall be accompanied by the payment of a fee set by resolution of the City Council.

When a permit is expired and a new permit is required to complete the work, a new permit application and plans shall be filed describing the remaining work to be done. If a site visit or other review is required to determine the extent of the remaining work, a fee may be charged to make such determination.

105.7 Placement of permit. The building permit or copy shall be posted on the site of the work in a location that is visible from the street until the completion of the project.

SECTION 109 – FEES

109.1 Payment of fees. Except when fees are deferred, a permit shall not be valid until the fees as set forth by resolution of City Council have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

109.2 Schedule of permit fees. On building, structures, electrical, gas, mechanical, and plumbing or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with the fee as set forth by resolution of the City Council. Fees for permits and inspections and other related services under this Code shall be assessed and paid as set forth by resolution of the City Council. Unless waived or deferred as provided by local regulations, a plan review fee and other fees as specified in the resolution shall be paid at the time of submitting any documents for review and additional fees as specified in the resolution shall be paid at issuance of the permit.

109.4 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical or plumbing permit system before obtaining the necessary permit shall be subject to a fee as set forth by resolution of the City Council equal to and in addition to the permit fees.

109.7 Re-inspection fees. A re-inspection fee, as set forth by resolution of the City Council, may be assessed for each inspection or re-inspection when such portion of work for which inspection is called for under Section 110 is not complete or when corrections called for are not made.

This section is not to be interpreted as requiring re-inspection fees the first time a job is rejected for failure to comply with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for such inspection, or when the inspection record card is not available on the work site, the approved plans are not readily available to the inspector, or for failure to provide access on the date for which inspection is requested, or for deviating from plans requiring the approval of the building official or when corrections required by the inspector are not made.

To obtain a re-inspection, the applicant shall pay the re-inspection fee as set forth by resolution of the City Council. In instances where re-inspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid.

SECTION 112 – SERVICE UTILITIES

112.4 Authority to Connect Utilities. Clearance for connection of one utility, either gas or electrical, will be withheld until final building, electrical, plumbing, heating and/or air conditioning inspections are made and approval has been given for any new building or change in occupancy classification to an existing building (as defined in Section 301 of the Berkeley Building Code) for which connection to such utilities is sought, unless approval has been first obtained from the Building Official, as provided by a Temporary Certificate of Occupancy or Final Certificate of Occupancy.

112.5 Unsafe service utilities. Unsafe service utilities are hereby declared to be public nuisances and shall be abated, repaired, rehabilitated, demolished or removed in accordance with the procedures set forth in Chapter 19.40 of the BMC for residential buildings and Berkeley Building Code for all other buildings, or any alternate procedure that may be adopted by the City of Berkeley. In addition, the City Attorney may pursue other appropriate action to prevent, restrain, correct or abate the violation as provided for in the BMC. Remedies under this section are cumulative.

When service utilities are maintained in violation of this code and in violation of a notice issued pursuant to the provisions of this section, the Building Official shall institute appropriate action to prevent, restrain, correct or abate the violation.

112.6 Authority to disconnect utilities in emergencies. The Building Official or his or her authorized representative shall have the authority to disconnect electrical power or other energy service supplied to the building, structure or building service equipment therein regulated by this code in case of emergency where necessary to eliminate an immediate hazard to life or property. The Building Official or his or her authorized representative shall, whenever possible, notify the serving utility, the owner and occupants of the building, structure or electrical system or equipment of the decision to disconnect prior to taking such action, and shall notify the serving utility, owner and occupant of the building, structure or building service equipment, in writing, of the disconnection as soon as possible thereafter.

112.7 Authority to condemn electrical system and equipment. Whenever the Building Official determines that an electrical system or electrical equipment regulated by this code is hazardous to life, health or property, the Building Official may order in writing that such electrical system or equipment either be removed or restored to a safe condition. The written notice shall fix a reasonable time limit for compliance with such order. Persons shall not use or maintain defective electrical systems or equipment after receiving such notice except as may be provided therein.

When equipment or an installation is to be disconnected, a written notice of such disconnection and the reasons therefore shall be given within 24 hours of the order to disconnect to the serving utility, the owner and occupants of the building, structure or premises.

When equipment or an installation is maintained in violation of this code and in violation of a notice issued pursuant to the provisions of this section, the Building Official shall institute appropriate action to prevent, restrain, correct or abate the violation.

Unsafe electrical systems or equipment are hereby declared to be public nuisances and shall be abated by repair, rehabilitation, demolition or removal in accordance with the procedures set forth in Chapter 19.40 of the BMC for residential buildings and Berkeley Building Code for all other buildings, or any alternate procedure that may be adopted by the City of Berkeley. In addition, the City Attorney may pursue other appropriate action

to prevent, restrain, correct or abate the violation as provided for in the BMC. Remedies under this section are cumulative.

112.8 Connection after order to Disconnect. Persons shall not make connections from to a service utility system or equipment that has been disconnected or ordered to be disconnected by the Building Official, or the use of which has been ordered to be discontinued by the Building Official, until the Building Official authorizes the reconnection and use of the electrical system or equipment.

SECTION 113 – BOARD OF APPEALS

113.1 General. In order to hear and decide appeals of orders, decisions, or determinations made by the building official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals consisting of the Housing Advisory Commission pursuant to Section 19.44.020 of the Berkeley Housing Code. The Building Official may convene and consult with an advisory panel of qualified individuals. This advisory panel is intended to help the Building Official in formulating and making staff recommendations to the Housing Advisory Commission. The advisory panel may provide written and/or oral presentations to the Housing Advisory Commission as needed.

113.3 Qualifications. The board of appeals shall consist of members meeting the qualifications required for the Housing Advisory Commission. The advisory panel shall consist of individuals found by the Building Official to be qualified by experience and training in the specific area of the appeal who are not employees of the jurisdiction.

