LAKESIDE FIRE PROTECTION DISTRICT

ORDINANCE NO. 08-02

AN ORDINANCE OF THE BOARD OF DIRECTORS OF THE LAKESIDE FIRE PROTECTION DISTRICT ADOPTING THE INTERNATIONAL WILDLAND URBAN INTERFACE CODE, 2006 EDITION AND ADOPTING APPENDIX "A" AND "D" WITH CERTAIN AMENDMENTS, ADDITIONS, AND DELETIONS

An ordinance of the Lakeside Fire Protection District, adopting the International Wildland Urban-Interface Code, 2006 edition, and adopting Appendix "A" and "D" regulating and governing the mitigation of hazard to life and property from the intrusion of fire from wildland exposures, fire from adjacent structures and prevention of structure fires from spreading to wildland fuels in the Lakeside Fire Protection District; providing for the issuance of permits and collection of fees therefore.

WHEREAS, the Board of Directors of the Lakeside Fire Protection District does herewith find that the District has certain climatic, geologic, and topographical features that can have a deleterious effect on emergency services such as fire protection and emergency medical services; and,

WHEREAS, the Board of Directors finds that the modifications and changes to the International Wildland-Interface Code 2006 Edition are reasonably necessary because of the following local climatic, geological, and topographical conditions as identified in Attachment

WHEREAS, certain amendments to the International Wildland-Urban Interface Code, 2006 Edition serve to mitigate to the extent possible said deleterious effects:

WHEREAS, Section 50022.1 through 50022.10, inclusive, of the Government code and Section 13869 of the Health and Safety Code, provide authority for the adoption by reference of codes, or portion of such codes:

NOW THEREFORE, The Board of Directors of the Lakeside Fire Protection District does ordain as follows:

Section 1

That a certain document, three (3) copies of which are on file in the office of the Lakeside Fire Protection District, being marked and designated as the International Wildland-Urban Interface Code, 2006 Edition, as published by the International Code Council, be and hereby is adopted as the International Wildland-Interface Code of the

Lakeside Fire Protection District, in the State of California for regulating and governing the mitigation of hazard to life and property from the intrusion of fire from wildland exposures, fire from adjacent structures and prevention of structure fires from spreading to wildland fuels as herein provided; providing for the issuance of permits and collection of fees therefore; and each and all of the regulations, provisions, penalties, conditions and terms of said International Wildland-Interface Code on file in the office of the Lakeside Fire Protection District are hereby referred to, adopted, and made a part hereof, as if fully set out in this ordinance, with the additions, insertions, deletions and changes, if any, prescribed in Section **2** of this ordinance.

Section 2

The following sections are hereby revised:

CHAPTER 1
ADMINISTRATION

SECTION 101 GENERAL

(M) Section 101.1 Title
These regulations shall be known as the International Wildland Urban- Interface Code of Lakeside Fire Protection District hereinafter referred to as this Code.

(A) When additions are made to an existing structure and the addition is within the 100 foot defensible space, such addition shall be in accordance setback distances as set forth in the code and with Sections 504.1.2, 505.1.2 and 505.1.3 of this Code.

Section 101.6 Maintenance
All buildings, structures, landscape materials, vegetation, defensible space or other devices or safeguards required by this code shall be maintained in conformance with this code edition. The owner or the owner's designated agent shall be responsible for the maintenance of buildings, structures, landscape materials, and vegetation.

Section 101.7 Guidance Documents.
The PAHJ may prepare, circulate for public comment, disseminate, and maintain guidance documents addressing the methods of ignition-resistant construction described in this Code.

These guidance documents may set out additional compliance alternatives that, in specified circumstances, can provide the same protection that is afforded by the methods required by this Code. These guidance documents may also identify practices that have been determined by PAHJ and the FAHJ to be equivalent and they may include additional new fire-resistive technologies as they become available.

SECTION 103
COMPLIANCE ALTERNATIVES

103.3 Alternative materials or methods.
The code official, in concurrence with approval from the building official and fire chief, is authorized to approve alternative materials or methods, provided that the code official finds that the proposed design, use or operation satisfactorily complies with the intent of this code and that the alternative is, for the purpose intended, at least equivalent to the level of quality, strength, effectiveness, fire resistance, durability and safety prescribed by this code. Approvals under the authority herein contained shall be subject to the approval of the building official whenever the alternate material or method involves matters regulated by the California Building Code. The code official shall require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding its use. The details of any action granting approval of an alternate shall be recorded and entered in the files of the code enforcement agency.

SECTION 104
APPEALS

Section 104 Appeals.
The entire Section 104 is deleted in its entirety. Appeals shall be enforced through the locally adopted Fire Code.

PERMITS

Section 105
Section 105 is deleted in its entirety. Permits shall be enforced through the locally adopted California Fire Code.

PLANS AND SPECIFICATIONS

106.3 Site plan.
In addition to the requirements for plans in the California Building Code, site plans shall include topography, width and percent of grade of access roads, landscape and vegetation details, locations of structures or building envelopes, existing or proposed overhead utilities, occupancy classification of buildings, types of ignition-resistant construction of buildings, structures and their appendages, roof classification of buildings, and site water supply systems. Any new development which necessitates updating of emergency response maps by virtue of new structures, hydrants, roadways or similar features, shall be required to provide map updates in a format compatible with current department mapping services (PDF, CAD) and shall be charged a reasonable fee for updating all response maps.

CHAPTER 2 DEFINITIONS

SECTION 201 GENERAL

201.3 Terms defined in other codes.
Where terms are not defined in this code and are defined in other California Codes, such terms shall have the meanings ascribed to them as in those codes.

ACCESSORY STRUCTURE. A building or structure used to shelter or support any material, equipment, chattel or occupancy other than a habitable building. (See Structure)

BUILDING OFFICIAL - the officer or other designated authority charged with the administration and enforcement of the locally adopted California Building Code, or the building official's duly authorized representative.

COMBUSTIBLE VEGETATION - is material that in its natural state will readily ignite, burn and transmit fire from the vegetative growth to any structure, this includes ground fuels which are any native or landscape vegetation not considered a tree and generally in contact with the ground.

DISCRETIONARY PROJECT - means a project, which requires the exercise of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity, as distinguished from situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations.

FIRE AUTHORITY HAVING JURISDICTION (FAHJ) - The designated entity providing enforcement of fire regulations as they relate to planning, construction, and development. This entity may also provide fire suppression and other emergency services.

FIRE CODE - The California Fire Code, as locally adopted with amendments additions and deletions.

FUEL, HEAVY - is vegetation consisting of round wood 3 to 8 inches (76 to 203 mm) in diameter. Heavy fuels represent dense conifer stands where there is a heavy accumulation of litter and downed woody material. See applicable National Fire Danger Rating System (NFDR), fuel models G & U as described in Appendix D.

FUEL, LIGHT - is vegetation consisting of herbaceous plants and round wood less than 1/4 inch (6.4 mm) in diameter. Light fuels represent western grasslands vegetated by annual or perennial grasses and forbs. Grasses and forbs are the primary ground fuel, but there can be enough needle litter and branch wood present from an open pine stand to

contribute to the fuel loading. See applicable National Fire Danger Rating system (NFDR), fuel models A, C & L as described in Appendix D.

FUEL, MEDIUM - is vegetation consisting of round wood 1/4 to 3 inches (6.4 mm to 76 mm) in diameter. Medium fuels represent mature, dense fields of California mixed chaparral. See applicable National Fire Danger Rating system (NFDR), fuel models B & F as described in Appendix D.

FUEL MODIFICATION ZONE - A strip of land where combustible vegetation has been thinned, modified or both and partially or totally replaced with approved drought-tolerant, fire-resistant, and/or irrigated plants to provide an acceptable level of risk from vegetation fires. Fuel modification reduces radiant and convective heat, thereby reducing the amount of heat exposure on the roadway or structure and providing fire suppression forces a safer area in which to take action.

HAZARDOUS FIRE AREA - Any geographic area mapped by the State or local jurisdiction as a high, or very high fire hazard area, or as set forth by the FAHJ that contains the type and condition of vegetation, topography, weather, and structure density to potentially increase the possibility of vegetation conflagration fires shall be considered a hazardous fire area.

HAZARDOUS MATERIALS - As defined in the locally adopted Fire Code.

HEAVY TIMBER CONSTRUCTION - As described in the California Building Code.

IGNITION SOURCE - is any item or substance capable of energy release of a type and magnitude sufficient to ignite any flammable materials that could occur in or outside of a structure. Examples of Ignition source are storage or use of flammable gases and flammable liquids, or permanent or temporary electrical wiring and open flame devices.

IGNITION-RESISTANT MATERIAL - is any product which, when tested in accordance with UBC Standard 8-1 for a period of 30 minutes, shall have a flame spread of not over 25 and show no evidence of progressive combustion. In addition, the flame front shall not progress more than 10½ feet (3200 mm) beyond the centerline of the burner at any time during the test.

Materials shall pass the accelerated weathering test and be identified as Exterior type, in accordance with UBC Standard 23-4. All materials shall bear identification showing the fire performance rating thereof. That identification shall be issued by ICC-ES/ICBO-ES or a testing facility recognized by the State Fire Marshal having a service for inspection of materials at the factory.

