2003 Cedar Fire
Code Change Report
Board of Building Appeals and Advisors
March 10, 2005

Updates since January 2004:

The following analysis has been updated since it was last introduced in January of 2004. Comments that were raised by interested parties at both the Board of Building Appeals and Advisors as well as at the San Diego City Council on January 21 were also considered in the development of the code changes being reintroduced as shown below.

A. Activities:

City staff from both the Development Services Department and San Diego Fire-rescue have spent approximately 1 year participating in a variety of local and statewide activities to further study and to get input from various stakeholders interested in the proposed code change package. Through the process, City staff became aware of a pressing need for a continuing evaluation of the current fire hazard situation in the City of San Diego and the need to set up a program to assess it on an on-going basis.

1. **Blue Ribbon Fire Commission** Fire Chief Jeff Bowman was appointed to and has attended monthly meetings of the Blue Ribbon Fire Commission that Governor-Elect Arnold Schwarzenegger formed. The Commission conducted a thorough review of the wildfires looking for issues relating to operational readiness, training, mutual-aid, and local building and land use regulations that needed to be change or implemented to make California less vulnerable to disasters of such enormity in the future. The Commission conducted public hearings in the six impacted counties. The public hearing that was held on January 7, 2004, centered on local building codes, planning and land use regulations, vegetation management and fuel modification programs. Two of the findings and recommendations that were a result of that public hearing and dealt with specifically building and fire code regulations were:

   a. Finding 3
      Currently, appropriate minimum building standards and fire safety requirements are neither mandated nor consistently enforced in all communities in High and Very High Fire Hazard Severity Zones.

   b. Finding 6
      Most structural losses occurred where homes had little or no vegetation clearance or were built using combustible building materials, and were thus vulnerable to wildfires.

The formal submission and acceptance of the report to the Governor, his staff and the legislature occurred on April 5, 2004. There was no action plan attached to this report.

2. **California State Fire Marshal (AB 1216)** Proposed by Assembly member Vargas was passed in October of 2003 and directs the State Fire Marshal to propose recommended building standards that provide for comprehensive space and structure defensibility to protect structures from fires spreading from adjacent structures or vegetation. Issues such as urban wildland interface hazard fire protection for roofs, exterior walls, structure projections, and structure openings will be addressed as well as a definition for "urban wildland interface community". The bill would also provide that the building standards adopted pursuant to the bill also apply to those areas unless otherwise determined by a local agency following a specified finding supported by substantial evidence. The language has been codified and is nearing introduction to the California Building Standards Commission.

3. **Firewise Workshop.** The Firewise Workshop was sponsored by the California Fire Alliance, National Firewise Program and the Governor's Office of Planning and Research. The workshop allowed various fire, city and private industry personnel a forum to learn how to recognize interface fire hazards, design firewise homes and landscaping, and incorporate firewise planning into existing developed areas and future communities. Various techniques were presented and there were several hands-on exercises on how to improve fire safety within high hazard communities. Other items discussed were specific needs within individual communities as it related to general safety elements, multi-hazard mitigation planning, landscaping fuels analysis, project planning and model codes

4. **San Diego Regional Emergency Preparedness Task Force** Mayor Dick Murphy and San Diego County Supervisor Greg Cox established the San Diego Regional Emergency Preparedness Task Force (SDREPTF). The co-chairs of this committee are Fire Chief Jeff Bowman and San Diego County Sheriff Bill Kolender. The members are city and county Fire Marshals, city and county Building Officials, fire district representatives, United States Department of Fish and Wildlife, California Department of Fish and Game, American Institute of Architects, private developers, environmentalist, developers and American Wood Council representatives. The Fire and Building Code Committee addressed, "What changes to and enforcement of existing regulations and ordinances are needed. The Mutual Aid Response and Public Education and Alert Systems Committee addressed, "How can City and County better prepare for emergencies." The Training and Funding Committee addressed, "How can regions more effectively use existing resources

   The Fire/Building Code Sub-Committee has submitted its final report to the Task Force with the following recommendations:

a. Adopting the International Code Council's "International Urban-Wildland Interface (UWI) Code "2003 Edition (ICC Code) as the base code language for individual jurisdictions to use to create their UWI standards. This code addresses building standards for the following construction elements: roof covering, gutters and downspouts, exterior wall covering, underfloor protection, appendages and projections, exterior glazing, vents, detached structures and fuel clearance issues that lead to the loss of structures during wildland fires. It also, requires one hundred feet of brush management, while acknowledging that individual cases may warrant more or less clearance.

b. Requiring that for those homes directly along the interface, that the first five feet of fencing that connects to the structure should be non-combustible, heavy timber or fire retardant pressure treated wood.

c. Requiring 100 feet of wildland/urban interface fuel clearance for structures and up to 30 feet for roadways and restricting highly flammable ornamental vegetation within 30 feet of structures.

