

ORDINANCE NO. 9869 (NEW SERIES)

AN ORDINANCE AMENDING
THE COUNTY BUILDING CODE TO REVISE CERTAIN FIRE-RESISTIVE
CONSTRUCTION STANDARDS

The Board of Supervisors of the County of San Diego ordains as follows:

Section 1. The Board of Supervisors finds and determines that the purpose of this ordinance is to amend the San Diego County Building Code to include measures that increase the likelihood of a building or structure to withstand intrusion by fire. Building elements addressed include building design and construction methodologies that use ignition-resistant building materials and provide protection of structure projections including porches, decks, balconies and eaves, with the intent of resisting the intrusion of a wildland or similar exposure fire.

Section 2. Section 51.0700 of the San Diego County Code is hereby amended to read as follows:

SEC. 51.0700 [IGNITION-RESISTANT MATERIALS AND CONSTRUCTION METHODS USED WITHIN WILDLAND AREAS]

Chapter 7A

SECTION 701A-SCOPE

Section 51.0700 applies to building materials and systems used in the design and construction of buildings and structures located within hazardous fire areas, to protect structures from fires spreading from adjacent structures or combustible vegetation. Section 51.0700 adds Chapter 7A to the County Building Code and the 700A section numbering is formatted to replicate proposed changes to the State Building Code. This Chapter is based on Appendix II-A of the County Fire Code as found at section 35.39100.030 of the San Diego County Code.

SECTION 702A – DEFINITIONS

For the purpose of Section 51.0700 of this Code, certain terms are defined as follows:

Basic Ignition-Resistant Construction standards are the system of building materials and components as found at section 704A.2.

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.

Defensible Space is an area either natural or man-made, where material capable of allowing a fire spread unchecked has been treated, cleared or modified to slow the rate and intensity of advancing wildfire. This will create an area for increased safety for emergency fire equipment and evacuating or sheltering civilians in place and a point for fire suppression to occur.

Discretionary Project. “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.

Enhanced Ignition-Resistant Construction standards are the system of building materials and components as found at section 704A.3.

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.

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.

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.

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.

Vegetation Conflagration is an uncontrolled fire spreading through vegetative fuels, and exposing and consuming structures in the advancing path of fire.

Wildland/Urban Interface Area is land in an area designated or identified as a hazardous fire area as determined by the FAHJ (see the definition of hazardous fire area).

Tracer is any bullet or projectile incorporating a feature, which marks or traces the flight of said bullet or projectile by flame, smoke or other means, which results in fire or heat.

Tracer charge is any bullet or projectile incorporating a feature designed to create a visible or audible effect by means which result in fire or heat and shall include any incendiary bullets and projectiles.

SECTION 703A - SETBACKS FOR NEW CONSTRUCTION.

703A.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 703A.2. In no case may the setbacks required by the FAHJ be less than those established by the PAHJ.

703A.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 Section 704A.3.

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

703A.3 Future Setback Modification – All fuel modification zones shall not extend beyond the property line.

SECTION 704A - IGNITION-RESISTANT CONSTRUCTION IN A WILDLAND/URBAN INTERFACE AREA

704A.1 General. For the purposes of this appendix this section describes the requirements of ignition-resistant construction related to protecting new structures from an approaching wildfire. While these standards will provide a high level of protection to structures built in the wildland/urban interface area; there is no guarantee or assurance that compliance with these standards will prevent damage or destruction of structures by fire in all cases. Section 704A contains standards for basic, and enhanced, ignition-resistant construction in the wildland/urban interface area. Greenhouses are not considered structures for the purposes of this appendix.

704A.2 Basic Ignition-Resistant Construction Requirements in the Wildland/Urban Interface Area. All structures built in the Wildland/Urban Interface Area must comply with the following basic ignition-resistant construction standards:

704A.2.1 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/NWDA 101/I.S.2-97 structural requirements.

704A.2.2 Skylights. Skylights within one-half mile of the Wildland/Urban Interface Area shall be tempered glass except when the structure is protected with an automatic fire sprinkler system, the FAHJ may approve other materials.

704A.2.3 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:

1. 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 704A.2.3, item 2.

EXCEPTIONS: 1. Wood siding of 3/8-inch plywood or 3/4-inch drop siding is permitted but must have an underlayment of 1/2-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.

2. 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.

704A.2.4 Venting. Attic and foundation ventilation shall comply with the requirements of the Uniform Building Code as adopted by the PAHJ. Ventilation louvers and openings may be incorporated as part of access assemblies.

