



CITY OF AGOURA HILLS

BUILDING & SAFETY DIVISION

30001 LADYFACE COURT
AGOURA HILLS, CA 91301

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City of Agoura Hills

Very High Fire Severity Hazard Zone Construction Standards

- **AHMC 8202.5 (mm) R337.1.3 Application.** New buildings, *and any additions, alterations, or repairs made* buildings located in *or moved within the City of Agoura Hills*, or in any Fire Hazard Severity Zone, or any Wildland-Urban Interface (WUI) Fire Area designated by the enforcing agency constructed after the application date shall comply with the provisions of this Section. This shall include all new buildings, *and any additions, alterations, or repairs made to existing buildings*, with residential, commercial, educational, institutional or similar occupancy type use, which shall be referred to in this chapter as "applicable building" (see definition in Section R337.2), as well as new buildings and structures, *and any additions, alterations, or repairs made to existing buildings* accessory to those applicable buildings
- **R337.3.3 Approved Agency.** Product evaluation testing shall be performed by an approved agency as defined in Section 1702 of the California Building Code. The scope of accreditation for the approved agency shall include building product compliance with the California Building Code.
- **R337.3.4 Labeling.** Material and material assemblies tested in accordance with the requirements of Section R337.3 shall bear an identification label showing the fire test results. That identification label shall be issued by a testing and/or inspecting agency approved by the State Fire Marshal.
- **AHMC 8202.5 (oo) - R337.3.5.2.2. Fire-retardant-treated wood shingles and shakes.** Fire-retardant-treated wood shingles and shakes shall *not be approved for use in the City of Agoura Hills*.
- **R337.3.5.3 Surface Treatment Protection.** The use of paints, coatings, stains or other surface treatments are not an approved method of protection as required in this section.
- **R337.4.3 Conditions of Acceptance for Ignition-Resistant Materials.** The material shall comply with the conditions of acceptance in Items 1 and 2 below or with the conditions of acceptance of ASTM E2768.
 1. The material shall exhibit a listed flame spread index not exceeding 25 when tested in accordance with ASTM E84 or UL 723.
 2. Additionally, the ASTM E84 or UL 723 test shall be continued for an additional 20-minute period, and the material shall exhibit a flame front that does not progress more than 10 1/2 feet beyond the centerline of the burner at any time during the test period.
- **R337.4.4 Alternative Methods for Determining Ignition-resistant Material.** Any one of the following shall be accepted as meeting the definition of ignition-resistant material:
 1. Noncombustible material. Material that complies with the definition for noncombustible materials in Section R202.
 2. Fire-retardant-treated wood. Fire-retardant-treated wood identified for exterior use that complies with the requirements of Section 2303.2 of the California Building Code.

Roofing

- **AHMC 8202.5 (pp) - R337.5.2 Roof coverings.** Roof coverings shall be Class A as specified in Section R902.1. Where the roofing profile has an airspace under the roof covering, installed over a combustible deck, a 72-pound cap



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sheet complying with ASTM D3909 Standard Specification for "Asphalt Rolled Roofing (Glass Felt) Surfaced with Mineral Granules," shall be installed over the roof deck. Bird stops shall be used at the eaves when the profile fits, to prevent debris at the eave. Hip and ridge caps shall be mudded in to prevent intrusion of fire or embers.

- **R337.5.3 Roof Valleys.** Where valley flashing is installed, the flashing shall be not less than 0.019-inch No. 26 gage galvanized sheet corrosion resistant metal installed over not less than one layer of minimum 72-pound mineral-surfaced non perforated cap sheet complying with ASTM D3909, at least 36-inch-wide running the full length of the valley
- **R337.5.4 Roof Gutters.** Roof gutters shall be provided with the means to prevent the accumulation of leaves and debris in the gutter.

Vents

- **R337.6.1 General.** Where provided, ventilation openings for enclosed attics, gable ends, ridge ends, under eaves and cornices, enclosed eave soffit spaces, enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters, underfloor ventilation, foundations and crawl spaces, or any other opening intended to permit ventilation, either in a horizontal or vertical plane, shall be in accordance with Section 1202 of the California Building Code and Sections R337.6.1 through R337.6.2 to resist building ignition from the intrusion of burning embers and flame through the ventilation openings.
- **R337.6.2 Requirements.** Ventilation openings shall be fully covered with Wildfire Flame and Ember Resistant vents approved and listed by the California State Fire Marshal, or WUI vents tested to ASTM E2886 and listed.
- **R337.6.2.1 Off Ridge and Ridge Vents.** Vents that are installed on a sloped roof, such as dormer vents, shall comply with all the following:
 1. Vents shall be covered with a mesh where the dimensions of the mesh therein shall be a minimum of 1/16 inch and shall not exceed 1/8 inch in diameter.
 2. The mesh material shall be noncombustible.
 3. The mesh material shall be corrosion resistant.