5. **Community Groups and Planning Committees** To date, there have been numerous presentations and meetings with community groups and planning committees held to answer questions about the Cedar Fire, proposed code changes, departmental resource needs and other community concerns. There have been presentations in all eight council districts.

6. Wildland Fire Behaviorists and Building and Design Industry Professionals

a. The Fire-Rescue Department has obtained input from scientists and professors with expertise in wildland fire behavior. Additionally, the department has attended several demonstrations performed by numerous companies and vendors suggesting the use of various types of fire retardant foams, gels and other fire resistant construction materials as a part of new construction regulations.

b. Staff from Development Services have updated local roofing contractors on the adopted regulations via targeted mailings to almost 500 licensed roofing contractors in San Diego County. Additionally, a presentation was made at the San Diego Roofing Contractors Association monthly meeting on the evening of March 24, 2004 to update the membership on the adopted roofing regulations and to respond to questions arising from application of the new regulations.

B. Some major changes to the package that was presented last year include:

1. **Section 145.0502** The measurement reference line for applicability of the regulations has been moved from the front of the first lot to the rear of the first lot immediately adjacent to the hazrd. This can result in fewer structures being subject to the additional requirements.

2. **Section 145.0503** The list of scopes of work exempt from compliance includes a variety of accessory structures including fences and play structures that do not require a building permit. An attached accessory structure falling within the 300 ft zone will not require the main structure and the attached structure to comply with the additional regulations.
3. **Section 145.0504 (a).** A non-combustible roof covering will not be require and we defer to the City wide roofing regulations/
4. **Section 145.0504 (b).** Combustible exterior wall finishes are not prohibited. The termination of fire resistive exterior wall materials has been expanded and improved for clarity.
5. **Section 145.0504 (c).** Vinyl window regulations were introduced and more glazing choices provided.
6. **Section 145.0504 (d).** Eaves need to be protected but not boxed. Additionally the option to use heavy timber construction has been added.
7. **Section 145.0504 (i).** Heavy combustible garage doors are permitted.
8. **Section 145.0505.** A new Section has been added to outline the process of granting the use of Alternate Materials, Designs, and Methods of Construction in lieu of compliance with the prescriptive code requirements proposed.

C. Code Change monograph:

Add the following new division 5 to chapter 14 article 5 of the SD Municipal Code. This new division incorporates the fire resistive requirements associated with fire hazards for buildings located adjacent to High Fire Hazard Areas and subject to the brush management regulations in Section 142.0412.

The Planning Department and the Fire-Rescue Department under a separate process will be pursuing revisions to the defensible space brush management requirements and will repeal the construction requirements related to wildland vegetation related hazards in Section 142.0412 and Section 55.9201 for consistency. The package will

That Chapter 14, Article 5, is amended by adding a new Division 5, titled "Additional Building Standards for Buildings Located Adjacent to Hazardous Areas of Native or Naturalized Vegetation," and sections 145.0501, 145.0502, 145.0503, 145.0504 and 145.0505, to read as follows:

Division 5: Additional Building Standards for Buildings Located Adjacent to Hazardous Areas of Native or Naturalized Vegetation.

§145.0501 Purpose of the Building Standards for Buildings Located Adjacent to Hazardous Areas of Native or Naturalized Vegetation

The purpose of this Division is to promote public safety and welfare by reducing the impact of fire hazards to buildings and structures located in developments and areas adjacent to areas of flammable vegetation.

The building standards contained in this Division are intended to prevent the ignition of, or otherwise reduce the spread of fire on developed properties, by controlling the use of materials and methods of construction.

The building standards contained in this Division are intended to impose requirements additional to any other applicable building and fire regulations. Section 142.0412 includes additional brush management requirements and specifies how brush management Zone 1 and Zone 2 are to be defined and established.

§145.0502 When the Additional Building Standards Apply

Unless otherwise specified, the building regulations of this Division apply to all new construction within 300 feet, in any direction, of the boundary between brush management Zones 1 and 2 as defined in Section 142.0412.

