

## Article 2. Restrictions in Fire Zones

### 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 3/4" hose bib connection prior to beginning any wood framing. The person responsible for the construction shall have at the site a 75 ft 3/4" hose available.

## **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 3/4" hose bib connection prior to beginning any wood framing. The person responsible for the construction shall have at the site a 75 ft 3/4" hose available.