Exterior Covering

- **R337.7.2 General.** The following exterior covering materials and/or assemblies shall comply with this section:
 1. Exterior wall coverings.
 2. Exterior wall assemblies.
 3. Exterior exposed underside of roof eave overhangs.
 4. Exterior exposed underside of roof eave soffits.
 5. Exposed underside of exterior porch ceilings.
 6. Exterior exposed underside of floor projections.
 7. Exterior underfloor areas.

Exceptions to Section R337.7.2:

1. Exterior wall architectural trim, embellishments, fascia, and gutters.



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2. Roof or wall top cornice projections and similar assemblies.
 3. Deck walking surfaces shall comply with Section R337.9 only.
- **R337.7.3 Exterior Wall Coverings.** The exterior wall covering shall comply with one or more of the following requirements, except as permitted for exterior wall assemblies complying with Section R337.7.4:
1. Noncombustible material.
 2. Ignition-resistant material. The ignition-resistant material shall be labeled for exterior use and shall meet the requirements of Section R337.4.2.
 3. Fire-retardant-treated wood. The fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
- **R337.7.3.1 Extent of Exterior Wall Covering.** Exterior wall coverings shall extend from the top of the foundation to the roof, and terminate at 2-inch nominal solid wood blocking between rafters at all roof overhangs, or in the case of enclosed eaves, terminate at the enclosure.
- **R337.7.4 Exterior Wall Assemblies.** Exterior wall assemblies of buildings or structures shall be constructed using one or more of the following methods, unless they are covered by an exterior wall covering complying with Section R337.7.3:
1. Assembly of sawn lumber or glue-laminated wood with the smallest minimum nominal dimension of 4 inches. Sawn or glue-laminated planks splined, tongue-and-groove, or set close together and well spiked.
 2. Log wall construction assembly.
 3. Assembly that has been tested in accordance with the test procedures for a 10-minute direct flame contact exposure test set forth in ASTM E2707 with the conditions of acceptance shown in Section R337.7.4.1.
 4. Assembly that meets the performance criteria in accordance with the test procedures for a 10-minute direct flame contact exposure test set forth in SFM Standard 12-7A-1.
 5. Assembly suitable for exterior fire exposure with a 1-hour fire-resistance rating, rated from the exterior side, as tested in accordance with ASTM E119 or UL 263.
 6. Assembly suitable for exterior fire exposure containing one layer of 5/8-inch Type X gypsum sheathing applied behind the exterior wall covering or cladding on the exterior side of the framing.
 7. Assembly suitable for exterior fire exposure containing any of the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual as complying with a 1-hour fire-resistance rating, as tested in accordance with ASTM E119 or UL 263.
- **R337.7.5 Open Roof Eaves.** The exposed roof deck on the underside of unenclosed roof eaves shall consist of one or more of the following:
1. Noncombustible material.
 2. Ignition-resistant material. The ignition-resistant material shall be labeled for exterior use and shall meet the requirements of Section 704A.2.
 3. Fire-retardant-treated wood. The fire-retardant treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
 4. Materials approved for not less than 1-hour fire-resistance-rated construction on the exterior side, as tested in accordance with ASTM E119 or UL 263.



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5. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the roof deck.
6. The exterior portion of a 1-hour fire-resistance-rated exterior assembly, as tested in accordance with ASTM E119 or UL 263, applied to the underside of the roof deck designed for exterior fire exposure, including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.

Exception to Section R337.7.5: Fascia and other architectural trim boards do not require protection:

- **R337.7.6 Enclosed Roof Eaves and Roof Eave Soffits.** The exposed underside of enclosed roof eaves having either a boxed-in roof eave soffit with a horizontal underside, or sloping rafter tails with an exterior covering applied to the underside of the rafter tails, shall be protected by one or more of the following:
1. Noncombustible material.
 2. Ignition-resistant material. The ignition-resistant material shall be labeled for exterior use and shall meet the requirements of Section R337.4.2.
 3. Fire-retardant-treated wood. The fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
 4. Materials approved for not less than 1-hour fire-resistance-rated construction on the exterior side, as tested in accordance with ASTM E119 or UL 263.
 5. One layer of 5/8-inch Type X gypsum sheathing applied behind the exterior covering or cladding on the underside of the rafter tails or soffit.
 6. The exterior portion of a 1-hour fire resistive exterior assembly applied to the underside of the rafter tails or soffit, including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
 7. Boxed-in roof eave soffit assemblies with a horizontal underside that meet the performance criteria in Section R337.7.11 when tested in accordance with the test procedures set forth in ASTM E2957.
 8. Boxed-in roof eave soffit assemblies with a horizontal underside that meet the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3.

Exception to Section R337.7.6: Fascia and other architectural trim boards do not require protection:

- **R337.7.7 Exterior Porch Ceilings.** The exposed underside of exterior porch ceilings shall be protected by one or more of the following:
1. Noncombustible material.
 2. Ignition-resistant material. The ignition-resistant material shall be labeled for exterior use and shall meet the requirements of Section R337.4.2.
 3. Fire-retardant-treated wood. The fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
 4. Materials approved for not less than 1-hour fire-resistance-rated construction on the exterior side, as tested in accordance with ASTM E119 or UL 263.
 5. One layer of 5/8-inch Type X gypsum sheathing applied behind the exterior covering on the underside of the ceiling.
 6. The exterior portion of a 1-hour fire-resistance-rated exterior assembly, as tested in accordance with ASTM E119, applied to the underside of the ceiling assembly, including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual



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7. Porch ceiling assemblies with a horizontal underside that meet the performance criteria in Section R337.7.11 when tested in accordance with the test procedures set forth in ASTM E2957.
8. Porch ceiling assemblies with a horizontal underside that meet the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3.