§145.0503 Exemptions from regulations due to proximity to Hazardous Areas of Native or Naturalized Vegetation

This Division is not applicable to the following:

(a) Accessory buildings such as detached garages, storage buildings or sheds, guest houses and similar buildings not exceeding 120 square feet in floor area.

(b) Agricultural buildings at least 50 feet from buildings containing habitable spaces.

(c) Modifications or alterations to the interior or exterior of the building that do not increase the existing floor area by more than 50%.

(d) Accessory structures such as fences, playhouses, decks, attached or detached patio covers and solariums, gazebos, and palapas located outside of brush management zones.

(e) Newly constructed buildings where only the attached accessory structures fall within the 300 distance described in Section 145.0502.

§145.0504 General Regulations for Buildings Located Adjacent to Hazardous Areas of Native or Naturalized Vegetation

(a) Roof Covering.

For roof coverings where the profile allows a space between the roof covering and roof decking, the space shall be solidly blocked with non-combustible or fire-retardant materials.

When drip edge flashing is used at the free edges of roofing materials, it shall be non-combustible.

(b) Exterior Wall Construction.

(1) Exterior walls of buildings or structures shall be constructed with materials approved for a minimum of 1-hour fire-resistance-rated construction on the exterior side or constructed with approved noncombustible materials.

Exception: Combustible exterior wall coverings such as 3/8-inch plywood or ¾-inch drop siding with an underlayment of ½-inch

fire-rated gypsum sheathing, that is tightly butted or taped and mudded.

(2) Fire resistive wall construction shall extend from the top of the foundation to the underside of the protected eave or to the underside of roof sheathing when heavy timber construction is used at eaves.

Exception: Fire resistive wall construction may terminate at the top plate if solid blocking (a minimum of two 2 inch nominal solid blocks) are between framing members and if all joints between the blocking and adjacent combustible roof elements are protected with approved fire-rated or intumescent caulking materials.

(c) Glazing Materials.

Exterior windows, window walls and glazed doors and windows within exterior doors shall be tempered glass, multilayered glazed panels, glass block or have a fire protection rating of not less than 20 minutes. Glazing frames made of vinyl materials shall have welded corners, metal reinforcement in the interlock area, and be certified to the most current edition of ANSI/AAMA/NWWDA 101/I.S.2 structural requirements.

(d) Eave Construction.

(1) Combustible eave construction shall be protected. Eaves and soffits shall be protected on the exposed underside by materials approved for a minimum of 1-hour fire-resistive construction.

(2) Fascias are required and must be protected on the backside by materials approved for a minimum of 1-hour fire-resistance-rated construction or 2-inch nominal dimension lumber.

(3) In lieu of fire resistive protection, eaves complying with the construction requirements of the adopted building code may be constructed of Type IV heavy timber construction.

a. Roof framing members shall have a have a minimum depth of 5.5 inches and a minimum width of 3.5 inches. The required depth may be reduced to 2.5 inches to accommodate architectural notching when located within the exterior 12 inches of the span.

b. Facia boards shall not be permitted unless they are partial depth, and non-combustible, or have a two-inch nominal thickness.

c. Exposed roof sheathing under eaves shall be of planks, splined or tongue and groove, of not less than 2 inch nominal thickness, or 1 1 /8 -inch tongue-and-groove wood structural panels with exterior glue, or of a double thickness of 1-inch boards with tongue-and-groove joints.

(e) Ventilation Openings.

(1) Individual ventilation openings shall not exceed 144 square inches.

(2) All ventilation openings shall be covered with non-combustible

corrosion-resistant mesh. Mesh openings shall be ¼ inch.

(3) Ventilation openings on structures located immediately adjacent to brush management Zone 1 shall not be directed toward Hazardous Areas of Native or Naturalized Vegetation.

(4) 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.

(5) Attic ventilation openings shall not be located in soffits, in eave overhangs, between rafters at eaves, or in other overhang areas.

(f) Spark Arrester.

All buildings and *structures* having any chimney, flue, or stovepipe attached to any fireplace, stove, barbecue, or other solid or liquid fuel burning equipment and devices, shall have the chimney, flue, or stovepipe equipped with an approved spark arrester.

(g) Skylights.

Glazing materials used in skylights, roofs, and sloped walls shall be tempered glass or multilayered glass.

(h) Roof Gutters and Downspouts.