SECTION 114 – VIOLATIONS

114.4 Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law. Violations of this Code are misdemeanors, but may be cited or charged, at the election of the enforcing officer, Building Official, or City Attorney, as infractions, subject to an election by the defendant under Penal Code Subsection 17(d). Nothing in this Section shall prevent any other remedy afforded by law.

SECTION 116 - UNSAFE STRUCTURES AND EQUIPMENT

116.1 Conditions. Structures or existing equipment that are or hereafter become structurally unsafe, insanitary or deficient because of inadequate means of egress facilities, in adequate light and ventilation, or which

constitute a fire hazard, or are otherwise dangerous to human life or the public welfare, or that involve illegal or improper occupancy or inadequate maintenance shall be deemed an unsafe condition. Unsafe structures shall be taken down and removed or made safe, as the building official deems necessary and as provided for in this section. A vacant structure that is not secured against entry shall be deemed unsafe.

All such unsafe buildings, equipment, structures or appendages are hereby declared to be public nuisances and shall be abated by repair, rehabilitation, demolition or removal in accordance with the procedures set forth in Chapters 1.24, 19.28, 19.40 and 19.44 of the BMC as applicable. As an alternative, the building official, or other employee or official of this jurisdiction as designated by the City Council, may institute any other appropriate action to prevent, restrain, correct or abate the violation.

116.6 Safety Assessment Placards.

116.6.1 Intent. This section establishes standard placards to be used to indicate the condition of a structure for occupancy after a natural disaster and a rapid visual inspection by authorized personnel. The Building Official and his or her authorized representatives post the appropriate placard at each entry point to a building or structure upon completion of a safety assessment.

116.6.2 Application of Provisions. The provisions of this section are applicable to all building and structure of all occupancies regulated by the City of Berkeley. The Council may extend the provisions as necessary.

116.6.3 Definitions.

116.6.3.1 "Safety Assessment" is a visual, non-destructive examination of a building or structure for the purpose of determining the condition for continued occupancy.

116.6.3.2 Placards. Following are titles and descriptions of the official jurisdiction placards to be used to designate the condition of a building structure for continued occupancy, partial or conditional occupancy, or unsafe to enter. Copies of placards are on file in the Building and Safety Division of the Planning and Development Department.

INSPECTED – Lawful Occupancy Permitted is to be posted on any building or structure wherein no apparent hazard has been found. This placard is not intended to mean that there is no damage to the building or structure.

RESTRICTED USE is to be posted on each building or structure that has been damaged wherein the damage has resulted in some form of restriction to be the continued occupancy. The individual who posts this placard will note in general terms the type of damage encountered and will clearly and concisely note the restrictions on continued occupancy.

UNSAFE – Do Not Enter or Occupy is to be posted on each building or structure that has been damaged such that continued occupancy poses a threat to life safety. Building or structures posted with this placard shall not be entered under any circumstances except as authorized in writing by the building official, or his or her authorized representative. Safety assessment teams shall be authorized to enter these building at any time. This placard is not to be used or considered as a demolition order. The individual who posts this placard will note in general terms the type of damage encountered.

116.6.4 Content of placard. The BMC Section number and the words "City of Berkeley" shall be permanently affixed to each placard.

116.6.5 Unlawful to remove. Once a placard has been attached to a building or structure, it is not to be removed, altered or covered until done so by an authorized representative of the Building Official. It shall be unlawful for any person, firm or corporation to alter, remove, cover or deface a placard unless authorized pursuant to this section. (Ord. 7076-NS § 1, 4/21/2009; Ord. 7005-NS § 1, 11/27/2007)

Article 2. Restrictions in Fire Zones

Section 19.28.030 CBC Chapter 7A Materials and Construction Methods for Exterior Wildlife Exposure.

701A – SCOPE, PURPOSE AND APPLICATION

701A.1 Scope. This chapter applies to building materials, systems and or assemblies used in the exterior design and construction of new buildings and structures, additions, alterations, repairs and re-roofs located within a Wildland-Urban Interface Fire Area as defined in Section 702A.

701A.2 Purpose. The purpose of this Chapter is to establish minimum standards for the protection of life and property by increasing the ability of a building located in any Fire Hazard Severity Zone within State Responsibility Areas or any building or structure in the Wildland-Urban Interface Fire Area to resist the intrusion of flame or burning embers projected by a vegetation fire and contributes to a systematic reduction in conflagration losses.

701A.3 Application. New buildings located in any Fire Hazard Severity Zone or new buildings and structures, additions, alterations, repairs and re-roofs located in any Wildland-Urban Interface Fire Area designated by the enforcing agency constructed after the application date shall comply with the provisions of this Chapter.

Exceptions:

1. Buildings or structures of an accessory character classified as a Group U occupancy and not exceeding 120 square feet in floor area, when located at least 30 feet from an applicable building or property lines.

701A.3.1 Application date and where required. Buildings for which an application for a building permit is submitted on or after July 1, 2008 located in any Fire Hazard Severity Zone or buildings and structures, additions, alterations, repairs and re-roofs for which an application for a building permit is submitted on or after July 1, 2008 located in the Wildland Interface Fire Area shall comply with all sections of this Chapter.

702A – DEFINITIONS

For the purposes of this Chapter, certain terms are defined below:

FIRE ZONE ONE shall encompass the entire City of Berkeley except for Fire Zones Two and Three.

FIRE ZONE TWO encompasses those areas designated as Combined Hillside District in the Official Zoning map of the City of Berkeley and those areas designated as Very High in the official Fire Hazard Severity Zones (FHSZ) map of The Department of Forestry and Fire Protection (CAL FIRE), as they may be amended from time to time. The following properties, not part of the Combined Hillside District, are included in Fire Zone Two under the Very High designation of the FHSZ map: The eastern section of the University of California, Berkeley main campus, block number 2042 (Alameda County Accessory's parcel numbering (APN) system), to the east city line and all of the Clark-Kerr campus, block number 7690, to the east city line. All of block number 7680 in the City of Berkeley and portions of block number 1702 in the City of Berkeley. See Exhibit A for the specific parcels by Assessor's Parcel Number and addresses.

