

**Jomsky, Mark**

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**From:** Damon Herring [DHerring@mparchitects.com]  
**Sent:** Tuesday, June 13, 2006 6:50 PM  
**To:** Jomsky, Mark  
**Subject:** Vista del Arroyo historic bungalow - material exception to the code

Hi Mr Jomsky,

I spoke with the building official today who told me he would not approve the Fire Retardant Wood shingles for our project. We resubmitted this request to the building department after the State Historic Building Safety Board (SHBSB) sent Mr. Nazerian a letter outlining the sections of the historic building code that would allow us to use the Class A shingles on our project.

Mr Nazerian has since spoken to the executive director at the SHBSB to clarify that it was not an official decision of the Safety Board. I am attaching a copy of the letter that was sent to Mr. Nazerian from the SHBSB.

We have decided that we would like to pursue an appeal with the city regarding this matter - I am referencing section 14.04 of the Pasadena Municipal Code:

14.04.040 Board of appeals.

All sections in the respective codes pertaining to the Board of Appeals are hereby amended in their entirety to read as follows:

In order to hear and decide appeals or orders and determine the suitability of **alternate materials** and methods of construction and to provide for reasonable interpretations of the provisions of these Codes, there shall be and there is hereby created a Board of Appeals, composed of the Mayor and the City Council.

The city clerk shall be the secretary to the Board. The Board may adopt reasonable rules and regulations for conducting its investigations and shall render all its decisions and findings on contested matters, in writing to the building official, with a duplicate copy thereof to any appellant or contestant affected by any such decision of findings, and may recommend to the City Council such new legislation, if any, as is consistent therewith.

The City Council may prescribe by resolution, to employ at the cost and expense of the City, such qualified individuals as the Board, in its discretion, may deem reasonably necessary in order to assist it in its investigations and in making its findings and decisions.

(Ord. 6909 § 3 (part), 2002; Ord. 6789 § 4 (part), 1999; Ord. 6683 § 4 (part), 1996)

We should talk to clarify the procedure that needs to be followed in order to pursue this appeal.

Regards,

Damon

Damon Herring  
**Elizabeth Moule & Stefanos Polyzoides**  
Architects and Urbanists  
180 E. California Blvd.  
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(626) 844-2400

6/21/2006

**Jomsky, Mark**

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**From:** Damon Herring [DHerring@mparchitects.com]  
**Sent:** Thursday, June 15, 2006 10:39 AM  
**To:** Jomsky, Mark  
**Subject:** Historic building code - Vista del Arroyo

Hi Marc,

I wanted to share the section of the California Historic Building Code that will be part of the discussion at our appeal. Sarkis has the opinion that the local code has been modified to supersede the State's code. The State has listed specific reasons allowed for modification. They also require local jurisdictions to file modifications of the code with them. Pasadena has not filed any modifications to the code with the State as of today per information we received from the executive director.

**California Historic Building Code:**

**18959.**

- a. Except as otherwise provided in Part 2.5 (commencing with Section 18901), all state agencies shall administer and enforce this part with respect to qualified historical buildings or structures under their respective jurisdiction.
- b. Except as otherwise provided in Part 2.5 (commencing with Section 18901), all local authorities shall, within their legal authority, administer and enforce this part with respect to qualified historical buildings or structures under their respective jurisdictions where applicable.
- c. The State Historical Building Safety Board shall coordinate and consult with the other applicable state agencies affected by this part and, except as provided in Section 18943, disseminate provisions adopted pursuant to this part to all local building authorities and state agencies at cost.
- d. Regulations adopted by the State Fire Marshal pursuant to this part shall be enforced in the same manner as regulations are enforced under Sections 13145, 13146, and 13146.5.
- e. Regular and alternative building standards published in the California Building Standards Code shall be enforced in the same manner by the same governmental entities as provided by law.
- f. When administering and enforcing this part, each local agency may make changes or modifications in the requirements contained in the California Historical Building Code, as described in Section 18944.7, as it determines are reasonably necessary because of local climatic, geological, seismic, and topographical conditions. The local agency shall make an express finding that the modifications or changes are needed, and the finding shall be available as a public record. A copy of the finding and change or modification shall be filed with the State Historical Building Safety Board. **No modification or change shall become effective or operative for any purpose until the finding and modification or change has been filed with the board.**