All roof gutters and downspouts shall be constructed of noncombustible

material.

(i) Garage Doors.

Garage doors shall be constructed of non-combustible materials or shall be constructed of wood members not less than 1.5 inches in thickness.

§145.0505 Alternate Materials, Designs, and Methods of Construction.

(a) Alternate materials, designs, or methods of construction may be approved and their use authorized by the Building Official in accordance with the provisions of Section 129.0109.

(b) The proposed materials, designs, or methods of construction must comply with the purposes of this division and be, for the use intended, at least the equivalent of that prescribed in this division in suitability, strength, effectiveness, fire resistance, durability, safety, and sanitation.

(c) The Building Official may require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding the use of an alternate.

(d) Methods of analysis and design, the design values themselves, and the materials and methods of construction must be in accordance with the most current edition of the California Building Code, as adopted by the City, except as modified by this division.

Reason:

A new division 5 is being proposed in Chapter 14 Article 5 of the Municipal Code to accomplish the following:

a) To consolidate into the building regulations all the required minimum fire resistant and architectural construction requirements for properties located adjacent hazardous vegetation areas. Similar regulations currently reside in the fire code and the landscape regulations.
b) To codify various requirements currently located in old policies, and to resolve conflicting fire code and landscape construction requirements.
c) To update the existing regulations based on a review of nationally available codes, codes from other similar southern California Jurisdictions and evaluation of issues and items brought forward by elected officials.

The requirements will be more restrictive than those currently published in the construction requirements in item (d) of the Brush Management regulations published in section 142.0412 of the Landscape Regulations. The requirements currently require an additional 10 feet added to brush management Zone 1 if the buildings subject to the regulations do not include the following three items:

> *(1) Roof material shall be fire retardant. Wood shakes-shingles, whether fire retardant treated or untreated, are not permitted.*
> *(2) Walls, eaves, and overhangs shall be one-hour, fire-resistive.*
> *(3) Eave vents shall be covered with wire screen not to exceed 1/4-inch mesh.*
> *(4) Exterior openings may be protection with fire shutters.*

The construction requirements in Section 55.9201, that amends the Fire Code, are presently not being enforced and are in conflict with the requirements in Section 142.0412. Both sections will be revised as a part of the brush management requirement changes proposed in a separate action proposed by the Planning Department.

The requirements in Division 5 are intended to supplement the fire and life-safety protections required in the adopted building code. The building code regulations protect occupants in buildings from hazards within the building or, from fire hazards in adjacent buildings or structures. The normal building code roof covering and exterior construction requirements are designed to protect against the effects of light or average hazards from fires in adjacent buildings and structures where it is assumed the fire and rescue services can attempt fire control and extinguishment in a reasonable and timely fashion.

Division 5 on the other hand is concerned with protecting structures from the effects of wildland fires from adjacent hazardous vegetation areas as well as protecting the dry combustible vegetation in the high fire hazard area from adjacent structure fires. The requirements are intended to function in conjunction with the separate Brush Management regulations published in the landscape regulations of chapter 14 in the Municipal Code.

The regulations have been calibrated to apply to the unique exposures to buildings located immediately adjacent to the brush management zones, and to buildings located on lots within 300 feet from the boundary between brush management Zone 1 and 2.

The proposed fire resistant building materials and fire safety systems are intended to reduce the amount of combustible construction materials on the exterior portions of buildings, to minimize the intrusion of embers into the building through exterior openings and attic ventilation openings and to provide protection due to an ember intrusion. The requirements also provide some protection to hazardous vegetation from an out of control fire involving an adjacent structure.

The cost impact of the high hazard requirements will minimally impact the cost of housing since most of the required construction features are currently implemented as a part of current practice.