Fire-Retardant-Treated Wood as defined in section 207 or noncombustible materials as defined in section 215 shall satisfy the intent of this section.

The enforcing agency may use other definitions of ignition-resistant material that reflect wildfire exposure to building materials and/or their materials performance in resisting ignition.

NON-COMBUSTIBLE - As applied to building construction material means a material that, in the form in which it is used, is either one of the following:

1. Material of which no part will ignite and burn when subjected to fire. Any material conforming to ASTM E 136 shall be considered noncombustible within the meaning of this section.
2. Material having a structural base of noncombustible material as defined in Item 1 above, with a surfacing material not over 1/8 inch (3.2 mm) thick, which has a flame spread rating of 50 or less. Flame spread rating as used herein refers to rating obtained according to tests conducted as specified in ASTM E 84.

"Noncombustible" does not apply to surface finish materials. Material required to be noncombustible for reduced clearances to flues, heating appliances or other sources of high temperature shall refer to material conforming to Item 1. No material shall be classed as noncombustible that is subject to increase in combustibility or flame spread rating, beyond the limits herein established, through the effects of age, moisture, or other atmospheric condition.

Roof Covering - Roofs shall comply with the Building Code and have a minimum Class A roof covering. For roof coverings where the profile allows a space between the roof covering and roof decking, the space at the eave ends shall be fire stopped to preclude entry of flames or embers.

> **EXCEPTION:** On qualified historical buildings wood roof covering may be repaired or reconstructed as allowed by the State Historical Building Code.

NON COMBUSTIBLE ROOF COVERING - One of the following must meet the Class "A" roof covering as noted above:

1. Cement shingles or sheets.
2. Exposed concrete slab roof.
3. Ferrous or copper shingles or sheets.
4. Slate shingles.
5. Clay or concrete roofing tile.
6. Approved roof covering of noncombustible material.

OFF-SITE ROADWAY - a road, street, public highway, or private road used for fire apparatus access from a publicly maintained road to the boundary of the subject property.

ON-SITE ROADWAY - A road, street, public highway, private road, or driveway used for fire apparatus access within the boundaries of the subject property or land division.

PLANNING AUTHORITY HAVING JURISDICTION (PAHJ) - The identified authority regulating and enforcing planning and/or construction standards.

STRUCTURE - means a residence and attached garage, building or related facility that is designed primarily for human use or habitation or buildings designed specifically to house farm animals. Decking, fences, and similar facilities are not considered structures for the purposes of establishing the limits of the fuel modification zone. Free standing open sided shade covers, sheds, gazebos, and similar accessory structures less than 250 square feet and 30 feet or more from the main building are not considered structures for the purposes of this appendix. (See Accessory Structure)

VEGETATION CONFLAGRATION - is an uncontrolled fire spreading through vegetative fuels, and exposing and consuming structures in the advancing path of fire.

WILDLAND FUEL - means any timber, brush, grass, or other flammable vegetation, living or dead, standing or down, that is not classified as fire-resistive.

WILDLAND/URBAN INTERFACE AREA – That geographical area where structures and other human development meet or intermingle with wildland or vegetative fuels. This area is designated or identified as a hazardous fire area as determined by the FAHJ (see the definition of hazardous fire area).

WILDFIRE - An uncontrolled fire spreading through vegetative fuels, exposing and possibly consuming structures.

CHAPTER 3
WILDLAND-URBAN INTERFACE AREAS

SECTION 302 WILDLAND-URBAN INTERFACE AREA DESIGNATIONS

Section 302.1 Declaration
The legislative body shall declare the International Urban-Wildland Interface Areas within the jurisdiction. The International Wildland Urban Interface Areas shall be based on the findings of fact. The International Wildland Urban Interface Area boundary shall be any geographic area mapped or otherwise identified by the State or local jurisdiction as a High Hazard, or Very High Fire Hazard area, or as set forth by the FAHJ. (See Attachment B for map) When the type and condition of vegetation, topography, weather, and structure density, which potentially increases the probability of vegetation conflagration, exists, such area shall be considered a Hazardous Fire Area.

CHAPTER 4
WILDLAND-URBAN INTERFACE AREA REQUIREMENTS

SECTION 402

APPLICABILITY

Section 402.1 Subdivisions
New subdivisions, as determined by this jurisdiction, shall be provided with fire apparatus access roads in accordance with the locally adopted Fire Code and access requirements in accordance with Section 403.

Section 402.2.2 Water Supply
Individual structures hereafter constructed or relocated into or within Wildland Urban Interface Areas shall be provided with a conforming water supply in accordance with the locally adopted Fire Code.

EXCEPTIONS:
1. Structures constructed to meet the requirements for the class of ignition-resistant construction specified in Table 503.1 for a nonconforming water supply.
2. Buildings containing only private garages, carports, sheds and agricultural buildings with a floor area of not more than **500** square feet (56 m2).

Section 402.2.1 Access.
Individual structures hereafter constructed or relocated into or within wildland-urban interface areas shall be provided with fire apparatus access in accordance with the locally adopted Fire Code and driveways in accordance with Section 403.2. Marking of fire protection equipment shall be provided in accordance with Section 403.5 and address markers shall be provided in accordance with Section 403.6.

SECTION 403
ACCESS

Section 403.2. Driveways.
Driveways shall be provided when any portion of an exterior wall of the first story of a building, measured in an approved manner, is located more than 150 feet (45 720 mm) from a fire apparatus access road. Driveways shall provide a minimum unobstructed width of 16 feet (4572 mm) and a minimum unobstructed height of 13 feet 6 inches (4115 mm). Driveways in excess of 150 feet (45 720 mm) in length shall be provided with turnarounds. Driveways in excess of 200 feet (60 960 mm) in length and less than 24 feet (6096 mm) in width, shall be provided with turnouts in addition to turnarounds. A driveway shall not serve more than two dwelling units.

When such driveways meet the requirements for an access road in accordance with the Fire Code. Driveway turnarounds shall have inside turning radii of not less than 28 feet (8,534) and outside turning radii of not less than 45 feet (13 716 mm). Driveways that connect with a road or roads at more than one point may be considered as having a turnaround if all changes of direction required to make the turnaround meet the radii

requirements for driveway turnarounds. Driveway turnouts shall be an all-weather road surface at least 10 feet (3,048 mm) wide and 30 feet (9144 mm) long.

Driveway turnouts shall be located as required by the code official. Vehicle load limits shall be posted at both entrances to bridges and on driveways and private roads containing bridges. Design loads for bridges shall be established by the code official.

Section 403.3. Fire Access Road Fire Apparatus Access Road.
When required, fire apparatus access roads shall be all-weather roads with a minimum width of 24 feet (6 096 mm) and an unobstructed vertical clearance of not less than 13 feet 6 inches (4 115 mm), shall be designed to accommodate the loads and turning radii for fire apparatus, and have a gradient negotiable by the specific fire apparatus normally used at that location within the jurisdiction. Dead-end roads in excess of 150 feet (45 720 mm) in length shall be provided with turnarounds as approved by the code official. An all-weather road surface shall be any approved surface material acceptable to the code official that would normally allow the passage of emergency vehicles typically used to respond to that location within the jurisdiction.

The fire access roadway requirement for widening existing improved fire apparatus roadway shall be per "**TABLE 1 – PHASING POLICY - Fire Apparatus Access**" and will extend from the property out to the nearest public road.

TABLE 1 - PHASING POLICY
Fire Apparatus Access – Single Family Dwellings

Number of Parcels	Unobstructed Road width	Roadways Over 600 foot Long	Extend to Nearest Public Road
1-2	16-foot, paved	Turnouts every 400-feet	Yes
3-8	20-foot, paved	Turn-outs every 400-feet	Yes
9 or more	24-foot, paved	Not required	Yes

Auxiliary structures (non-habitable) and residential additions/remodels less than 500 square feet- The access roadway will not be required to be improved if the access roadway has already been improved to a minimum width of 20 feet. If the roadway is not 20 feet, then the roadway shall be widened per "TABLE 1 – PHASING POLICY - Fire Apparatus Access", but not greater than 20 feet. The preceding addition/remodel exception is limited to one permit (addition or remodel) per three-year period from the date of the last permit approval.

SECTION 404
WATER SUPPLY

Section 404.5 Adequate Water Supply
In Hazardous Fire Areas as defined in the locally adopted Fire Code, the water main capacity for new subdivisions shall not be less than 2,500 gallons (5 676.4 liters) per minute, unless otherwise approved by the chief.

SECTION 404.6

Section 404.6 Fire Department is hereby deleted in its entirety.

404.10.3 Standby power.
Stationary water supply facilities within the wildland-urban interface area dependent on electrical power to meet adequate water supply demands shall provide standby power systems in accordance with the Electrical Code to ensure that an uninterrupted water supply is maintained. The standby power source shall be capable of providing power for a minimum of two hours.

EXCEPTIONS:

1. When approved by the code official, a standby power supply is not required where the primary power service to the stationary water supply facility is underground.
2. A standby power supply may be required where the stationary water supply facility serves no more than one single-family dwelling.