FIRE ZONE 3 encompasses those areas designated as Environmental Safety – Residential Districts on the Official Zoning Map of the City of Berkeley, as it may be amended from time to time.

LOCAL AGENCY VERY HIGH FIRE HAZARD SEVERITY ZONE means an area designated by a local agency upon the recommendation of the CDF Director pursuant to Government Code Sections 51177(c), 51178 and 5118 that is not a state responsibility area and where a local agency, city, county, city and county, or district is responsible for fire protection. Fire Zones 2 and 3 are designated as Local Agency High Fire Hazard Severity Zone.

WILDLAND-URBAN INTERFACE FIRE AREA is a geographical area identified by the state as a "Fire Hazard Severity Zone" in accordance with the Public Resources Code

Sections 4201 through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires. Fire Zones 2 and 3 are designated as Wildland-Urban Interface Fire Area.

705A – ROOFING

705A.1 General. Roofs shall be a Class A minimum and shall comply with the requirements of Chapter 7A and Chapter 15. Roofs shall have a roofing assembly installed in accordance with its listing and the manufacturer's installation instructions. Wooden shakes and shingles are prohibited roof coverings regardless of the assembly rating of the roof system.

Exception: Replacement of less than 50% of the roof area within a 5 year period.

705A.5 Spark Arrestors. All chimneys of fireplaces, stoves, barbecues or heating appliances using solid fuel shall be provided with an approved spark arrestor whenever modification has been made to any of these appliances, or whenever a structure is re-roofed. The net free area of the spark arrestor shall be not less than four times the net free area of the outlet of the chimney. The spark arrestor shall have heat and corrosion resistance equivalent to twelve-gauge wire, nineteen gauge galvanized wire, or twenty-four-gauge stainless steel. Openings shall not permit the passage of spheres having a diameter larger than one-half inch and shall not block the passage of spheres having a diameter of less than three-eighths inch. The arrestor shall be securely attached to the chimney or stovepipe and shall be adequately supported. The use of bands, mollies, masonry anchors or mortar ties are recommended depending upon the individual need.

707A – EXTERIOR COVERING

707A.3.2 Replacement of Exterior Wall Covering. Materials for replacement of existing exterior wall covering shall meet or exceed the standards set forth in this Chapter.

Exception: Where less than 50% of any wall surface is being replaced or repaired, and the matching of the new plane to the existing plane on that wall is not possible.

711A – UNDERGROUND UTILITY CONNECTIONS

711A.1 Underground utility connections. For new construction, provisions shall be made for the undergrounding of all utilities serving the property, including but not limited to electrical, telephone and cable television, by the installation of appropriately sized underground conduits extending from the street property

712A – ADDITIONAL REQUIREMENTS IN FIRE ZONE THREE

712A.1 General. In addition to meeting the other requirements of this Chapter, buildings or structures hereinafter erected, constructed, moved, altered, added, or repaired within

Fire Zone Three shall comply with the following requirements for buildings and structures.

712A.2 Fire Warning System. All residential units shall be equipped with a Fire Warning System as specified by the residential smoke detector requirements of the current edition of the California Building Code and with an audible exterior alarm. The exterior alarm must meet the requirements of NFPA 72 or equivalent and generate 45 decibels ten feet from the alarm, or more.

712A.3 Automatic Fire Sprinklers, Berkeley Fire Code Section 903.2.21. Any new construction or new additions to existing structures requiring a permit determined to be \$100,000 or more in construction costs shall be required to install automatic fire sprinklers throughout the existing structure.

712A.4 Utilities. Utilities, pipes, furnaces, water heaters or other mechanical devices located in an exposed underfloor area of a building or structure shall be enclosed with material as required for exterior one hour fire resistive construction. Adequate covered access openings for servicing and ventilation of such facilities shall be provided as required by appropriate codes.

712A.5 Control of brush or vegetation. Brush and vegetation shall be controlled as required in the Berkeley Fire Code.

712A.6 Special Conditions. The following additional conditions must be met:

1. Public access roads and fire trails. No person(s) shall use any public access road or fire trail for the storage of any construction material, stationary construction equipment, construction office, portable refuse container, or earth from any grading or excavating.
2. Water Service. The water service to the site shall be installed with a ¾" hose bib connection prior to beginning any wood framing. The person responsible for the construction shall have at the site a 75 ft ¾" hose available.

**Exhibit A
Parcels in Addition to the Combined Hillside District**

The following additional parcels by Assessor's Parcel Number and address are included in Fire Zone Two:

Parcel Number (APN)	Address
048-7680-001-02	3 Tanglewood Road
048-7680-002-01	5 Tanglewood Road
048-7680-031-00	7 Tanglewood Road
048-7680-019-00	11 Tanglewood Road
048-7680-014-00	19 Tanglewood Road
048-7680-032-01	25 Tanglewood Road
048-7680-027-00	29 Tanglewood Road

054-1702-067-00	10 Tanglewood Road
054-1702-068-00	18 Tanglewood Road
054-1702-069-00	22 Tanglewood Road
054-1702-070-00	28 Tanglewood Road
054-1702-063-00	2701 Belrose Avenue
054-1702-076-00	2715 Belrose Avenue
054-1702-075-00	2721 Belrose Avenue
054-1702-074-00	2729 Belrose Avenue
054-1702-073-00	2737 Belrose Avenue
054-1702-112-00	2801 Claremont Boulevard
054-1702-123-01	2811 Claremont Boulevard
054-1702-122-00	2815 Claremont Boulevard
054-1702-120-01	2821 Claremont Boulevard
054-1702-114-01	2816 Claremont Avenue
054-1702-115-00	2820 Claremont Avenue
054-1702-072-00	3005 Garber Street
054-1702-071-00	3015 Garber Street
054-1702-113-00	3020 Garber Street
054-1702-116-00	3017 Avalon Avenue

Article 3. Wood Burning Appliances

Section 19.28.040 Wood Burning Appliances.