Code Change Analysis

CODE SECTION	REASON	PRO/CON ARGUMENT
§145.0501 Purpose of the Building Standards for Buildings Located Adjacent to Hazardous Areas of Native or Naturalized Vegetation *(Revised since 2004)*	The scoping language herein was adapted from the Urban Wildland Interface Code and the current Brush Management regulations. Defining where "Hazardous Areas of Native or Naturalized Vegetation" is in Section §142.0412 "Brush Management" of the Land Development code.	A careful study of a high fire hazard map exhibit clearly shows more than 60% of the City affected by these regulations due to the mapped vegetation and canyon slopes. The exhibit does not reveal new information rather it is an attempt to provide an overall look at the issue rather than a focused view by lot or development.
§145.0502 When the Additional Building standards Apply *(Revised since 2004)*	This scoping requirement clarifies that the supplemental building regulations only apply to buildings on lots located adjacent to the high hazard areas and buildings on any lot within 300 ft of the boundary between brush management Zone 1 and 2. These requirements do not address buildings that encroach brush management Zone 1 where other alternative compliance measures determined by the Fire Chief apply and are enforced per the Brush Management requirements.	• Damage assessment data collected by Fire-Rescue validate this approach to regulating the hazard • A research of other regulations reveals that every jurisdiction contacted handles the hazard definition and mitigation in a different way. • City staff currently use vegetation maps as a reference when identifying sites subject to the current regulations. • Solariums and patio covers are not addressed. • Scope of the Zone updated with the input of stakeholders. • Identification of buildings subject to the requirements is a subjective determination based on a review of subdivision maps and the overlaid map layers.
§145.0503 Exemptions from regulations due to proximity to Hazardous Areas of Native or Naturalized Vegetation *(Revised since 2004)*	The requirements do not apply to projects involving remodel work to the interior of the building or to minor accessory and architectural structures set back from the main habitable building. Work exempt from a building permit will not be regulated by this division.	• Existing buildings are granted non-conforming rights as is the practice in Chapter 34 of the Building Code. • The requirements to not apply to the alteration, repair or replacement of roof coverings. • Many buildings constructed prior to the application of these

		to the application of these regulations or similar regulations would only be affected when additions are made to them and encroach into brush management Zone 1 or on lots regulated by this division. • Adapted in part from the 2003 Urban Wildland Interface Code Section 504.11.
§145.0504 General Regulations for Buildings Located Adjacent to Hazardous Areas of Native or Naturalized Vegetation *(Revised since 2004)*	This section lists the 9 features that form the package of protection in conjunction with the brush management regulations.	• The regulations protect the building envelope from radiation of heat and burning brand intrusion and limit the combustible that can be ignited by burning brands. • Adapted from the 2000 International Urban Wildland Interface Code, the County of San Diego regulations and include stakeholder information.
(b) Roof Covering. *(Revised since 2004)*	The roof covering requirements City wide have been enhanced and apply to buildings subject to this division. Closures are required roof covering materials whose profiles create concealed void spaces exposing ember accumulation to the combustible sheathing below. Non-combustible drip edge flashing will remove an ignition source away from combustible roof sheathing at roofs edge.	• Damage assessment results revealed the shortcomings of the space between roofing tiles and the roof deck of barrel shaped roofing tiles. • Some of the requirements were adapted from Section 504.2 of the 2001 Urban Wildland Interface Code.
(b) Exterior Wall Construction. *(Revised since 2004)*	Exterior walls are required to be of at least one-hour fire resistive construction to minimize the radiation of heat into a building structure and to provide some protection against fire intrusion due to flame impingement of adjacent involved combustibles or the fire front from the hazardous vegetation. Opening protection is not required due to issues of cost and practicality and due to the proposed sprinkler system and brush management required defensible space of 85 of 100 ft. Exterior wall finish materials may be combustible such as 3/8-inch plywood or ¾-inch drop siding with an underlayment of ½-inch fire-rated	• Most developments incorporate plaster stucco exterior wall materials due to durability, ease of maintenance and design issues. • The requirements were adapted from Section 504.5 of the 2003 Urban Wildland Interface Code. • The combustible wall covering requirements were also adapted from Section 26.2.3 exception in the consolidated County of San Diego Fire Code. • Fire resistive wall construction can terminate at double 2 x blocking appropriately caulked to prevent fire and drafts from entering the attic space.