SECTION 405
FIRE PROTECTION PLAN

405.1General.
When required by the code official, a fire protection plan shall be prepared as prescribed in the San Diego County Guidelines for Determining Significance and Report Format and Content Requirement, Wildland Fire and Fire Protection document.

Section 405.2 Content of Wildland Fire Protection Plan
The Wildland Protection Plan shall be based upon a community, site-specific wildfire risk assessment that is developed in consultation with local and state government representatives, federal agencies, and other interested parties. The plan shall consider location, topography, geology, aspect, combustible vegetation (fuel types) climatic conditions and fire history. The plan shall address water supply, access, structural ignitability, structure set back and ignition resistive building features, fire protection systems and equipment, impacts to existing emergency services defensible space and vegetation management. The plan shall identify and prioritize areas for hazardous fuel reduction treatments and recommend the types and methods of treatment that will protect one or more-at-risk communities and essential infrastructures. The plan shall recommend measures that homeowners and communities shall take to reduce the ignitability of structures throughout the area addressed by the plan.

CHAPTER 5 SPECIAL BUILDING CONSTRUCTION REGULATIONS

SECTION 501 GENERAL

501.1Scope.
Buildings and structures shall be constructed in accordance with the California Building Code and this code.

501.2 Objective.
The objective of this chapter is to establish minimum standards to locate, design and construct buildings and structures or portions thereof for the protection of life and property, to resist damage from wildfires, and to mitigate building and structure fires from spreading to wildland fuels. The minimum standards set forth in this chapter vary with the critical fire weather, slope, and fuel type to provide increased protection, above the requirements set forth in the California Building Code, from the various levels of hazards.

SECTION 502
FIRE HAZARD SEVERITY

502.1 General.
The fire hazard severity of building sites for all buildings hereafter constructed, modified, or relocated into wildland-urban interface areas shall be established in accordance with Section 302 and Table 502.1.

TABLE 502.1
FIRE HAZARD SEVERITY

FUEL MODEL (b)	CRITICAL FIRE WEATHER FREQUENCY		
	Greater than 8 days (a.)		
	SLOPE (%)		
	<40	41-60	>60
Light Fuel	**M**	**M**	**H**
Medium Fuel	**E**	**E**	**E**
Heavy Fuel	**E**	**E**	**E**

a. Days per annum.
b. When required by the code official, fuel classification shall be based on the historical fuel types for the area.
E = Extreme hazard. H = High hazard. M = Moderate hazard.

SECTION 503
IGNITION-RESISTANT CONSTRUCTION

503.1 General.
Buildings and structures hereafter constructed, modified, or relocated into or within wildland-urban interface areas shall meet the construction requirements in accordance with Table 503.1. Class 1, Class 2 ignition-resistant construction shall be in accordance with Sections 504 and 505, respectively.

TABLE 503.1 IGNITION-RESISTANT CONSTRUCTION

DEFENSIBLE SPACE (c)	FIRE HAZARD SEVERITY					
	Moderate Hazard		High Hazard		Extreme Hazard	
	Water Supply (b)		Water Supply (b)		Water Supply (b)	
	Conforming (d)	Nonconforming (e)	Conforming (d)	Nonconforming (e)	Conforming (d)	Nonconforming (e)
Nonconforming	IR 2	IR 1	IR 1	IR 1 N.C.	IR 1 N.C	Not Permitted
Conforming	IR 2	IR1	IR 1	IR 1	IR 1	IR 1 N.C.
1.5 X Conforming	Not required	IR 2	IR2	IR1	IR 1	IR 1

(a) Access shall be in accordance with Section 402.
(b) Subdivisions shall have a conforming water supply in accordance with Section 402.1.
IR 1 = Ignition-resistant construction in accordance with Section 504.
IR 2 = Ignition-resistant construction in accordance with Section 505.
N.C. = Exterior walls shall have a fire-resistance rating of not less than 1-hour and the exterior surfaces of such walls shall be noncombustible. Usage of log wall construction is allowed.
(c) Conformance based on Section 603.
(d) Conformance based on Section 404.
(e) A nonconforming water supply is any water system or source that does not comply with Section 404, including situations where there is no water supply for structure protection or fire suppression

SECTION 504
CLASS 1 IGNITION-RESISTANT CONSTRUCTION

Sections 504.1.1 Zoning Requirements.
The minimum setbacks for locating structures on a lot are set by the PAHJ. To minimize fire spread potential the FAHJ may require additional setbacks as described in Section 504.1.4. In no case may the setbacks required by the FAHJ be less than those established by the PAHJ.

Section 504.1.2 Fire Requirements.
In those jurisdictions where a FAHJ approves a fuel modification zone of less than 100 feet, all structures, including any part of a structure located within the Wildland/Urban Interface Area shall be not less than 30 feet measured perpendicular from the subject property line adjacent to Wildland Fuel. When the property line abuts a public way, the setback is measured to the centerline of the public way or street.

EXCEPTION: When allowed by both the FAHJ and by the PAHJ zoning requirements and the wildland fire hazard is determined to be minimal, the 30 foot setback may be reduced to a minimum of 5 feet from a property line provided the entire exterior wall, eave, overhang, or any other building construction elements shall comply with the enhanced ignition-resistant construction standards of Class 1.

Note: The FAHJ may allow openings in the exterior wall facing the wildland/Urban Interface Area if it is determined the hazard is minimal.

Section 504.1.3 Future Setback Modification
All fuel modification zones shall not extend beyond the property line.

EXCEPTION: The FAHJ may approve fuel modification zones that extend beyond the property lines when legal agreements (Land easement run with the land) are in place.

Section 504.1.4 Structure Setback From Slope
A single story structure shall be setback a minimum 15 feet (4,572 mm) horizontally from top of slope to the farthest projection from a roof. A single story structure shall be less than 12 feet above grade. A two- story structure shall be setback a minimum of 30 feet (9,144 mm) measured horizontally from top of slope to the farthest projection from a roof. Structures greater than two stories may require greater setback, which is based upon a 2-to1 slope.

Section 504.1.5 Mitigation
In jurisdictions where a PAHJ or FAHJ approves a fuel modification zone of less than 100 feet (30,480 mm), CLASS 1 IGNITION-RESISTANT CONSTRUCTION shall be provided and or additional mitigation as determined by the FAHJ

Section 504.2 Roof Covering.
Roofs shall comply with the California Building Code and have a minimum Class "A" roof covering. For roof coverings where the profile allows a space between the roof covering and roof decking, the space at the eave ends shall be fire stopped to preclude entry of flames or embers.

EXCEPTIONS:
1. When re-roofing or repairs are made which exceed 50 percent of the projected roof area or 2,500 square feet, whichever is less, then the entire roof shall be fire rated roof coverings in conformance with California Building Code. Roofing of residential room additions, however, may be constructed of roofing materials having the same fire rating as the existing building when the projected roof area of the addition does not exceed 50 percent of that of the existing horizontal projected roof area or 2,500 square feet, whichever is less. For the purpose of this exception, re-roofing or addition projects must be separated by at least 12 months to be considered separate projects.

2. On qualified historical buildings wood roof covering may be repaired or reconstructed as allowed by the State Historical Building Code.

Section 504.2.1 Protection of Eaves.
Combustible eaves, fascias, and soffits shall be constructed as required in guidance documents prepared by the PAHJ.

> **EXCEPTION:** Eave construction on additions may match the existing structure provided that the addition does not exceed 50% of the existing structure or 2,500 square feet, whichever is less. The vents in these eaves must comply with Section 26.2.5 and 26.3.2 of the San Diego Consolidated Fire Code, as applicable.

Section 504.2.2 Insulation
In the Urban-Wildland Interface Area, paper-faced insulation shall be prohibited in attics or ventilated spaces.

504.3 Protection of Eaves.
Eaves and soffits shall be protected on the exposed underside by materials approved for a minimum of 1-hour fire-resistance-rated construction, 2-inch (51 mm) nominal dimension lumber, or 1-inch (25.4 mm) nominal fire-retardant-treated lumber or 3/4-inch (19 mm) nominal fire-retardant-treated plywood, identified for exterior use and meeting the requirements of Section 2303.2 of the California Building Code. Fascias are required and shall be protected on the backside by materials approved for a minimum of 1-hour fire-resistance-rated construction or 2-inch (51 mm) nominal dimension lumber.

Section 504.4 Gutters and Downspouts.
Gutters and downspouts shall be constructed of noncombustible material. Gutters shall be designed to reduce the accumulation of leaf litter and debris that contributes to roof edge ignition.

504.5 Exterior Walls.
Exterior walls in the Wildland/Urban Interface Area shall comply with the provisions of the California Building Code and with the following additional requirements:

Exterior Wall Surfacing Materials - The exterior wall surface materials shall be non-combustible or an approved alternate. In all construction, exterior walls are required to be protected with 2-inch nominal solid blocking between rafters at all roof overhangs. Wood shingle and shake wall covering shall be prohibited except for repair or replacement as noted in Section 504.5.1.