**Jomsky, Mark**

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**From:** DHerring [DHerring@mparchitects.com]  
**Sent:** Wednesday, June 21, 2006 9:29 AM  
**To:** Jomsky, Mark  
**Subject:** regarding Vista del Arroyo material exception appeal

Hi Marc,

I am attaching 2 sections of the California Historic Building Code. The first section highlighting the application of the historic building code which should allow a reasonably equivalent alternative to the local code.

The second section related to fire protection - allowance of Class C shingles and the implementation of a sprinkler system.

I am also including a section of a shingle manufacturer's website that states a Class A wood assembly is equivalent to other Class A materials.

Regards,

Damon

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6/21/2006

## Chapter 8-1 ADMINISTRATION

### SECTION 8-101 — TITLE, PURPOSE AND INTENT

**8-101.1 Title.** These regulations shall be known as the State Historical Building Code and will be referred to herein as "the SHBC."

**8-101.2 Purpose.** The purpose of this code is to provide regulations for the preservation, restoration, rehabilitation, relocation or reconstruction of buildings or structures designated as qualified historical buildings or properties (as defined in Section 8-218). Such regulations are intended to provide alternative solutions for the preservation of qualified historical buildings or properties, to provide access for persons with disabilities, to provide a cost-effective approach to preservation, and to provide for the reasonable safety of the occupants or users. These regulations require enforcing agencies to accept reasonably equivalent alternatives to the regular code (as defined in Section 8-219) when dealing with qualified historical buildings or properties.

**8-101.3 Intent.** It is the intent of these regulations to facilitate the preservation and continuing use of qualified historical buildings or properties while providing reasonable safety for the building occupants and access for persons with disabilities.

### SECTION 8-102 — APPLICATION

**8-102.1 Application.** These regulations are applicable for all issues regarding building code compliance for qualified historical buildings or properties. These regulations are to be used in conjunction with the regular code to provide alternatives to the regular code to facilitate the preservation of qualified historical buildings or properties. These regulations shall be used whenever compliance with the regular code is required for qualified historical buildings or properties.

**8-102.1.1 Additions, alterations and repairs.** It is the intent of these regulations to allow nonhistorical expansion or addition to a qualified historical building or property provided:

1. Nonhistorical additions shall conform to the requirements of the regular code. See Section 8-202—A.
2. Additions, alterations or repairs shall not cause a qualified historical building or structure to become unsafe or overloaded.

**8-102.1.2 Relocation.** Relocated qualified historical buildings or properties shall be sited to comply with the regular code or as provided for in this code. New nonhistorical construction related to relocation shall comply with the regular code. Historical reconstruction and restoration related to relocation may comply with the alternatives contained in this code.

**8-102.1.3 Change of occupancy.** For change of use or occupancy, see Chapter 8-3, Use and Occupancy.

**8-102.1.4 Continued use.** Qualified historical buildings or properties may have their existing use or occupancy continued if such use or occupancy does not constitute a distinct hazard to life safety as defined in this code.

**8-102.1.5 Unsafe buildings.** When a qualified historical building or property is determined to be unsafe as defined in the regular code, the requirements of this code are applicable to the work necessary to correct the unsafe conditions. Work to remedy the building shall be limited to the correction of the unsafe conditions, and

it shall not be required to bring the entire building in compliance with regular code.

**NOTE:** See Section 8-703, Structural Survey, to determine when a structural survey is required.

### SECTION 8-103 — ORGANIZATION AND ENFORCEMENT

**8-103.1 Authority.** The state or local enforcing agency, pursuant to authority provided under Section 18954 of the Health and Safety Code, shall apply the provisions of this code in permitting repairs, alterations and additions necessary for the preservation, restoration, reconstruction, rehabilitation, moving or continued use of a qualified historical building or property when so elected by the private property owner.