	gypsum sheathing, that is tightly butted or taped and mudded.	
(c) Glazing Materials. *(Revised since 2004)*	Exterior glazed openings such as door and window openings shall be glazed with multilayered glazed panels. The dual glazing within closed or fixed openings reduces the amount of radiated heated that can ignite interior contents such as drapes or other combustible furnishings or finishes. Reinforced vinyl windows prevent the glass pane from falling out as the window frame softens under heat.	• Most residential projects incorporate dual glazing systems due to energy code compliance issues or due to sound insulation issues. • The Section was adapted from Section 26.1.1 of the SD County Consolidate Fire Code. • The requirements were adapted from Section 504.8 of the 2003 Urban Wildland Interface Code.
(d) Eave Construction. *(Revised since 2004)*	Eaves are required to be protected boxed to prevent the entrapment of heat under the eaves. One hour protection of the soffits provides protection for combustible construction and provides a barrier to radiating heat into the attic space. Eaves are susceptible on side walls where adjacent buildings with eaves face one another with a separation between eaves that can be a s low as 4 feet on single family dwellings. Fascia boards must be two inches and must include protective materials on the backside. Facias are required to close of the cavity unless heavy timber eaves are used. Limited depth facias are permitted on heavy timber eaves for attaching gutters.	• The requirements were adapted from those from Burbank and San Bernadino as well as Section 504.3 of the 2003 Urban Wildland Interface Code. • This requirement can complicate the ventilation of attic spaces when desired. • The Section was adapted from Section 26.2.5 of the SD County Consolidate Fire Code.
(e) Ventilation Openings. *(Revised since 2004)*	This section regulates the maximum size of ventilation openings to not exceed 144 square inches each. The protective mesh can be no larger or smaller than ¼ in. The required non-combustible galvanized mesh should be sufficiently durable to prevent the intrusion of burning brands into uncovered openings into the building or concealed spaces above or below the occupied spaces.	• The City of San Diego does not enforce the attic ventilation requirements of Section1505 of the building code due to local climactic conditions. Experience shows that temperature fluctuations sufficiently dramatic to cause moisture problems in attic spaces. • Attic ventilation openings are provided to enhance the longevity of roof coverings and their underlayment felt and to improve the insulation of the

	Orientation of roof and underfloor ventilation openings away form the High Fire Hazard Area reduces the possibility of ember intrusion. Attic vents are prohibited in protected eaves on buildings located immediately adjacent to brush management Zone 1. This will minimize intrusion into the attic space due to pressure differentials of embers, flames or other products of combustion.	conditioned space below due hot weather. • This requirement strikes a balance between requiring fewer but larger ventilation openings versus smaller ventilation openings for under floor spaces and attic spaces. • These requirements are common to many jurisdictions and were adapted from Sections 504.6 and 504.10 of the 2003 Urban Wildland Interface Code. • Section 26.2.4.1 of the of the SD County Consolidate Fire Code.has similar eave vent regulations. • It is typically for attic spaces to be vented by non-combustible dormer vents since the vents will be set back 10 or more feet away from the property line (depending on roof slope and attic size) and include downward pointing vanes and the mesh on the interior side.
(f) Spark Arrester.	This requirement is added for emphasis and is required for chimneys opening into buildings per Section 3102.3.8 of the Building Code. The requirement covers exterior cooking or burning site built or prefabricated appliances or structures that can expose the hazardous vegetation or adjacent structures to burning embers due to the products of combustion of wood and similar fuels.,	• This requirement is placed for emphasis and addresses items that do not require a building permit.
(g) Skylights. *(Revised since 2004)*	Glazing materials used in skylights, roofs, and sloped walls shall be tempered glass or multilayered glass. The double glazing provides some protection from radiant heat and provides for non-combustible materials on the roof.	• Adapted from Section 504.8 of the 2003 Urban Wildland Interface Code. • The skylight requirements introduce a non-combustible material on the roof . • The glazing material in the skylights can pass the Class B burning brand test specified in UBC Standard 15-2.
(h) Roof Gutters and Downspouts.	All roof gutters and downspouts shall be constructed of noncombustible material. This prevents a source of ignition at the critical transition point between the roof covering edge and the plywood underlayment below.	• Adopted from Section 504.4 of the 2001 Urban Wildland Interface Code. • Not a very onerous requirement as a continuous no-seem metal gutter system is popular due to maintenance and longevity issues.
(i) Garage Doors. *(Revised since 2004)*	Garage doors shall be constructed of non-combustible material or heavy wood construction.	• This requirement was adapted from regulations of San Bernardino and modified with stakeholder input..

	The reason for this requirement is to reduce the possibility of burning embers igniting large garage door surfaces, especially those facing the hazardous area.	
§145.0505 Alternate Materials, Designs, and Methods of Construction.	This is a new section added to clarify that there is a process for granting alternatives to complying with the prescriptive regulations.	• Examples of alternatives can be the use of an NFPA 13 sprinkler system that includes under floor and attic space coverage to allow deviations from ventilation openings limitations. The entire building would need to be sprinklered. • Sprinklers can be used in lieu of complying with the skylight requirements in commercial buildings that need to satisfy energy requirements.