> **EXCEPTIONS:**
> 1. Wood siding of 3/8-inch plywood or 3/4-inch drop siding is permitted but must have an under-layment of ½-inch fire-rated gypsum sheathing that is tightly butted or taped and mudded, or other ignition-resistive material as approved by the PAHJ.
> 2. Livestock stables less than 2,000 square feet total floor area and without restrooms are exempt from the non-combustible wall requirement if constructed a minimum of 100 feet from the property line, from any open space easement, and from any dwelling on the parcel. If a dwelling or addition to a dwelling is subsequently proposed to be constructed closer than 100 feet from a stable constructed under this exemption, the stable must be retrofitted with non-combustible exterior wall covering or be removed.
> 3. Heavy timber or log wall construction. Such material shall extend from the top of the

foundation to the underside of the roof sheathing.

Section 504.5.1 Repair/Replacement.
If 50 percent or more of an exterior wall located less than 30 feet from a property line requires repair or replacement, the entire wall shall conform to this section. If less than 50 percent of the wall requires repair or replacement, the existing wall may be repaired or replaced in kind; however, if the wall covering is wood shingle or shake, it must be repaired or replaced with fire-retardant, pressure-treated wood shingles or shakes.

Section 504.7 Appendages and Projections.
Unenclosed accessory structures attached to buildings with habitable spaces and projections, such as decks, shall be a minimum of 1-hour fire-resistance-rated construction, heavy timber construction or constructed of approved noncombustible materials or fire-retardant-treated wood identified for exterior use and meeting the requirements of Section 2303.2 of the California Building Code. When the attached structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10 percent, the area 16 below the structure shall have all under- floor areas enclosed to within 6 inches (152 mm) of the ground, with exterior wall construction in accordance with Section 504.5.

Section 504.7.1 Fences and Other Attachments to Structures.
The first five feet of fences and other items attached to a structure shall be constructed of non-combustible material, or pressure-treated exterior fire-retardant wood, or meet the same fire-resistive standards as the exterior walls of the structure.

> **EXCEPTION:** Wooden gates are permitted provided that a 5-foot minimum length section of non-combustible fencing material is installed as a firebreak immediately adjacent to the gate.

Section 504.7.2 Projections, appendages.
Exterior balconies, carports, decks, patio covers, unenclosed roofs and floors, and similar architectural appendages and projections, not meeting the 100-foot fuel modification requirements of Section 603.2, shall be of ignition-resistant construction in accordance with sections 302.1 and 504.7.4. When such appendages or projections are attached to exterior fire-resistive walls, they shall be constructed to maintain the fire-resistive integrity of the wall. Construction details shall comply with the methods specified in guidance documents prepared by the PAHJ in accordance with Section 101.7.

> **EXCEPTIONS:**
> 1. A free-standing deck or trellis less than 250 square feet in area and greater than 30 feet from the nearest structures and property lines is not required to meet the fire-resistive requirements of Appendix II-A.
> 2. A detached deck that is separated from the dwelling by at least 5 feet of non-combustible surface may be constructed of non-rated wood provided all of the following conditions are met:
>   a) The decking must be a minimum dimension of 2x (nominal) material
>   b) The deck is located at or below the elevation of the dwelling ground floor level, and not exposed to any under floor area or basement opening,
>   c) The deck is skirted from the deck-walking surface to ground level with non-combustible material.

d) If the deck is skirted, the under deck area must be vented in conformance with Section 504.10.

Section 504.7.3 Structural Supports and Framing Members.
Structural supports and framing members shall be of non-combustible construction, exterior fire-retardant-treaded wood, modified heavy timber construction as described in guidance documents prepared by the PAHJ, or one-hour fire-resistive construction.

EXCEPTION: Structural supports and framing may be constructed of non-fire-rated lumber when decks, balconies, and similar projections are skirted from floor level to ground level with non-combustible material or an approved alternate. The skirted under deck area must be vented in conformance with Section 504.10.

Section 504.7.4 Decking Surfaces
Decking surfaces, stair treads, risers, and landings of decks, porches & balconies shall be constructed of non-combustible construction, exterior fire-retardant-treaded wood, modified heavy timber construction as described in guidance documents prepared by the PAHJ, one-hour fire-resistant construction, or alternative decking that passes the performance testing requirements of section 504.7.5.

Section 504.7.5 Testing of Alternative Decking Materials
Alternative decking materials may be approved when tested to demonstrate passing of the performance requirements of State Fire Marshal standard 12-7A-4. The decking surface shall pass the tests in both Parts A and B of SFM 12-7A-4, however, the burning brand exposure test of Part B may be conducted with a Class "B" sized brand as specified in ASTM E-108 or UL-790.

The Conditions of Acceptance of State Fire Marshal standard 12-7A-4 shall be modified to read as follows:

Part A: Underflame Test

1 .Peak heat release rate of less than or equal to 25 kW/ft2 (269 kW/m2)

2. Absence of sustained flaming at the conclusion of the 40-minute observation period.

3. Absence of structural failure of any deck board.

4. Absence of falling particles that are still burning when reaching the floor.

Part B: Burning Brand Test

1. Absence of sustained flaming at the conclusion of the 40-minute observation period.

2. Absence of structural failure of any deck board.

3. Absence of falling particles that are still burning when reaching the floor.

Should one of the three replicates fail to meet the Conditions of Acceptance, three additional tests may be run. All of the additional tests must meet the Conditions of Acceptance.

Product tests shall be done by a testing laboratory accredited by the California Accreditation Service or identified by an ICC-ES/ICBO-ES report. Test results and reports must be submitted to the PAHJ for analysis and approval prior to being used within the Wildland/Urban Interface Area.

Decking materials passing the performance requirements of this section shall be identified with a grade stamp or label not more than every six feet along the length of the decking board.

Section 504.7.6 Coatings.
The use of paints, coatings, stains, or other surface treatments are not an approved method of protection as required in this Chapter.

Section 504.7.7 Deck Remodels or Repair.
When remodels or repairs are made to decks in areas of the Wildland/Urban Interface Area requiring Enhanced Ignition-Resistant Construction and the deck remodel/repair exceeds 50 percent of the projected area or 1,000 square feet, whichever is less, the entire deck shall comply with section 504.7.2. For the purpose of this exception deck remodel/repair projects must be separated by at least 12 months to be considered separate projects.

Section 504.8 Exterior Windows and Glazing.
Glass or other transparent, translucent or opaque glazing shall be tempered glass, multi-layered glass panels (dual glazed), glass block, have a fire-protection rating of not less than 20 minutes, or other assemblies approved by the FAHJ. Glazing frames made of vinyl materials shall have welded corners, metal reinforcement in the interlock area, and be certified to ANSI/AAMA/NWWDA 101/I.S.2-97 structural requirements.

Section 504.8.1 Skylights.
Skylights shall be tempered glass.

Section 504.9 Exterior Doors.
All exterior doors facing the Wildland/Urban Interface Area shall be approved non-combustible construction or ignition-resistant, solid core wood not less than 1 ⅜ inches thick or have a fire protection rating of not less than 20 minutes. Windows within doors and glazed doors shall comply with Section 504.8.

504.10 Vents.
Attic ventilation openings, foundation or under floor vents, or other ventilation openings in vertical exterior walls and vents through roofs shall not exceed 144 square inches (0.0929 m2) each. Such vents shall be covered with noncombustible corrosion-resistant

mesh with openings of 1/4 inch (6.4 mm), or shall be designed and approved to prevent flame or ember penetration into the structure.
Attic ventilation openings shall not be located in soffits, in eave overhangs, between rafters at eaves, or in other overhang areas. Gable end and dormer vents shall be located at least 10 feet (3048 mm) from property lines. Under floor ventilation openings shall be located as close to grade as practical.

Section 504.10.1 Venting in Eaves.
Attic ventilation openings or ventilation louvers shall not be permitted in soffits, in eave overhangs, between rafters at eaves, or in other similar exterior overhanging areas in the Wildland/Urban Interface Area.

EXCEPTIONS:
1. Attic vents in soffits may be permitted by the FAHJ on those areas of the building that do not face the wildland fuels, when the FAHJ determines it is not a hazard.
2. When enhanced ignition-resistant construction is not required, enclosed eaves may be vented on the underside of the eave closest to the fascia provided the closest edge of the vent opening is at least 12 inches from the exterior wall. This venting must be screened or have holes of 1/4" in diameter.

Section 504.10.2 Venting on Roofs and Vertical Walls.
Roof vents, dormer vents, gable vents, foundation ventilation openings, ventilation openings in vertical walls, or other similar ventilation openings shall be louvered and covered with 1/4-inch, noncombustible, corrosion-resistant metal mesh or other approved material that offers equivalent protection. Turbine attic vents shall be equipped to allow, one-way direction rotation only; they shall not free spin in both directions.

SECTION 505
CLASS 2 IGNITION-RESISTANT CONSTRUCTION

Sections 505.1.1 Zoning Requirements.
The minimum setbacks for locating structures on a lot are set by the PAHJ. To minimize fire spread potential the FAHJ may require additional setbacks as described in Section 505.1.4. In no case may the setbacks required by the FAHJ be less than those established by the PAHJ.