**8-103.2 State Enforcement.** All the state agencies per Section 18958 of the Health and Safety Code shall administer and enforce this code with respect to qualified historical buildings or properties under their respective jurisdiction.

**8-103.3 Liability.** Prevailing law regarding immunity of building officials is unaffected by the use and enforcement of this code.

### SECTION 8-104 — REVIEW AND APPEALS

**8-104.1 State Historical Building Safety Board (SHBSB).** In order to provide for interpretation of the provisions of this code and to hear appeals, the SHBSB shall act as a review body to state and local agencies or any affected party.

**8-104.2 SHBSB Review.** When a proposed design, material or method of construction is being considered by the enforcing agency, the agency chief, the building official or the local board of appeals may file a written request for opinion to the SHBSB for its consideration, advice or findings. In considering such request, the SHBSB may seek the advice of other appropriate private or public boards, individuals, or state or local agencies. The SHBSB shall, after considering all of the facts presented, including any recommendation of other appropriate boards, agencies or other parties, determine if, for the purpose intended, the proposal is reasonably equivalent to that allowed by these regulations in proposed design, material or method of construction, and it shall transmit such findings and its decision to the enforcing agency for its application. The Board shall recover the costs of such reviews and shall report the decision in printed form, copied to the California Building Standards Commission.

**8-104.3 SHBC Appeals.** If any local agency administering and enforcing this code or any person adversely affected by any regulation, rule, omission, interpretation, decision or practice of the agency enforcing this code wishes to appeal the issue for resolution to the SHBSB, either of these parties may appeal directly to the Board. The Board may accept the appeal only if it determines that issues involved are of statewide significance. The Board shall recover the costs of such reviews and shall make available copies of decisions in printed form at cost, copied to the California Building Standards Commission.

**8-104.4 Costs for Board Action and Informational Material.** An estimate of the review and appeals process can be provided by contacting:

Executive Director  
The State Historical Building Safety Board

## Chapter 8-4 FIRE PROTECTION

### SECTION 8-401 — PURPOSE, INTENT AND SCOPE

**8-401.1 Purpose.** The purpose of this chapter is to provide alternative regulations for fire protection of buildings or structures designated as qualified historical buildings or properties. These regulations require enforcing agencies to accept any reasonably equivalent alternatives to the regular code when dealing with qualified historical buildings or properties.

**8-401.2 Intent.** The intent of these regulations is to preserve the integrity of qualified historical buildings and properties while maintaining a reasonable degree of fire protection based primarily on the life safety of the occupants and firefighting personnel.

**8-401.3 Scope.** This chapter shall apply when required by the provisions of Section 8-102.

### SECTION 8-402 — FIRE-RESISTIVE CONSTRUCTION

**8-402.1 Exterior Wall Construction.** The fire-resistance requirement for existing exterior walls and existing opening protection may be satisfied when an automatic fire-extinguishing system designed for exposure protection is installed. The automatic sprinklers may be installed on the exterior under the roof line with at least one sprinkler head located over each opening required to be protected. Additional sprinkler heads shall also be distributed along combustible walls that do not meet the fire-resistive requirement due to their relationship to property lines as required by regular code. Such sprinkler system may be connected to an adequate domestic water supply on the street-main side of the building shut-off valve. A shut-off valve may be installed for the sprinkler system provided it is locked in an open position.

**8-402.2 One-hour Construction.** Upgrading an existing qualified historic building or property to one-hour fire-resistive construction and one-hour fire-resistive corridors shall not be required regardless of construction or occupancy when one of the following is provided:

1. An automatic fire sprinkler system throughout.
2. An approved life-safety evaluation.
3. Other alternative measures are approved by the enforcing agency.