3111 Wood Burning Appliances.

A. The purpose of this section is to reduce the health risks caused by wood smoke under the climatic conditions applicable to Berkeley.

B. For purposes of this section the following terms shall be defined as set forth below.

1. "EPA" means the United States Environmental Protection Agency.
2. "EPA Certified" means any wood heater that is labeled "EPA Certified" in accordance with the standards in Title 40, Part 60, Subpart AAA, of the Code of Federal Regulations or equivalent, in effect at the time the wood heater is installed.
3. "Pellet heater" means wood heaters that burn pellet fuel exclusively and are either EPA-certified or exempted under EPA requirements set forth in Part 60 Title 40, Subpart AAA, of the Code of Federal Regulations, February 26, 1988.

4. “Wood-burning” means an appliance that burns wood or any wood-based solid fuel, including but not limited to wood pellets.

5. “Wood burning cooking device” means any wood-burning device that is designed or primarily used for cooking.

6. “Wood-burning fireplace” means any permanently-installed masonry or factory-built wood-burning appliance, either open or with doors in front of the combustion chamber, which is neither a wood heater as defined in 40 CFR 60.531 nor designed and used for cooking.

C. No wood-burning fireplace or wood heater as defined in 40 CFR 60.531, that is not EPA certified or exempted by under EPA requirements may be installed in any occupancy.

Exception: Existing masonry fireplaces may be repaired in accordance with the applicable codes in effect at the time of the proposed repair or reconstruction. For purposes of this exception, the term repair includes resurfacing the combustion chamber, but does not include replacing any other part of the combustion chamber.

D. Wood burning cooking devices are not prohibited by this section.

E. Any person planning to install a wood-burning fireplace or heating stove must submit verifiable documentation to the City showing that the appliance conforms to the requirements of this section.

Article 4. Projection into Public Right of Way

Section 19.28.050 Encroachments into the Public Right of Way – Revocation, Removal, Indemnification and Hold Harmless.

3202 – ENCROACHMENTS

3202.5 Projection into Public Right of Way – Revocation, Removal, Indemnification and Hold Harmless.

Any permits granted pursuant to this Code which allow any projection upon, over, or under the public right of way may be revoked by the City at any time. Upon such revocation, the permittee or his or her successor(s) or assignee(s) shall forthwith remove such projection at his or her cost and expense and without any cost or expense whatsoever to the City.

Any person who is granted a permit pursuant to the provisions of this Code which allows a projection upon, over or under the public right of way shall by the issuance of such permit thereby indemnify and hold harmless

the City of Berkeley, its officers and employees of and from any and all liabilities, claims, demands, actions or causes of action for injury or injuries to any person or persons or death or deaths of any person or persons or damage to property arising out of or occasioned in any way by the issuance of said permit, the work performed pursuant to such permit, or the existence of such projection. The obligation of such indemnification and hold harmless provision shall be applicable to the successor(s) and assignee(s) of the permittee.

Article 5. Existing Buildings

Section 19.28.060 Adoption of Certain Chapters of the 2006 International Existing Building Code by reference

3401.5 Adoption of Certain Chapters of the 2006 International Existing Building Code by reference.

When seismic retrofit is not otherwise required by this code, the following Chapters of the 2006 International Existing Building Code (IEBC) published by the International Code Council contained in the Appendix A are hereby adopted by reference as applicable to the types of buildings as designated therein as though fully set forth herein:

Chapter 2, Earthquake Hazard Reduction in Existing Reinforced Concrete and Reinforced Masonry Wall Buildings with Flexible Diaphragms,

Chapter 4, Earthquake Hazard Reduction in Existing Wood-frame Residential Buildings with Soft, Weak or Open-front walls, and

Chapter 5, Earthquake Hazard Reduction in Existing Concrete Buildings and Concrete with Masonry Infill Buildings.

Article 6. Repairs to Existing Buildings and Structures

Section 19.28.070 Adoption and Intent. Repairs to Existing Buildings and Structures by the Occurrence of a Natural Disaster.

3405.6 Repair and Reconstruction

3405.6.1 Repairs. Repairs of structural elements shall comply with this section.

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

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

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

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

**Table 3403.5.1.1.2
ASCE 41 and ASCE 31 PERFORMANCE LEVELS**

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

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

1. 75 percent of the forces prescribed in the building code. The R factor used for analysis in accordance with Chapter 16 of the building code shall be the R factor as specified in Section 3403.5.1.1.2.

2. In accordance with the applicable chapters in Appendix A of the International Existing Building Code as specified in Items 2.1 through 2.5 below. Structures or portions of structures that comply with the requirements of the applicable chapter in Appendix A shall be deemed to comply with the requirements for reduced building code force levels.

2.1. The seismic evaluation and design of unreinforced masonry bearing wall buildings in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A1.

2.2. Seismic evaluation and design of the wall anchorage system in reinforced concrete and reinforced masonry wall buildings with flexible diaphragms in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A2.

2.3. Seismic evaluation and design of cripple walls and sill plate anchorage in residential buildings of light-frame wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A3.

2.4. Seismic evaluation and design of soft, weak, or open-front wall conditions in multiunit residential buildings of wood construction in Occupancy Category I or II are permitted to be based on the procedures specified in Appendix Chapter A4.

2.5. Seismic evaluation and design of concrete buildings and concrete with masonry infill buildings in all Occupancy Categories are permitted to be based on the procedures specified in Appendix Chapter A5.

3. In accordance with ASCE 31 based on the applicable performance level as shown in Table 3403.5.1.1.2.

4. Those associated with the BSE-1 Earthquake Hazard Level defined in ASCE 41 and the performance level as shown in Table 3403.5.1.1.2. Where ASCE 41 is used, the design spectral response acceleration parameters S_x and S_{x1} shall not be taken less than 75 percent of the respective design spectral response acceleration parameters SDS and SD1 defined by the International Building Code and its reference standards.