Section 505.1.2 Fire Requirements.
In those jurisdictions where a FAHJ approves a fuel modification zone of less than 100 feet, all structures, including any part of a structure located within the Wildland/Urban Interface Area shall be not less than 30 feet measured perpendicular from the subject property line adjacent to Wildland Fuel. When the property line abuts a public way, the setback is measured to the centerline of the public way or street.

EXCEPTION: When allowed by both the FAHJ and by the PAHJ zoning requirements and the wildland fire hazard is determined to be minimal, the 30 foot setback may be reduced to a minimum of 5 feet from a property line

provided the entire exterior wall, eave, overhang, or any other building construction elements shall comply with the enhanced ignition-resistant construction standards of Class II.

Note: The FAHJ may allow openings in the exterior wall facing the Wildland/Urban Interface Area if it is determined the hazard is minimal.

Section 505.1.3 Future Setback Modification
All fuel modification zones shall not extend beyond the property line.

Exception: The FAHJ may approve fuel modification zones that extend beyond the property lines when legal agreements (Land easement run with the land) are in place.

Section 505.1.4 Structure Setback From Slope
A single story structure shall be setback a minimum 15 feet (4,572 mm) horizontally from top of slope to the farthest projection from a roof. A single story structure shall be less than 12 feet above grade. A two- story structure shall be setback a minimum of 30 feet (9,144 mm) measured horizontally from top of slope to the farthest projection from a roof. Structures greater than two stories may require greater setback, which is based upon a 2-to1 slope.

Section 505.1.5 Mitigation
In jurisdictions where a PAHJ or FAHJ approves a fuel modification zone of less than 100 feet (30,480 mm), CLASS 1 IGNITION-RESISTANT CONSTRUCTION shall be provided and or additional mitigation as determined by the FAHJ

Section 505.2 Roof Covering
Roofs shall comply with the Building Code and have a minimum Class A roof covering. For roof coverings where the profile allows a space between the roof covering and roof decking, the space at the eave ends shall be fire stopped to preclude entry of flames or embers.

EXCEPTIONS:
1. When re-roofing or repairs are made which exceed 50 percent of the projected roof area or 2,500 square feet, whichever is less, then the entire roof shall be fire rated roof coverings in conformance with section 505.2. Roofing of residential room additions, however, may be constructed of roofing materials having the same fire rating as the existing building when the projected roof area of the addition does not exceed 50 percent of that of the existing horizontal projected roof area or 2,500 square feet, whichever is less. For the purpose of this exception re-roofing or addition projects must be separated by at least 12 months to be considered separate projects.

2. On qualified historical buildings wood roof covering may be repaired or reconstructed as allowed by the State Historical Building Code.

Section 505.2.1 Protection of Eaves.
Combustible eaves, fascias, and soffits shall be constructed as required in guidance documents prepared by the PAHJ.

EXCEPTION: Eave construction on additions may match the existing structure provided that the addition does not exceed 50% of the existing structure or 2,500 square feet,

whichever is less. The vents in these eaves must comply with Section 26.2.4 and 26.3.2 of the San Diego Consolidated Fire Code, as applicable.

Section 505.2.2 Insulation
In the Urban-Wildland Interface Area, paper-faced insulation shall be prohibited in attics or ventilated spaces.

Section 505.4 Gutters and Downspouts.
Gutters and downspouts shall be constructed of noncombustible material. Gutters shall be designed to reduce the accumulation of leaf litter and debris that contributes to roof edge ignition.

505.5 Exterior Walls.
Exterior walls in the Wildland/Urban Interface Area shall comply with the provisions of the U.B.C. and with the following additional requirements:

Exterior Wall Surfacing Materials. The exterior wall surface materials shall be non-combustible or an approved alternate. In all construction, exterior walls are required to be protected with 2-inch nominal solid blocking between rafters at all roof overhangs. Wood shingle and shake wall covering shall be prohibited except for repair or replacement as noted in Section 505.5.1.

EXCEPTIONS:
1. Wood siding of 3/8-inch plywood or 3/4-inch drop siding is permitted but must have an under-layment of ½-inch fire-rated gypsum sheathing that is tightly butted or taped and mudded, or other ignition-resistive material as approved by the PAHJ.
2. Livestock stables less than 2,000 square feet total floor area and without restrooms are exempt from the non-combustible wall requirement if constructed a minimum of 100 feet from the property line, from any open space easement, and from any dwelling on the parcel. If a dwelling or addition to a dwelling is subsequently proposed to be constructed closer than 100 feet from a stable constructed under this exemption, the stable must be retrofitted with non-combustible exterior wall covering or be removed.
3. Heavy timber or log wall construction. Such material shall extend from the top of the foundation to the underside of the roof sheathing.

Section 505.5.1 Repair/Replacement.
If 50 percent or more of an exterior wall located less than 30 feet from a property line requires repair or replacement, the entire wall shall conform to this section. If less than 50 percent of the wall requires repair or replacement, the existing wall may be repaired or replaced in kind; however, if the wall covering is wood shingle or shake, it must be repaired or replaced with fire-retardant, pressure-treated wood shingles or shakes.

505.7 Appendages and Projections.
Unenclosed accessory structures attached to buildings with habitable spaces and projections, such as decks, shall be a minimum of 1-hour fire-resistance-rated construction, heavy timber construction or constructed of approved noncombustible materials or fire-retardant-treated wood identified for exterior use and meeting the requirements of Section 2303.2 of the California Building Code. When the attached structure is located and constructed so that the structure or any portion thereof projects

over a descending slope surface greater than 10 percent, the area below the structure shall have all under floor areas enclosed to within 6 inches (152 mm) of the ground, with exterior wall construction in accordance with Section 505.5.

Section 505.7.1 Fences and Other Attachments to Structures.
The first five feet of fences and other items attached to a structure shall be constructed of non-combustible material, or pressure-treated exterior fire-retardant wood, or meet the same fire-resistive standards as the exterior walls of the structure.

> **EXCEPTION:** Wooden gates are permitted provided that a 5-foot minimum length section of non-combustible fencing material is installed as a firebreak immediately adjacent to the gate.

Section 505.7.2 Coatings.
The use of paints, coatings, stains, or other surface treatments are not an approved method of protection as required in this Chapter.

Section 505.8 Exterior Windows and Glazing.
Glass or other transparent, translucent or opaque glazing shall be tempered glass, multi-layered glass panels (dual glazed), glass block, have a fire-protection rating of not less than 20 minutes, or other assemblies approved by the FAHJ. Glazing frames made of vinyl materials shall have welded corners, metal reinforcement in the interlock area, and be certified to ANSI/AAMA/NWWDA 101/I.S.2-97 structural requirements.

Section 505.9 Exterior Doors.
All exterior doors facing the Wildland/Urban Interface Area shall be approved non-combustible construction or ignition-resistant, solid core wood not less than 1 ⅜ inches thick or have a fire protection rating of not less than 20 minutes. Windows within doors and glazed doors shall comply with Section 504.8.

505.10 Vents.
Attic ventilation openings, foundation or under floor vents or other ventilation openings in vertical exterior walls and vents through roofs shall not exceed 144 square inches (0.0929 m2) each. Such vents shall be covered with noncombustible corrosion-resistant mesh with openings of 1/4 inch (6.4 mm) or shall be designed and approved to prevent flame or ember penetration into the structure. Attic ventilation openings shall not be located in soffits, in eave overhangs, between rafters at eaves, or in other overhang areas. Gable end and dormer vents shall be located at least 10 feet (3048 mm) from property lines. Under floor ventilation openings shall be located as close to grade as practical.

Section 505.10.1 Venting in Eaves.
Attic ventilation openings or ventilation louvers shall not be permitted in soffits, in eave overhangs, between rafters at eaves, or in other similar exterior overhanging areas in the Wildland/Urban Interface Area.

EXCEPTIONS:

1. Attic vents in soffits may be permitted by the FAHJ on those areas of the building that do not face the wildland fuels, when the FAHJ determines it is not a hazard.

2. When enhanced ignition-resistant construction is not required, enclosed eaves may be vented on the underside of the eave closest to the fascia provided the closest edge of the vent opening is at least 12 inches from the exterior wall. This venting must be screened or have holes 1/4" in diameter.

Section 505.10.2 Venting on Roofs and Vertical Walls.
Roof vents, dormer vents, gable vents, foundation ventilation openings, ventilation openings in vertical walls, or other similar ventilation openings shall be louvered and covered with 1/4-inch, noncombustible, corrosion-resistant metal mesh or other approved material that offers equivalent protection. Turbine attic vents shall be equipped to allow, one-way direction rotation only; they shall not free spin in both directions.

SECTION 506
CLASS 3 IGNITION-RESISTANT CONSTRUCTION

Section 506 Class 3 Ignition-Resistant Construction hereby is deleted in its entirety.