**8-402.3 Glazing in Fire-rated Systems.** Historic glazing materials in interior walls required to have one-hour fire rating may be approved subject to the concurrence of the enforcing agency when provided with approved smoke seals and when the area affected is provided with an automatic sprinkler system.

### SECTION 8-403 — INTERIOR FINISH MATERIALS

New nonhistoric interior wall and ceiling finish shall conform to the provisions of the regular code. Existing nonconforming materials used in interior wall and finishes may be surfaced with an approved fire retardant to increase the rating of the natural finish to within reasonable proximity of the required rating. For wood lath and plaster walls, see Section 8-404.

**EXCEPTION:** When an approved automatic sprinkler system is provided throughout the building, existing finishes need not be fire retardant.

### SECTION 8-404 — WOOD LATH AND PLASTER

Wood lath and plaster walls may be considered in accordance with codes, standards, and listings published prior to 1943 whereby a wood stud wall assembly with gypsum or lime plaster on hand split or sawn wooden lath obtains a one-half-hour fire-resistive rating. This rating may be increased for interior walls to as much as one hour by filling the wall with mineral fiber or glass fiber.

### SECTION 8-405 — OCCUPANCY SEPARATION

See Chapter 8-3.

### SECTION 8-406 — MAXIMUM FLOOR AREA

See Chapter 8-3.

### SECTION 8-407 — VERTICAL SHAFTS

Vertical shafts need not be enclosed when such shafts are blocked at every floor level by the installation of not less than 2 full inches (51 mm) of solid wood or equivalent construction installed as to prevent the initial passage of smoke and flame. Approved automatic sprinkler systems or other solutions may be considered on a case-by-case basis, in lieu of enclosure of vertical shafts and stairwells.

### SECTION 8-408 — ROOF COVERING

Existing or original roofing materials may be repaired or reconstructed subject to the following requirements:

1. The original or historic roofing system shall be detailed or modified as necessary in order to be capable of providing shelter to the building occupants and exclude dampness, while preserving the historic materials and appearance of the roof.
2. Wooden roof materials may be utilized where fire resistance is required provided they are treated with fire-retardant treatments to achieve an equivalence to a Class C fire-resistive rating, or as otherwise permitted on a case-by-case basis.

### SECTION 8-409 — FIRE ALARM SYSTEMS

Every qualified historical building or property shall be provided with fire alarm systems as required for the use or occupancy by the regular code or other approved alternative.

### SECTION 8-410 — AUTOMATIC FIRE-EXTINGUISHING SYSTEMS

**8-410.1** Every historical building which cannot be made to conform to the construction requirements specified in the regular code for the occupancy or use, and which constitutes a distinct fire hazard (for definition of "distinct hazard," see Section 8-205), shall be deemed to be in compliance if provided with an approved automatic fire-extinguishing system.

**EXCEPTION:** When an alternative life-safety system is approved by the enforcing agency.

**8-410.2** An automatic fire-extinguishing system shall not be used to substitute for or act as an alternative to the required number of exits from any facility. (See Chapter 8-5 for exiting requirements.)

**8-410.3** An automatic fire-extinguishing system shall be provided in all detention facilities.



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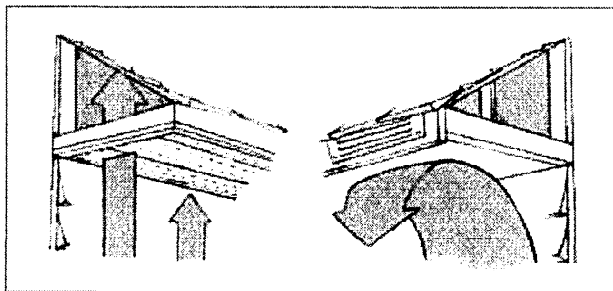
## Fire Smart



Many of us watched the massive wildfires in fall, 2003 and wondered, "what can we do to protect our home from fire?" Since it is difficult to recreate a wildfire in a lab, there has been little laboratory research on what changes can be made to a house in order to eliminate any "weak points." However, many veteran firefighters, and fire officials across

the United States have singled out changes that can be made to greatly **increase your house's survival success** from an encroaching fire.