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

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

Article 7. Technical Amendments to Structural Standards

Section 19.28.080 Various Technical Amendments to Structural Standards.

1613.8 ASCE 7, Section 12.8.7. ASCE 7, Section 12.8.7 Equation 12.8-16 shall be:

$$\frac{P_x I}{V_x h_{xx} C_d} \quad (12.8-16)$$

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 structural 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).

1908.1.8 ACI 318, section 22.10 Plain concrete in structures assigned to seismic design category C, D, E or F.

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

- (a) 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 dwelling 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. A minimum of one bar shall be provided at the top and bottom of the footing. Continuity of reinforcement shall be provided at corners and intersections.

Exception:

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

TABLE 2308.12.4
WALL BRACING IN SEISMIC DESIGN CATEGORIES D AND E

(Minimum Length of Wall Bracing per each 25 Linear Feet of Braced Wall Line^a)
 For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

CONDITIO N	SHEATHING TYPE ^b	$S_{DS} < 0.50$	$0.50 \leq S_{DS} < 0.75$	$0.75 \leq S_{DS} \leq 1.00$	$S_{DS} > 1.00$
One Story	S-W	5 feet 4 inches	8 feet 0 inches	9 feet 4 inches	12 feet 0 inches

- a. Minimum length of panel bracing of one face of the wall for S-W sheathing h/w ratio shall not exceed 2:1. For S-W panel bracing of the same material on two faces of the wall, the minimum length is permitted to be one-half the tabulated value but the h/w ratio shall not exceed 2:1 and design for uplift is required.
- b. S-W = wood structural panels and diagonal wood sheathing.

Section 2. That Chapter 19.29 is added to the Berkeley Municipal Code to read as follows:

Chapter 19.29

BERKELEY RESIDENTIAL CODE

Sections:

- 19.29.010 Adoption of California Residential Code.**
- 19.29.020 Title.**
- 19.29.030 Administrative provisions.**
- 19.29.040 Section R327 Materials and Construction Methods for Exterior Wildlife Exposure**
- 19.29.050 Technical Amendments to Structural Standards**

Section 19.29.010 Adoption of California Residential Code.

All of the provisions of the California Residential Code, 2010 Edition, (CRC) California Code of Regulations, Title 24, Part 2.5, is hereby adopted and made a part of this Chapter as though fully set forth herein, subject to the modifications thereto which are set forth in this Chapter. A copy of this code is on file for use and examination by the public in the office of the City Clerk of the City of Berkeley.

Section 19.29.020 Title.

This code shall be known as the "Berkeley Residential Code" and may be cited as "this code."

Section 19.29.030 Administrative provisions.

All of the administrative provisions contained in Article 1 of Chapter 19.28, the Berkeley Building Code, shall apply to this code as well and take precedence over any CRC administrative provisions that may conflict.

**TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA**

GROUND SNOW LOAD	WIND DESIGN		SEISMIC DESIGN CATEGORY ^f	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP ^e	ICE BARRIER UNDERLAYER REQUIRED ^h	FLOOD HAZARDS ^g	AIR FREEZING INDEX ⁱ	MEAN ANNUAL TEMP ^j
	Speed ^d (mph)	Topographic effects ^k		Weathering ^a	Frost line depth ^b	Termite ^c					
ZERO	85	NO	D ₂ or E	NEGLECTIBLE	N/A	VERY HEAVY	See footnote 'm'	NO	See Footnote 'l'	ZERO	57.2 ⁰ F

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

- a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e., “negligible,” “moderate” or “severe”) for concrete as determined from the Weathering Probability Map [Figure R301.2.(3)]. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C652.
- b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
- c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
- d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
- e. *Temperatures* shall be permitted to reflect local climates or local weather experience as determined by the Building Official.
- f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
- g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction’s entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and (c) the panel numbers and dates of all currently effective FIRMs and FBFMs or other flood hazard map adopted by the authority having jurisdiction, as amended.
- h. In accordance with Sections R905.2.7.1, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice

damming, the jurisdiction shall fill in this part of the table with “YES.” Otherwise, the jurisdiction shall fill in this part of the table with “NO.”

- i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3.(2) or from the 100-year (99%) value on the National Climatic Data Center data table “Air Freezing Index- USA Method (Base 32°)” at www.ncdc.noaa.gov/fpsf.html.
- j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table “Air Freezing Index- USA Method (Base 32°F)” at www.ncdc.noaa.gov/fpsf.html.
- k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with “YES.” Otherwise, the jurisdiction shall indicate “NO” in this part of the table.
- l. Flood Hazard Data for the City of Berkeley:
Date of Jurisdiction’s Entry into the NFIP: December 7, 1973;
Date of adoption of the first code or ordinance for management of flood hazards: Ordinance No. 5085-N.S., July 25, 1978;
Date of Flood Insurance study: Aug 3, 2009;
Panel numbers and dates of all currently effective maps adopted by the AHJ (Ordinance 7108-NS 9/29/09):
 - FEMA’s “Use of Digital Flood Hazard Data” establishes that paper and digital maps are equivalent. Policy and related information are available at <http://www.fema.gov/library/viewRecord.do?id=3235>. The policy implements section 107 of Public Law 108-264, 118 Stat. 724 (2004)
 - Panel 13 (not available in printed form)
 - Panel 14 of 725, Map Number 06001C0014G, August 3, 2009
 - Panel 18 of 725, Map Number 06001C0018G, August 3, 2009
 - Panel 19 of 725, Map Number 06001C0019G, August 3, 2009
 - Panel 38 (not available in printed form)
 - Panel 51 (not available in printed form)
 - Panel 52 of 725, Map Number 06001C0052G, August 3, 2009
 - Panel 53 (not available in printed form)
 - Panel 54 of 725, Map Number 06001C0054G, August 3, 2009
 - Panel 56 of 725, Map Number 06001C0056G, August 3, 2009
 - Panel 57 of 725, Map Number 06001C0057G, August 3, 2009
 - Panel 80 of 725, Map Number 06001C0080G, August 3, 2009
- m. Heating Load Calculation Data for the City of Berkeley:
 - 33 degrees F “Winter Median of Extremes”
 - 37 degrees F “Design Drybulb (0.2%)”
 - 40 degrees F “Design Drybulb (0.6%)”