SECTION 507
REPLACEMENT OR REPAIR OF ROOF COVERINGS

507.1 General
When re-roofing or repairs are made which exceed 50 percent of the projected roof area or 2,500 square feet, whichever is less, then the entire roof shall be fire rated roof coverings in conformance with section 1503.1. Roofing of residential room additions, however, may be constructed of roofing materials having the same fire rating as the existing building when the projected roof area of the addition does not exceed 50 percent of that of the existing horizontal projected roof area or 2,500 square feet, whichever is less. For the purpose of this exception re-roofing or addition projects must be separated by at least 12 months to be considered separate projects.

507.1.1On qualified historical buildings
Wood roof covering may be repaired or reconstructed as allowed by the State Historical Building Code.

CHAPTER 6
FIRE PROTECTION REQUIREMENTS

SECTION 602
AUTOMATIC SPRINKLER SYSTEMS

602.1 General.
An approved automatic sprinkler system shall be installed in all occupancies in new buildings required to meet the requirements for Class 1 and Class II ignition-resistant construction in Chapter 5 or otherwise noted in the locally adopted Fire Code. The installation of the automatic sprinkler systems shall be in accordance with nationally recognized standards.

SECTION 603
DEFENSIBLE SPACE

Section 603.2 Fuel Modification
For individual building or structures on a property, in order to qualify as a conforming defensible space for the purpose of Table 503.1, the fuel modification zone shall be achieved by removing, clearing or modifying away combustible vegetation and other flammable materials from areas within 100 feet (30,480 mm) from such buildings or structures. The distances specified in Table 603.2 shall be measured on a horizontal plane, in plan view, from the perimeter or projection of the building or structure as shown in Figure 603.2. The code official, because of a site-specific analysis based on local conditions and the fire protection plan, may increase distances specified in Table 603.2. All Fuel Modification zones shall have approved field markers to identify limits of the fuel modification zones'.

Sections 603.2.1 Fuel Modification of Brush or Vegetative Growth from Roadways

(a) Clearance at Existing Off-Site Roadways The Fire Chief and/or his/her designee is authorized to cause the area within twenty (20) feet on each side of the improved width portions of highways and private streets roads which are improved, designed, or ordinarily used for vehicular traffic to be cleared of flammable vegetation and other combustible growth shall comply with the requirements of a fuel modification zone. The Fire Chief and/or his/her designee are authorized to enter upon private property to insure the fuel modification zone requirements are met.

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.

(b) **Clearance for New Off-Site Roadways when constructed and New On-Site Roadways.** The area thirty (30) feet on each side of the improved width of highways, private road street and driveways shall comply with requirements of a fuel modification zone.

EXCEPTION:

1. Upon approval by the Fire District, the Roadway Fuel Modification Zones may be reduced provided it does not impair access.

2. 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.

(c) All roadways shall have a minimum of thirteen (13) feet six (6) inches vertical clearance free of vegetation.

TABLE 603.2
REQUIRED DEFENSIBLE SPACE

URBAN-WILDLAND INTERFACE AREA	FUEL MODIFICATION DISTANCE (FEET) (1)
Moderate Hazard	30
High Hazard	100
Extreme Hazard	100

(1) Or as defined in a Fire Protection Plan (See Section 405)

Sections 603.3 Community Fuel Modification
Fuel modification zones to protect new communities shall be provided when required by the fire code official in accordance with Section 603 to reduce the fuel loads adjacent to communities and structures within them.

Sections 603.3.1 Land Ownership
Fuel modification zone land used to protect a community shall be under the control of an association or other common ownership established in perpetuity, for the benefit of the community to be protected.

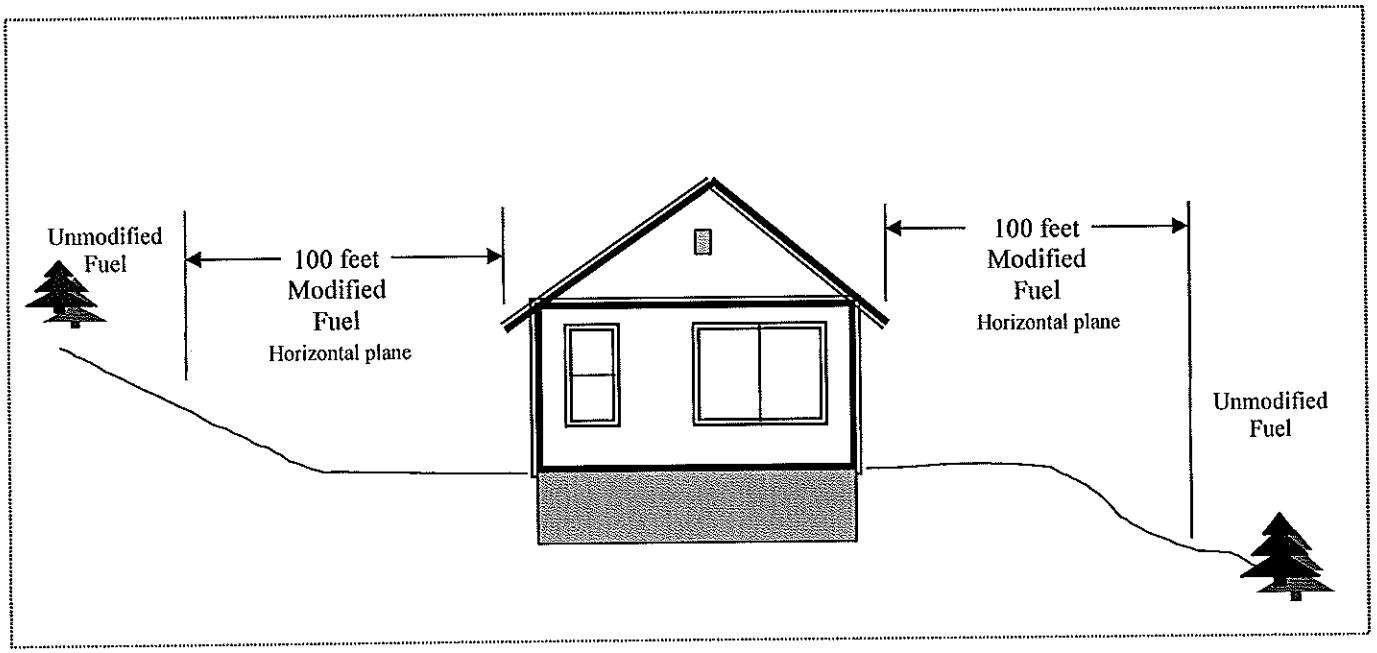
Sections 603.3.2 Plans
Plans shall be approved prior to fuel modification work. Plans shall be placed on a grading site plan shown in plan view. An elevation plan shall also be provided to indicate the length of the fuel modification zone on the slope. Plans shall include but not limited to: (1) plan showing existing vegetation (2) photographs showing natural condition prior to work being performed, (3) grading plans showing location of proposed structures and set back from top of slope to all structures.

Section 603.4 Fuel Modification Installations.
All fuel modifications shall be installed prior to the final inspection for issuance of a certificate of occupancy.

Table 603.2
REQUIRED DEFENSIBLE SPACE WILDLAND-URBAN INTERFACE

Wildland –Urban Interface Area AREA	FUEL MODIFICATION DISTANCE (feet)
Moderate hazard	30
High hazard	100
Extreme hazard	100

FIGURE 603.2 MEASUREMENTS OF FUEL MODIFICATION DISTANCE



SECTION 604
MAINTENANCE OF DEFENSIBLE SPACE

604.2 Modified area.
Non-fire-resistive vegetation or growth shall be kept clear of buildings or structures, in accordance with Section 603 and Section 604, in such a manner as to provide a clear area for fire suppression operations.

Sections 604.3 Responsibility
Persons owning, leasing, controlling, operating or maintaining buildings or structures are responsible for maintenance of defensible spaces. Maintenance of the defensible space shall be annually or as determined by the FAHJ and may include but not limited to the modification or removal of non-fire resistive vegetation and keeping leaves, needles and other dead vegetative material regularly removed from roofs of buildings and structures.

Sections 604.4 Trees.
Horizontal clearance from tree crowns to structures shall be pruned to maintain a minimum of 10 feet (3 048 mm) for fire resistant trees and 30 feet (9 144 mm) for non-fire resistive trees. Tree crowns within the defensible space shall be pruned to remove limbs located less than 6 feet (1829mm) above the ground surface adjacent to the trees. Portions of tree crowns that extend within 10 feet (3 048mm) of the outlet of a chimney shall be pruned to maintain a minimum horizontal clearance of 10 feet (3,048 mm). Dead wood and litter shall be regularly removed from trees. Ornamental trees shall be limited to groupings of 2-3 trees with canopies for each grouping separated horizontally as described in Table 604.

TABLE 604
DISTANCE BETWEEN TREE CANOPIES

Distance between Tree Canopies by Percent Slope (1)	
Percent of Slope	**Recommended Distances Between Edge of Mature Tree Canopies (2)**
0 to 20	**10 feet**
21 to 40	**20 feet**
41 plus	**30 feet**

1. Adapted from Wildland Home Fire Risk Meter, Simmerman and Fischer, 1990.
2. Determined from canopy dimensions as described in Sunset Western Garden Book (Current Edition)

604.5 Landscape Requirements -Objective.
Provisions of this section are intended to modify fuel load in areas adjacent to structures to create defensible space.