### The problem with soffits and attic vents



Exposed soffits and eaves are potential heat traps and are at risk of catching fire. But this problem isn't the only threat. Soffit vents, which are designed to allow a roof to breathe, also provide a freeway for flames and heat to enter an attic. To minimize exposure, enclose all eaves and soffits with a mold resistant gypsum underlayment. Cover it with fiber-cement sheathing. To vent attic spaces, it's safer to use ridge or gable vents. Be sure all exposed vents and chimneys are covered with 1/8-inch corrosion-resistant steel screens to keep out convection-driven embers.

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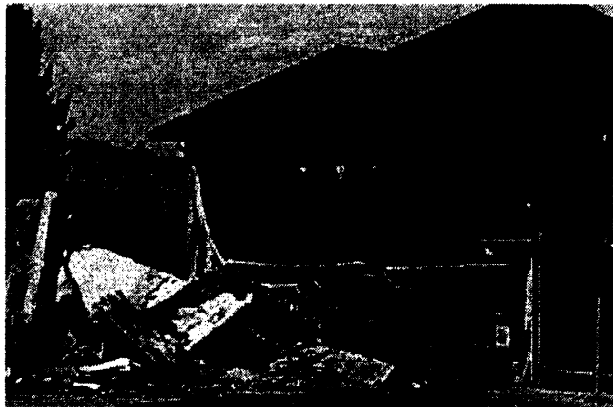
### Exterior Siding - Enclose your house with firewalls

*"FSR Treatment has successfully passed the most stringent fire retardency tests."*

Steve Harris  
Certification Mgr, QAI

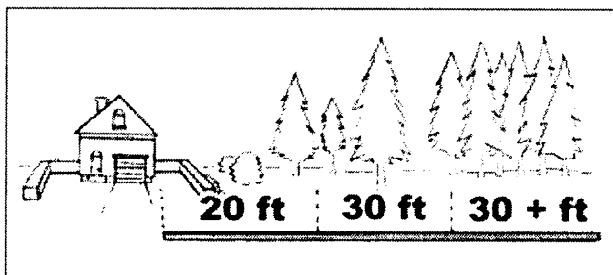


Exterior walls are vulnerable to both radiant and convective heat from a wildfire. During an intense fire, vinyl and aluminum siding melts, exposing the wall's vulnerable interior. A layer of 5/8-in gypsum sheathing under either vinyl or aluminum siding can increase the level of protection significantly. However, **non-combustible and fire treated wood sidings are the preferred choice** of materials.



Siding materials like cement stucco, stone, pressure treated cedar siding, or other masonry materials are better choices if you live in a fire-hazard zone. But stucco and other masonry assemblies are prone to cracking and need to be maintained to be effective.

### A good site plan is your first defense against wildfire



Consider fire defenses as a series of concentric spaces, or zones of managed landscape around your home. These zones act as **natural breaks that can slow the spread of fire**. Consult your local forest-service agency ([www.fs.fed.us](http://www.fs.fed.us)) for help with selecting plants that have natural fire resistance.

Long-term maintenance is also important. You should eliminate "ladder fuels" - vegetation that provides a path for fires to climb from the ground to the treetops - by removing tree branches that are within 12 feet of the ground. To eliminate potential fuel sources:

- remove dried vines from the side of the house
- keep gutters clean
- sweep your roof of any build up debris
- prune shrubs
- remove dead leaves

Also, you should store firewood and flammable fuels at least 30 feet from the house. Any plants that can dry up and burn easily should be kept away

from contact with the side of the house.

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### **Noncombustible materials won't make a house fireproof**

While a noncombustible material like metal roofing or siding doesn't burn, metal is an excellent heat conductor. During an intense fire, enough heat can be conducted through the metal to ignite the material behind it.