**Section 19.29.040 CRC Section R327 Materials and Construction Methods for
Exterior Wildlife Exposure.**

R327.1 – SCOPE, PURPOSE AND APPLICATION

R327.1.1 Scope. This Chapter applies to building materials, systems and/or assemblies used in the exterior design and construction of new buildings and structures, additions, alterations, repairs and re-roofs located within a Wildland-Urban Interface Fire Area as defined in Section R327.2.

R327.1.2 Purpose. The purpose of this Chapter is to establish minimum standards for the protection of life and property by increasing the ability of a building located in any Fire Hazard Severity Zone within State Responsibility Areas or any building or structure in the Wildland-Urban Interface Fire Area to resist the intrusion of flame or burning embers projected by a vegetation fire and contributes to a systematic reduction in conflagration losses.

R327.1.3 Application. New buildings located in any Fire Hazard Severity Zone or new buildings and structures, additions, alterations, repairs and re-roofs located in any Wildland-Urban Interface Fire Area designated by the enforcing agency constructed after the application date shall comply with the provisions of this Chapter.

Exceptions:

1. Buildings or structures of an accessory character classified as a Group U occupancy and not exceeding 120 square feet in floor area, when located at least 30 feet from an applicable building or property lines.

R327.1.3.1 Application date and where required. Buildings for which an application for a building permit is submitted on or after July 1, 2008 located in any Fire Hazard Severity Zone or buildings and structures, additions, alterations, repairs and re-roofs for which an application for a building permit is submitted on or after July 1, 2008 located in the Wildland Interface Fire Area shall comply with all sections of this Chapter.

R327.2 – DEFINITIONS

For the purposes of this Chapter, certain terms are defined below:

FIRE ZONE ONE shall encompass the entire City of Berkeley except for Fire Zones Two and Three.

FIRE ZONE TWO encompasses those areas designated as Combined Hillside District in the Official Zoning map of the City of Berkeley and those areas designated as Very High in the official Fire Hazard Severity Zones (FHSZ) map of The Department of Forestry and Fire Protection (CAL FIRE), as they may be amended from time to time. The following properties, not part of the Combined Hillside District, are included in Fire Zone Two under the Very High designation of the FHSZ map: The eastern section of the University of California, Berkeley main campus, block number 2042 (Alameda County Accessory's parcel numbering (APN) system), to the east city line and all of the

Clark-Kerr campus, block number 7690, to the east city line. All of block number 7680 in the City of Berkeley and portions of block number 1702 in the City of Berkeley. See Exhibit A for the specific parcels by Assessor's Parcel Number and addresses.

FIRE ZONE 3 encompasses those areas designated as Environmental Safety – Residential Districts on the Official Zoning Map of the City of Berkeley, as it may be amended from time to time.

LOCAL AGENCY VERY HIGH FIRE HAZARD SEVERITY ZONE means an area designated by a local agency upon the recommendation of the CDF Director pursuant to Government Code Sections 51177(c), 51178 and 5118 that is not a state responsibility area and where a local agency, city, county, city and county, or district is responsible for fire protection. Fire Zones 2 and 3 are designated as Local Agency High Fire Hazard Severity Zone.

WILDLAND-URBAN INTERFACE FIRE AREA is a geographical area identified by the state as a "Fire Hazard Severity Zone" in accordance with the Public Resources Code Sections 4201 through 4204 and Government Code Sections 51175 through 51189, or other areas designated by the enforcing agency to be at a significant risk from wildfires. Fire Zones 2 and 3 are designated as Wildland-Urban Interface Fire Area.

R327.5 – ROOFING

R327.5.1 General. Roofs shall be a Class A minimum and shall comply with the requirements of Sections R327 and R902. Roofs shall have a roofing assembly installed in accordance with its listing and the manufacturer's installation instructions. Wooden shakes and shingles are prohibited roof coverings regardless of the assembly rating of the roof system.

Exception: Replacement of less than 50% of the roof area within a 5 year period.

R327.5.5 Spark Arrestors. All chimneys of fireplaces, stoves, barbecues or heating appliances using solid fuel shall be provided with an approved spark arrestor whenever modification has been made to any of these appliances, or whenever a structure is re-roofed. The net free area of the spark arrestor shall be not less than four times the net free area of the outlet of the chimney. The spark arrestor shall have heat and corrosion resistance equivalent to twelve-gauge wire, nineteen gauge galvanized wire, or twenty-four-gauge stainless steel. Openings shall not permit the passage of spheres having a diameter larger than one-half inch and shall not block the passage of spheres having a diameter of less than three-eighths inch. The arrestor shall be securely attached to the chimney or stovepipe and shall be adequately supported. The use of bands, mollies, masonry anchors or mortar ties are recommended depending upon the individual need.

R327.7 – EXTERIOR COVERING

R327.7.3.2 Replacement of Exterior Wall Covering. Materials for replacement of existing exterior wall covering shall meet or exceed the standards set forth in this chapter.

Exception: Where less than 50% of any wall surface is being replaced or repaired, and the matching of the new plane to the existing plane on that wall is not possible.

R327.11 – UNDERGROUND UTILITY CONNECTIONS

R327.11.1 Underground utility connections. For new construction, provisions shall be made for the undergrounding of all utilities serving the property, including but not limited to electrical, telephone and cable television, by the installation of appropriately sized underground conduits extending from the street property

R327.12 – ADDITIONAL REQUIREMENTS IN FIRE ZONE THREE

R327.12.1 General. In addition to meeting the other requirements of this Chapter, buildings or structures hereinafter erected, constructed, moved, altered, added, or repaired within Fire Zone Three shall comply with the following requirements for buildings and structures.