604.5.1 Landscape submittals
Landscape Plans are required for all residential custom homes, production tract homes, multi-family residential, and commercial buildings. Landscape plans shall be submitted and approved by the Fire District prior to the framing inspection. Landscape plan submittals shall include, at a minimum, a readable scale, the delineation of 100-foot fuel modification zone, the existing vegetation, and all irrigated areas, a plant legend with both botanical and common names and identify all plant material symbols.

(A) 604.5.2 Landscaping Requirements. All plant materials used shall be from the Wildland/Urban interface Development Standards plant palette. The addition of plant material to the approved list will be at the discretion of the Fire District. Landscape plans shall be in accordance with the following criteria:

(1) All non-fire resistive trees, including conifers, pepper trees, eucalyptus, and acacia species, shall be planted and maintained so that the tree's drip line at maturity is a minimum 30 feet from any combustible structure. All fire resistive tree species shall be planted and maintained at a minimum of 10 feet from the tree's drip line to any combustible structure.
(2) For streetscape plantings, all non-fire resistive trees shall be planted so that the center of the tree trunk is 20 feet from edge of curb. Fire resistive trees can be planted 10 feet from edge of curb to center of tree trunk. Care should be given to the type of tree selected that will not encroach into the roadway, nor produce a closed canopy effect.
(3) Limit planting of large unbroken masses especially trees and large shrubs. Groups should be two to three trees maximum, with mature foliage of any group separated horizontally by at least 10 feet, if planted on less than 20 percent slope, and 20 feet, if planted on greater than 20 percent slope.
(4) If shrubs are located underneath a tree's drip line, the lowest branch should be at least three times as high as the under story shrubs or 10 feet, whichever is greater.
(5) Existing trees can be pruned 10 feet away from roof, eave, or exterior siding, depending on the tree's physical or flammable characteristics and the building construction features.
(6) All tree branches and palm fronds shall be removed within 10 feet of a fireplace chimney or outdoor barbecue.

604.5.3 Orchards, Groves or Vineyards.
All orchards, groves, and vineyards shall be kept in a healthy state and maintained as described below. A 10-foot firebreak shall be cleared between the perimeter, orchard trees or row of grape vines and native vegetation or ornamental landscaping. Orchards shall be kept cleaned of dead and or downed trees. Orchards and vineyards shall be free of combustible debris, dead branches and dead foliage. All dead grasses between rows of trees or vines shall be mowed or disked to bare soil.

604.5.4 Eucalyptus Forests and Oak Woodlands.
All forests and woodlands shall be kept in a healthy state and maintained as described below. The forest or woodlands shall be free of all dead, dying or diseased trees

(excluding tree stumps no higher than six inches above the ground). Dead, dying or diseased trees shall include insect infested trees, no longer living, in the last stages of growth or infected by a pathogen of any type. If combustible vegetation is located underneath a tree's drip line, the lowest branch shall be at least three times as high as the under story brush or grasses, or ten feet, whichever is greater. This will reduce the build-up of "ladder" fuels. Firewood shall be neatly stacked and shall have a minimum of 30 feet of clearance (no vegetation) around the entire firewood storage area. Debris and trimmings produced by the removal process shall be removed from the site, or if left, shall be converted into mulch by a chipping machine and evenly dispersed to maximum depth of six inches.

604.5.5 Landscape Installation.
All landscaping shall be installed prior to the final inspection for issuance of certificate of occupancy.

SECTION 606
LIQUEFIED PETROLEUM GAS INSTALLATIONS

606.1 General.
The storage of liquefied petroleum gas (LP gas) and the installation and maintenance of pertinent equipment shall be in accordance with the Locally Adopted Fire Code or, in the absence thereof, recognized standards.

Sections 606.2 Location of Containers.
LP-gas containers shall be located within the defensible space in accordance with the Locally Adopted Fire Code.

SECTION 607
STORAGE OF FIREWOOD AND COMBUSTIBLE MATERIALS

Sections 607.1 General Storage of Firewood and Combustible Materials
Firewood and combustible material shall not be stored in unenclosed spaces beneath buildings or structures, or on decks or under eaves, canopies or other projections or overhangs. When required by the code official, storage of firewood and combustible material stored in the defensible space shall be located a minimum of 30 feet (9 144 mm) from structures and separated from the crown of trees by a minimum of 15 feet (4 572 mm), measured horizontally. Firewood and combustible materials not for consumption on the premises shall be stored so as to not pose a hazard.

SECTION A109 REFERENCED STANDARDS

IFC-2006	California Fire Code	A104.6, A105.1
ICC-EC-2006	ICC Electrical Code—Administrative Provisions	A107.5

APPENDIX "B," "C," "E," "F" and "H" are deleted.

Section 3
That Ordinance No. 08-02 of the Board of Directors of Lakeside Fire Protection District Adopting the International Wildland-Interface Code, 2006 Edition and all other ordinances or parts of ordinances in conflict herewith are hereby repealed.

Section 4
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 Directors of Lakeside Fire Protection District 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 5
That nothing in this ordinance or in the International Wildland-Interface Code, 2006 edition, hereby adopted shall be construed to affect any suit or proceeding impending in any court, or any rights acquired, or liability incurred, or any cause or causes of action acquired or existing, under any act or ordinance hereby repealed as cited in Section 2 of this ordinance; nor shall any just or legal right or remedy of any character be lost, impaired or affected by this ordinance.

Section 6
That the Lakeside Fire Protection District's Keeper of Records is hereby ordered and directed to cause this ordinance to be published as required by law. Upon passage, the Secretary of the Board shall transmit a copy of this Ordinance to the California Building Standards Commission pursuant to Health and Safety Code section 17958.7 and the California Department of Housing and Community Development.

Section 7
Specific boundaries of natural or man-made features of urban-wildland interface areas shall be as shown on the wildland area interface map. See Attachment B for map.

Section 8 Date of Effect

This ordinance shall take effect and be in force on January 18, after its final passage at a public hearing, as required by law, except for provisions regulated by the Hanson-Greene Act, which require ratification by the County Board of Supervisors.

First read at a regular meeting of the Board of Directors of the Lakeside Fire Protection District of the County of San Diego, California, held on the 27 day of November 2007 and finally adopted and ordered published in the manner required by law at the hearing and meeting of the 18 day of December 2007 by the following roll call vote.

Upon passage, the Secretary of the Board shall transmit a copy of this Ordinance to the California Building Standards Commission pursuant to Health and Safety Code Section 17958.7 and the California Department of Housing and Community Development.

AYES: Coyle, Dailey, Daskoski, Smith, Liebig.
NOES: None
ABSENT: None
ABSTAIN: None

APPROVED:

President, Board of Directors

Mark T. Baker
Fire Chief

ATTEST:

Board of Directors

Clerk of the Board

APPROVED AS TO FORM:

District Counsel
Hilda Mendoza

ATTACHMENT A

FINDINGS

FOR REVISION OF THE
LAKESIDE FIRE PROTECTION DISTRICT
AMENDMENTS TO THE INTERNATIONAL WILDLAND-INTERFACE CODE, 2006 EDITION

As required by Health and Safety Code section 17958 the Lakeside Board of Directors does herewith make express findings that amendments to the California Building Standards Code are necessary for the protection of the public health, safety and welfare due certain climatic, topographic or geological features existing in the County of San Diego.

DEFINITIONS

CLIMATE. The average course or condition of the weather at a particular place over a period of many years, as exhibited in absolute extremes, means and frequencies of given departures
from these means (i.e., of temperature, wind velocity, precipitation and other weather elements).

TOPOGRAPHY. The configuration of landmass surface, including its relief (elevation) and the position of its natural and man-made features that affect the ability to cross or transit a terrain.

GEOGRAPHY. A science that deals with the earth and its life, especially the description of land, sea, air, and the distribution of plant and animal life including man and his industries with reference to the mutual relations of these diverse elements. *Webster's Third New California Dictionary*

CLIMATIC CONSIDERATIONS

There are two types of climates: macro and micro. A macro climate affects an entire region and gives the area a general environmental context. A micro climate is a specific variation that could be related to the other two factors, topography and geography. A micro climate may cover a relatively small area or be able to encompass an entire community, as opposed to another community in the same county.

Climatic consideration should be given to the extremes, means and anomalies of the following weather elements:

1. Temperatures.

2. Relative humidifies.
3. Precipitation and flooding conditions.
4. Wind speed and duration of periods of high velocity.
5. Wind direction.
6. Fog and other atmospheric conditions.

TOPOGRAPHIC CONSIDERATIONS

Topographic considerations should be given to the presence of the following topographical elements:

1. Elevation and ranges of elevation.
2. Location of ridges, drainages and escarpments.
3. Percent of grade (slope).
4. Location of roads, bridges and railroads.
5. Other topographical features, such as aspect exposure.

This information becomes an important part of creating an analysis of urban-wildland areas because topography and slope are key elements (along with fuel type) that create the need for specific ignition-resistance requirements in this code

GEOGRAPHIC CONSIDERATIONS

Geography should be evaluated to determine the relationship between man-made improvements (creating an exposure) and factors such as the following:

1. Fuel types, concentration in a mosaic and distribution of fuel types.
2. Earthquake fault zones.
3. Hazardous material routes.
4. Artificial boundaries created by jurisdictional boundaries.
5. Vulnerability of infrastructure to damage by climate and topographical concerns.