When grouped with noncombustible materials, fire-rated assemblies can provide additional protection. A fire-rated assembly is a combination of materials forming a component of a building, such as a roof or a wall, which resists ignition while protecting the rest of the structure.

Fire rated assembly comes in a Class A- B- or C-rating. The best form of a fire rated assembly for a roofing material is a Class "A" assembly that uses pressure-treated cedar shakes with a fiberglass underlay. This arrangement adds an additional protective barrier for the home.

### **The most vulnerable component is the roof**

The American Society for Testing Materials (ASTM) has a test to determine the hourly rating of an assembly. It exposes an assembly to heat and flame on one side and tests for heat transmission, burn-through, structural integrity, the ability to withstand water pressure from a fire hose, and the assembly's capability of carrying its own load.

During a fire, wind-driven embers, which have been known to travel as far as ½-mile from a wildfire, can stick to the rough surfaces or valleys of a roof. If roof materials are flammable, the structure can catch fire long before a wildfire arrives. To protect your home, consider using any of the three classes of fire retardant pressure treated cedar roofing materials available.

It's recommended that if you are going to choose an assembly, choose the highest level of protection for your home with a Class "A" rated roofing system which uses a fiberglass underlay beneath the pressure treated shingles for optimal protection.

A roof sprinkler system is, at best, a backup to a fire-resistant roof assembly (See National Fire Sprinkler Association web site at [www.nfsa.org](http://www.nfsa.org)). Although a wet roof can reduce the chances of radiant and direct-flame combustion, roof sprinkler systems aren't foolproof. Water pressure tends to be low during a fire, and if sprinklers are pump driven, the electricity that powers the pump can fail. Also, fire-generated winds can redirect the spray from the roof.

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### **Windows and skylights are vulnerable**

Windows and skylights are weak points. That's because they can fail before a building ignites, allowing fire to enter a house. (Which is why an interior sprinkler system is a good idea). During a wildfire, single pane windows last only a couple of minutes before they break. **Thermo-pane and double-glazed windows last twice as long.**

During a fire, the window's sash causes a differential in the heating and stressing of the glass, causing it to crack. On smaller windows (less than 2-foot wide), cracked glass usually stays in place and continues to offer some protection. On bigger windows, glass falls out because it's too heavy for the sash to hold.

Your best bet, especially on the windward side of the house, is to use non-combustible shutters that latch to protect your windows. Another good practice is to use low-e (low emissivity) tempered glass. The ultra-thin metallic coating on the glass dramatically reduces the fire's radiant energy from entering the house and possibly igniting drapes or other flammable material. Tempered glass, although expensive, resists high heat that weakens most glass and resists impact from wind-thrown objects.

Low-e tempered glass needs to stay in place. Vinyl frames warp, and then melt until the window fails. All aluminum frames would seem like the best choice because there are no combustible components; however, they melt at 1200 F. **Pressure impregnated wood sashes will hold the glass in place best.**

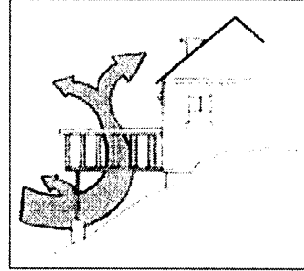


If replacing your existing windows isn't an option, you can use full-cover metal screens of noncombustible storm panels ([www.shuttertime.com](http://www.shuttertime.com)) to protect windows from heat and flying embers. These galvanized-steel storm panels aren't rated for fire but are used to protect windows from hurricane force winds and blown debris.

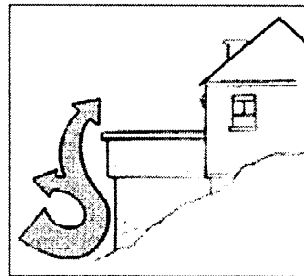
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### Decks and fences are potential fire bridges

An attached deck, trellis, or fence should get the same attention as a roof. A deck on a sloping hill is the ultimate firetrap. Fast-moving ground forces can ignite a deck, turning it into an unwanted barbeque. If a wood deck is your choice, enclose you perimeter below you deck with 1/8" metal screening, fire retardant treated siding or non-combustible siding. The screening will stop burning embers and combustible materials from blowing under the deck.