R327.12.2 Fire Warning System. All residential units shall be equipped with a Fire Warning System as specified by the residential smoke detector requirements of the current edition of the California Building Code and with an audible exterior alarm. The exterior alarm must meet the requirements of NFPA 72 or equivalent and generate 45 decibels ten feet from the alarm, or more.

R327.12.3 Automatic Fire Sprinklers, Berkeley Fire Code Section 903.2.21. Any new construction or new additions to existing structures requiring a permit determined to be \$100,000 or more in construction costs shall be required to install automatic fire sprinklers throughout the existing structure.

R327.12.4 Utilities. Utilities, pipes, furnaces, water heaters or other mechanical devices located in an exposed underfloor area of a building or structure shall be enclosed with material as required for exterior one hour fire resistive construction. Adequate covered access openings for servicing and ventilation of such facilities shall be provided as required by appropriate codes.

R327.12.5 Control of brush or vegetation. Brush and vegetation shall be controlled as required in the Berkeley Fire Code.

R327.12.6 Special Conditions. The following additional conditions must be met:

1. Public access roads and fire trails. No person(s) shall use any public access road or fire trail for the storage of any construction material, stationary

- construction equipment, construction office, portable refuse container, or earth from any grading or excavating.
2. Water Service. The water service to the site shall be installed with a ¾” hose bib connection prior to beginning any wood framing. The person responsible for the construction shall have at the site a 75 ft ¾” hose available.

Exhibit A

Parcels in Addition to the Combined Hillside District

The following additional parcels by Assessor’s Parcel Number and address are included in Fire Zone Two:

Parcel Number (APN)	Address
048-7680-001-02	3 Tanglewood Road
048-7680-002-01	5 Tanglewood Road
048-7680-031-00	7 Tanglewood Road
048-7680-019-00	11 Tanglewood Road
048-7680-014-00	19 Tanglewood Road
048-7680-032-01	25 Tanglewood Road
048-7680-027-00	29 Tanglewood Road
054-1702-067-00	10 Tanglewood Road
054-1702-068-00	18 Tanglewood Road
054-1702-069-00	22 Tanglewood Road
054-1702-070-00	28 Tanglewood Road
054-1702-063-00	2701 Belrose Avenue
054-1702-076-00	2715 Belrose Avenue
054-1702-075-00	2721 Belrose Avenue
054-1702-074-00	2729 Belrose Avenue
054-1702-073-00	2737 Belrose Avenue
054-1702-112-00	2801 Claremont Boulevard
054-1702-123-01	2811 Claremont Boulevard
054-1702-122-00	2815 Claremont Boulevard
054-1702-120-01	2821 Claremont Boulevard
054-1702-114-01	2816 Claremont Avenue
054-1702-115-00	2820 Claremont Avenue
054-1702-072-00	3005 Garber Street
054-1702-071-00	3015 Garber Street
054-1702-113-00	3020 Garber Street
054-1702-116-00	3017 Avalon Avenue

Section 19.29.050 Technical Amendments to Structural Standards

R403.1.3 Seismic reinforcing. Concrete footings located in Seismic Design Categories D0, D1 and D2, 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 D0, D1 and D2 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 D0, D1 and D2 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 D0, D1 and D2 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.

R404.1.4.2 Concrete foundation walls. In buildings assigned to Seismic Design Category D_0 , D_1 or D_2 , as established in Table R301.2(1), concrete foundation walls that support light-frame walls shall comply with ACI 318.

R404.1.4.1 Masonry foundation walls. Masonry foundation walls in buildings assigned to Seismic Design Category D_0 , D_1 or D_2 , as established in Table R301.2(1), shall comply with TMS 402/ACI 530/ASCE 5.

Table R602.10.1.2(2)

d. In Seismic Design Categories D_0 , D_1 , and D_2 , Method GB is not permitted and the use of Method PCP is limited to one-story single family dwellings and accessory structures.

TABLE R602.10.1.2(2)^{a,b,c,d}

R602.10.2.1.1 Limits on methods GB and PCP. In Seismic Design Categories D_0 , D_1 , and D_2 , 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 D₀, D₁, and D₂, the use of Method PCP is limited to one-story single family dwellings and accessory structures.

Section 3. That Berkeley Municipal Code Chapter 19.30 is hereby repealed and reenacted to read as follows:

Chapter 19.30

BERKELEY ELECTRICAL CODE

Sections:

- 19.30.010 Adoption of California Electrical Code.**
- 19.30.020 Title.**
- 19.30.030 Administrative provisions.**

Section 19.30.010 Adoption of California Electrical Code.

The California Electrical Code, 2010 Edition, as adopted by the California Code of Regulations, Title 24, Part 3 is hereby adopted and made a part of this Chapter as though fully set forth herein subject to the modifications thereto which are set forth in this Chapter. A copy of this code is on file for use and examination by the public in the office of the City Clerk of the City of Berkeley.

Section 19.30.020 Title.

This code shall be known as the "Berkeley Electrical Code" and may be cited as "this code."

Section 19.30.030 Administrative provisions.

Administrative provisions. All of the administrative provisions contained in Article 1 of Section 19.28, the Berkeley Building Code, shall apply to this code as well and take precedence over any administrative provisions contained in Article 89 General Code Provisions that may conflict.

Section 4. That Berkeley Municipal Code Chapter 19.32 is hereby repealed and reenacted to read as follows:

Chapter 19.32

BERKELEY MECHANICAL CODE

Sections:

- 19.32.010 Adoption of the California Mechanical Code.**
- 19.32.020 Title.**
- 19.32.030 Administrative provisions.**

Section 19.32.010 Adoption of the California Mechanical Code.