Fuel types are the final component of the findings that suggest the need for identifying urban-wildland areas in a jurisdiction. Review Appendix D and definitions for a brief description of the various fuel models that relate to the specific areas under evaluation.

The following matrix lists the Lakeside Fire Protection District amendments and the corresponding expressed findings. Minor editorial changes or typographical corrections to the International Wildland-Interface Code, 2006 edition are not shown in these findings. The full texts of the proposed Lakeside Fire Protection District amendments are shown in Lakeside Fire Protection District International Wildland-Interface Code, 2006 edition

Findings for the International Wildland-Interface Code, 2006 edition

Finding 1

The Lakeside Fire Protection District is located in hilly, inland terrain. Approximately 65% of the District is Wildland for fire protection purposes, covered by native vegetation on steep and frequently inaccessible hillsides. The native ground cover is highly combustible and susceptible to the production of flying, burning brands that will greatly increase the spread of fire. These conditions have the potential for overcoming the ability of the Fire Department to aid or assist in fire control, evacuations, rescues and the emergency task demands inherent in such situations.

Finding 2

The Lakeside Fire Protection District is situated near several known major faults, each capable of generating earthquakes of significant magnitude. These include the Rose Canyon, Coronado Banks, and Silver Strand Faults, located generally west of the District, and the Elsinore and the Agua Caliente Faults. These faults are subject to becoming active at any time; the Lakeside Fire Protection District is particularly vulnerable to devastation should such an earthquake occur.

The potential effects of earthquake activity include isolating the Lakeside Fire Protection District from the surrounding area and restricting or eliminating internal circulation due to the potential for collapsing of highway overpasses and underpasses, along with other bridges in the district, or an earth slide, and the potential for vertical movement rendering surface travel unduly burdensome or impossible.

Finding 3

The Lakeside Fire Protection District is bisected by California State Route (Highway) 67 and Interstate 8. These highways are heavily traveled by transportation vehicles carrying known toxic, flammable, explosive and hazardous materials.

The potential for release or threatened release of a hazardous material along this route and others within the district is likely given the volume transported daily. Incidents of this nature will normally require all available emergency response personnel to prevent injury and loss of life and to prevent, as far as practicable, property loss. Emergency personnel responding to such aforementioned incidents may be unduly impeded and delayed in accomplishing an emergency response as a result of this situation. With the potential result of undue and unnecessary risk to the protection of life and public safety and, in particular, endangering residents and occupants in buildings or structures without the protection of automatic fire sprinklers.

Finding 4

The Lakeside Fire Protection District and Southern California are semi-arid regions and experience water shortages from time to time. Those shortages can have a severely adverse effect on water availability for fire fighting. Fires starting in sprinkled buildings are typically controlled by one or two sprinkler heads, flowing as little as 13 gallons per minute.

Hose streams used by engine companies on well-established structure fires operate at about 250 gallons per minute each, and the estimated water need for a typical residential fire is 1,250 to 1,500 gallons per minute, according to the Insurance Service Office and the California Fire Code.

Under circumstances such as, lack of water infrastructure, earthquakes, multiple fires and wildland fires within a community, the limited water demands needs of residential fire sprinklers would control and extinguish many fires before they spread from building to wildland. In such a disaster, water demands needed for conflagration firefighting probably would not be available.

Finding 5

The topography of the Lakeside Fire Protection District presents problems in delivery of emergency services, including fire protection. Hilly terrain has narrow, winding roads with little circulation, preventing rapid access and orderly evacuation. Much of these hills are covered with highly non-fire resistive natural vegetation. In addition to access and evacuation problems, the terrain makes delivery of water extremely difficult. Some hill areas are served by water tank and pump systems are subject to failure in fire, high winds, earthquake and other power failure situations.

The aforementioned problems support the imposition of fire protection requirements greater than those set forth in the Building Code or Fire Code.

Finding 6

The seasonal climatic conditions during the late summer and fall create numerous serious difficulties regarding the control of and protection against fires in the Lakeside Fire Protection District. The hot, dry weather typical of this area in summer and fall, coupled with Santa Anna winds and low humidity frequently results in wildfires that threaten or could threaten the Lakeside Fire Protection District.

Although some code requirements, such as fire-resistive roof classification, have a direct bearing on building survival in a wildland fire situation, others, such as residential fire sprinklers, may also have a positive effect. In dry climate on low humidity days, many materials are much more easily ignited. More fires are likely to occur and any fire, once started, can expand extremely rapidly. Residential fire sprinklers can arrest a fire starting within a structure before the fire is able to spread to adjacent brush and structures.

A seasonal wind also have the potential for interfering with emergency vehicle access, delaying or making impossible fire responses, because of toppling of extensive plantings of dense chaparral, eucalyptus and confers trees. The trees are subject to uprooting in strong winds due to relatively small root bases compared to the tree itself. The aforementioned problems support the imposition of fire-protection requirements greater than those set forth in the Building Code or Fire Code.

Finding 7

Due to the topography in much of the Lakeside Fire Protection District, roadway condition, gates, angle of approach or departure, steeply sloping roadways and grades are common. In addition, combining potentially severe rainstorms and ground water retention of many areas of the District where there is expansive soil. This produces a condition wherein the moisture content of the soil is sufficient that roadways become damaged due to soil expansion and shrinkage. All weather, paved surfaces capable of supporting the imposed loads of fire apparatus are necessary to ensure access of emergency response personnel. These roadways, gates, approach angles, steep slopes and grades can also make it difficult for fire apparatus and other emergency vehicles to access a site. It is therefore essential that these roadway accesses be provided with proper all weather, paved surfaces, angle of approach, grades and gate access.

Finding 8

The Lakeside Fire Protection District is situated on the slopes of and at the base of the Coastal Mountains, with drainage from the eastern portion of the district, including the San Diego River, San Vicente Creek and Los Coches Creek, which when flooded, could result in conditions rendering fire departments vehicular traffic access unduly burdensome or impossible.

Further, the flood conditions described above carries the potential for overcoming the ability of the fire department to aid or assist in fire control, evacuations, rescues and the emergency tasks demands inherent in such situations. The potential for the aforementioned flooding conditions to result in limiting fire department emergency vehicular traffic, with resulting overtaxing fire department personnel, may further cause a substantial or total lack of protection against fire for the buildings and structures located within the jurisdiction.

MATRIX OF FINDINGS		
SECTION	*PAGE NUMBER*	*FINDING NUMBER(S)*
CHAPTER 1 ADMINISTRATION		
101 General 1	2	6
103 Compliance Alternatives	3	6
104 Appeals	3	Deleted referred to Fire Code
105 Permits	3	Deleted referred to Fire Code
106 Plans and Specifications	3	1, 2, 5, 7
107 Inspection and Enforcement		
108 Certificate of Completion		
CHAPTER 2 DEFINITIONS		
202 Definitions	3-7	All
CHAPTER 3 URBAN-WILDLAND INTERFACE AREAS		
302 Urban-Wildland Interface Area Designations	7	6,7
CHAPTER 4 URBAN-WILDLAND INTERFACE AREA REQUIREMENTS		
401 General		All
402 Applicability	7-8	All
403 Access	8-9	All
404 Water Supply	9-10	All
405 Fire Protection Plan	10	5,6,7
CHAPTER 5 SPECIAL BUILDING CONSTRUCTION		
501 General	11	All
502 Fire Hazard Severity	11	All
503 Ignition-resistant Construction	12	All
504 Class1 Ignition-resistant Construction	12-18	All
505 Class2 Ignition-resistant Construction	18-22	All
506 Class 3 Ignition-resistant Construction	22	Deleted entire section 506

507 Replacement or Repair of Roof Coverings	22	All
CHAPTER 6 FIRE-PROTECTION REQUIREMENTS		
602 Automatic Fire Sprinkler Systems	23	Referred to Fire Code
603 Defensible Space	23-25	All
604 Maintenance of Defensible Space	25	All
604 Distance between Tree Canopies Table	26	All
604.5 Landscape Requirements	26-27	All
604.5.1 Landscape submittals	26	All
604.5.2 Landscaping Requirements	26	All
604.5.3 Orchards, Groves or Vineyards	27	All
604.5.4 Eucalyptus Forest and Oak Woodlands	27	All
604.5.5 Landscape Installation	27	All
605 Spark Arresters		Referred to Fire Code
606 Liquefied Petroleum Gas Installations	28	Referred to Fire Code
607 Storage of Firewood and Combustible Materials	28	6
Appendix "A" General Requirements		All
Appendix "D" Fire Rating Danger	Définitions	All
APPENDIX "B", APPENDIX "C", APPENDIX "E", APPENDIX "F", APPENDIX "H"		Deleted

ATTACHMENT "B"

All areas within the Boundaries of the Lakeside Fire Protection District (outlined in red) have been deemed **VERY HIGH FIRE HAZARD** areas.