Choosing decking material is also an important. A recent study conducted by fire marshals in Arizona showed that **many of the new synthetic materials are more prone to fire than traditional cedar** or redwood decks. Although more rigorous testing needs to be completed, you should choose these materials carefully.



After a wildfire rips through a forest, all that's left is the blackened tree trunks rising from the scorched earth. The thick trunks don't turn to ash because they have a low surface-to-mass ratio. They burn, but slowly, which is why heavy timber decks are considered appropriate for medium to high-risk areas.

Typically, decks are made from 2x materials. While perfect for load bearing structures, 2x materials have a low surface to mass ratio and catch fire quickly. When building a deck from wood, to give the **maximum protection from fire**, large 6" or thicker beams should be used for structural supports and at least 3" thick boards, with a pressure treated fire retardant, should be used for decks.

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### What are the chances of surviving a large-scale wildfire?

Bill Mills, from the Colorado Springs Fire Department stated, "If you create a defensible space with all your roof and exterior home elements, in an extreme wildfire (which typically means mammoth 100 foot high flames, traveling at 100 miles per hour), your home might have a 50% chance of survival".

In the British Columbia and California wildfires of 2003, many homes simply imploded. This was due to the massive temperature differentials from the gigantic wall of flames that approached these houses.

Studies done after the 1990 Painted Cave Fire, which involved an analyses of hundreds of aspects that may influence survivability, found that homes threatened in the typical wildfire encroachment with a fire-rated roof and exterior, and a vegetation clearance of 10 meters or more had a **90% survival rate, which increased to 99% when defensive actions where also taken** by civilians or firefighters.

On the flip side, it has been said, a home with no defense elements had only a 20% chance of surviving a wildfire. The majority of homes in the US are built in areas that are considered low-risk to wild fires. In these areas statistics show that less than 1% of home fires originate on roofs of any type. 98% of homes burn due to ignitions from inside the house.

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### Why do some districts choose to ban wood roofs?

Often it is a lack of informed decision-making that contributes to a politician's or building official's ruling to ban wood in any given area. The majority of the time officials don't even understand that **Class-A wood roof is considered equal in the level of fire protection** offered as other non-combustible roofing materials rated by organizations such as UL, ICBO, UBC, NFPA, and the ASTM.

In a majority of the cases, when building officials are not influenced to make quick rulings, due to such large scale disasters such as the California fire of 2003, and research is conducted into the various different fire rated roofing materials available on the market and the qualifications they hold, **wood roofing is always an option** used in those district's building codes.

Areas such as:

- Pueblo, Douglas County, Co. Class "C"
- Jefferson County (above 6400 feet), Co. Class "A"
- Park County, Co. Class "A"
- Castle Rock, Co. Class "A"
- Boulder City, Co. Class "A"
- Boulder County, Co. Class "C"
- The entire state of California has requirements from Class "A", "B" and "C"
- Chaparral Pines Subdivision, Arizona Class "A"
- And many other districts around the United States

For information on ways that your state can protect against wildfires visit:

[www.for.gov.bc.ca/protect](http://www.for.gov.bc.ca/protect)

[www.fire.ca.gov/FireEmergencyResponse/FirePlan/FirePlan.asp](http://www.fire.ca.gov/FireEmergencyResponse/FirePlan/FirePlan.asp)

[www.nifc.gov/harvesting/index.html](http://www.nifc.gov/harvesting/index.html)

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HISTORIC BUNGALOWS

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MODERATE FIRE ZONE

HIGH FIRE ZONE

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S Grand Ave

S Arroyo Blvd

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Arbor St

Wesbridge Pl

Brookside Park

159

California Ter