The California Mechanical Code, 2010 Edition, as adopted by the California Code of Regulations, Title 24, Part 4 is hereby adopted and made a part of this Chapter as though fully set forth herein subject to the modifications thereto which are set forth in this Chapter. A copy of this code is on file for use and examination by the public in the office of the City Clerk of the City of Berkeley.

Section 19.32.020 Title.

This Code shall be known as the "Berkeley Mechanical Code" and may be cited as "this Code."

Section 19.32.030 Administrative provisions.

All of the administrative provisions contained in Article 1 of Section 19.32, the Berkeley Building Code, shall apply to this Code as well and take precedence over any administrative provisions contained in Article 89 General code Provisions that may conflict.

For regulations governing wood burning appliances, see BMC 19.28.060.

Section 5. That Berkeley Municipal Code Chapter 19.36 is hereby repealed and reenacted as Chapter 19.34 to read as follows:

Chapter 19.34

BERKELEY PLUMBING CODE

Sections:

- 19.34.010 Adoption of the California Plumbing Code.**
- 19.34.020 Title.**
- 19.34.030 Administrative provisions.**
- 19.34.040 Minimum Plumbing Fixtures.**

Section 19.34.010 Adoption of the California Plumbing Code.

The California Plumbing Code, 2010 Edition, as adopted California Code of Regulations, Title 24, Part 5 including Appendices A, B, C, D and I, is hereby adopted and made a part of this Chapter as though fully set forth herein subject to the modifications thereto which are set forth in this Chapter. One copy of this Code is on file for use and examination by the public in the office of the City Clerk of the City of Berkeley.

Section 19.36.020 Title.

This Code shall be known as the "Berkeley Plumbing Code" and may be cited as "this Code."

Section 19.34.030 Administrative provisions.

All of the administrative provisions contained in Article 1 of Section 19.28, the Berkeley Building Code, shall apply to this Code as well and take precedence over any administrative provisions contained in Article 89 General Code Provisions that may conflict.

Section 19.34.040 CPC Table 4-1 Minimum Plumbing Fixture Facilities

Footnote 15: For smaller type Public and Professional Offices such as banks, dental offices, law offices, real estate offices, architectural offices, engineering offices, and similar uses, including restaurants classified as Group B occupancies. A public area in these establishments may use the requirement for Retail or Wholesale Stores.

Section 6. That Berkeley Municipal Code Chapter 19.36 is hereby added to read as follows:

Chapter 19.36

BERKELEY ENERGY CODE*

Sections:

- 19.36.010 Adoption of the California Energy Code.**
- 19.36.020 Title.**
- 19.36.030 Administrative provisions.**

Section 19.36.010 Adoption of the California Energy Code.

The California Energy Code, 2010 Edition, as adopted by the California Code of Regulations, Title 24, Part 6 is hereby adopted and made a part of this Chapter as though fully set forth herein subject to the modifications thereto which are set forth in this Chapter. A copy of this code is on file for use and examination by the public in the office of the City Clerk of the City of Berkeley.

Section 19.32.020 Title.

This Code shall be known as the "Berkeley Energy Code" and may be cited as "this Code."

Section 19.32.030 Administrative provisions.

All of the administrative provisions contained in Article 1 of Section 19.28, the Berkeley Building Code, shall apply to this Code as well and take precedence over any administrative provisions contained in Article 89 General code Provisions that may conflict.

For regulations governing wood burning appliances, see BMC 19.28.060.

Section 7. That Chapter 19.37 is added to the Berkeley Municipal Code to read as follows:

Chapter 19.37

BERKELEY GREEN CODE

Sections:

- 19.37.010 Adoption of California Green Building Standards Code.**
- 19.37.020 Title.**
- 19.37.030 Administrative provisions.**
- 19.37.040 Chapter 4. Residential Mandatory Measures
Division 4.4 Material Conservation and Resource Efficiency**
- 19.37.050 Chapter 5. Nonresidential Mandatory Measures
Division 5.4 Material Conservation and Resource Efficiency**

Section 19.37.010 Adoption of California Green Building Standards Code.

The California Green Building Standards Code, 2010 Edition, California Code of Regulations, Title 24, Part 11, is hereby adopted and made a part of this Chapter as though fully set forth herein subject to the modifications thereto which are set forth in this Chapter.

Section 19.37.020 Title.

This code shall be known as the "Berkeley Green Code" and may be cited as "this code."

Section 19.37.030 Administrative provisions.

All of the administrative provisions contained in Article 1 of Section 19.28, the Berkeley Building Code, shall apply to this code as well and take precedence over any California Green Building Standards Code administrative provisions that may conflict. A copy of this code is on file for use and examination by the public in the office of the City Clerk of the City of Berkeley.

Section 19.37.040 Chapter 4. Residential Mandatory Measures

Division 4.4 Material Conservation and Resource Efficiency

Section 4.408 Construction Waste Reduction, Disposal and Recycling

Recycle and/or salvage for reuse construction and demolition debris in accordance with Berkeley Municipal Code Chapter 19.24.

Section 19.37.050 Chapter 5. Nonresidential Mandatory Measures Division 5.4 Material Conservation and Resource Efficiency

Section 5.408 Construction Waste Reduction, Disposal and Recycling

Recycle and/or salvage for reuse construction and demolition debris in accordance with Berkeley Municipal Code Chapter 19.24

Section 8. Copies of this Ordinance shall be posted for two days prior to adoption in the display case located near the walkway in front of Council Chambers, 2134 Martin Luther King Jr. Way. Within 15 days of adoption, copies of this Ordinance shall be filed at each branch of the Berkeley Public Library and the title shall be published in a newspaper of general circulation.

At a regular meeting of the Council of the City of Berkeley held on October 26, 2010, this Ordinance was passed to print and ordered published by posting by the following vote:

Ayes: Anderson, Arreguin, Capitelli, Maio, Moore, Wengraf, Worthington, Wozniak and Bates.

Noes: None.

Absent: None.