704A.2.4.1 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 less than 1/4" in diameter.

704A.2.4.2 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.

704A.2.5 Protection of Eaves. Combustible eaves, fascias and soffits shall be constructed as required in guidance documents prepared by the PAHJ in accordance with Section 29 of the County Fire Code.

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 sections 704A.2.4 and 704A.3.2 as applicable.

704A.2.6 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.

704A.2.7 Unenclosed Underfloor Protection. Buildings or structures shall have all underfloor areas enclosed to the ground with exterior walls in accordance with Section 704A.2.3.

EXCEPTION: Complete enclosure may be omitted where the underside of all exposed floors and all exposed structural columns, beams and supporting walls are protected as required for exterior 1-hour fire-resistance rated construction or heavy timber construction.

704A.2.8 Insulation. In the Wildland/Urban Interface Area, paper-faced insulation shall be prohibited in attics or ventilated spaces.

704A.2.9 Automatic Fire Sprinklers. When a reduction of the fuel modification zone to less than 100 feet is approved, an automatic fire sprinkler system may be required, and approved by the FAHJ.

704A.3 Enhanced Ignition-Resistant Construction Requirements in the Wildland/Urban Interface Area.

704A.3.1 Where Required. The PAHJ/FAHJ shall require a structure to be of enhanced ignition-resistant construction when it is determined that any of the following conditions apply:

1. When the 100 feet fuel modification zone is reduced in accordance with Section 16.1, exception 3 of the County Fire Code.

2. The development is located above a slope that will influence fire behavior, and with dense chaparral or highly combustible trees, unless it can be demonstrated that flame fronts will not impact the structure.
3. When reduction of setbacks required by Section 703A are allowed by the FAHJ.
4. Where there is high fuel load, such as dense chaparral or eucalyptus, unless it can be demonstrated that the flame fronts will not impact the structure.

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 sections 704A.2.4 and 704A.3.2 as applicable.

Enhanced ignition-resistant construction includes all items in Section 704A.2 plus the following additional requirements:

704A.3.2 Venting. 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 when enhanced ignition-resistant construction is required.

EXCEPTION: In locations where fuel modification is provided on a region wide basis for multiple lots, attic vents in soffits complying with section 704A.2.4.1 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.

704A.3.3 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.

704A.3.4 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 $\frac{3}{8}$ inches thick or have a fire protection rating of not less than 20 minutes. Windows within doors and glazed doors shall comply with Section 704A.2.1.

704A.3.5 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.

704A.3.6 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 16 of the County Fire Code, shall be of ignition-resistant construction in accordance with sections 704A.3.6.1 and 704A.3.6.2. 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 29 of the County Fire Code.

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 of the County Fire Code.
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 2 x (nominal) material
 - b) The deck is located at or below the elevation of the dwelling ground floor level, and not exposed to any underfloor area or basement opening, and
 - c) The deck is skirted from the deck walking surface to ground level with non-combustible material.
 - d) If the deck is skirted, the underdeck area must be vented in conformance with Section 704A.2.4.

704A.3.6.1 Structural Supports and Framing Members. Structural supports and framing members shall be of non-combustible construction, exterior fire-retardant-treated 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 underdeck area must be vented in conformance with Section 704A.2.4.

704A.3.6.2 Decking Surfaces

Decking surfaces, stair treads, risers, and landings of decks, porches & balconies shall be constructed of non-combustible construction, exterior fire-retardant-treated wood, modified heavy timber construction as described in guidance documents prepared by the PAHJ, one-hour fire-resistive construction, or alternative decking that passes the performance testing requirements of section 704A.3.6.2.1.

704A.3.6.2.1 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 (269kW/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 International 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.

704A.3.6.3 Coatings The use of paints, coatings, stains, or other surface treatments are not an approved method of protection as required in this Chapter.

704A.3.7 Skylights. Skylights shall be tempered glass.

Section 3. Effective date. This Ordinance shall take effect and be in force thirty (30) days after the date of its passage and before the expiration of fifteen (15) days after its passage, a summary shall be published once with the names of the members voting for and against the same in the San Diego Daily Transcript, a newspaper of general circulation published in the County of San Diego.

Section 4. Operative Date. This ordinance shall be operative on July 16, 2007.

PASSED, APPROVED, AND ADOPTED this 13th of JUNE, 2007.