Exception to Section R337.7.7: Architectural trim boards do not require protection.

- **R337.7.8 Floor Projections.** The exposed underside of a cantilevered floor projection where a floor assembly extends over an exterior wall shall be protected by one or more of the following:
 1. Noncombustible material.
 2. Ignition-resistant material. The ignition-resistant material shall be labeled for exterior use and shall meet the requirements of Section R337.4.2.
 3. Fire-retardant-treated wood. The fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
 4. Materials approved for not less than 1-hour fire resistance-rated construction on the exterior side, as tested in accordance with ASTM E119 or UL 263.
 5. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.
 6. The exterior portion of a 1-hour fire-resistance rated exterior assembly, as tested in accordance with ASTM E119 or UL 263, applied to the underside of the floor projection, including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
 7. The underside of a floor assembly that meets the performance criteria in Section R337.7.11 when tested in accordance with the test procedures set forth in ASTM E2957.
 8. The underside of a floor assembly that meets the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3.

Exception to Section R337.7.8: Architectural trim boards do not require protection.

- **R337.7.9 Underfloor Protection.** The underfloor area of elevated or overhanging buildings shall be enclosed to grade in accordance with the requirements of this chapter or the underside of the exposed underfloor shall be protected by one or more of the following:
 1. Noncombustible material.
 2. Ignition-resistant material. The ignition-resistant material shall be labeled for exterior use and shall meet the requirements of Section R337.4.2.
 3. Fire-retardant-treated wood. The fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
 4. Materials approved for not less than 1-hour fire-resistance-rated construction on the exterior side, as tested in accordance with ASTM E119 or UL 263.
 5. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the floor projection.
 6. The exterior portion of a 1-hour fire-resistance-rated exterior assembly, as tested in accordance with ASTM E119 or UL 263, applied to the underside of the floor, including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
 7. The underside of a floor assembly that meets the performance criteria in Section R337.7.11 when tested in accordance with the test procedures set forth in ASTM E2957.



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8. The underside of a floor assembly that meets the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3.

Exception to Section R337.7.9: Structural columns and beams do not require protection when they are constructed with sawn lumber or glue laminated wood with the smallest minimum nominal dimension of 4 inches (102 mm). Sawn or glue-laminated planks shall be splined, tongue-and-groove, or set close together and well spiked.

- **R337.7.10 Underside of Appendages.** When required by the enforcing agency the underside of overhanging appendages shall be enclosed to grade in accordance with the requirements of this chapter or the underside of the exposed underfloor shall be protected by one or more of the following:
 1. Noncombustible material.
 2. Ignition-resistant material. The ignition-resistant material shall be labeled for exterior use and shall meet the requirements of Section R337.7.2.
 3. Fire-retardant-treated wood. The fire-retardant-treated wood shall be labeled for exterior use and shall meet the requirements of Section 2303.2 of the California Building Code.
 4. Materials approved for not less than 1-hour fire-resistance-rated construction on the exterior side, as tested in accordance with ASTM E119 or UL 263.
 5. One layer of 5/8-inch Type X gypsum sheathing applied behind an exterior covering on the underside of the appendage projection.
 6. The exterior portion of a 1-hour fire-resistance-rated exterior assembly, as tested in accordance with ASTM E119 or UL 263, applied to the underside of the appendage, including assemblies using the gypsum panel and sheathing products listed in the Gypsum Association Fire Resistance Design Manual.
 7. The underside of an appendage assembly that meets the performance criteria in Section R337.7.11 when tested in accordance with the test procedures set forth in ASTM E2957.
 8. The underside of an appendage assembly that meets the performance criteria in accordance with the test procedures set forth in SFM Standard 12-7A-3.

Exception to Section R337.7.10: Structural columns and beams do not require protection when they are constructed with sawn lumber or glue-laminated wood with the smallest minimum nominal dimension of 4 inches. Sawn or glue-laminated planks shall be splined, tongue-and-groove, or set close together and well spiked.

Exterior Windows, Skylights and Exterior Glazed Door

- **R337.8.2 Exterior Glazing.** The following exterior glazing materials and/or assemblies shall comply with this section:
 1. Exterior windows.
 2. Exterior glazed doors.
 3. Glazed openings within exterior doors.
 4. Glazed openings within exterior garage doors.
 5. Exterior structural glass veneer.
 6. Skylights.
 7. Vents.

- **R337.8.2.1 Exterior Windows, Skylights and Exterior Glazed Door Assembly Requirements.** Exterior windows, skylights and exterior glazed door assemblies shall comply with one of the following requirements:



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1. Be constructed of multi-pane glazing with a minimum of one tempered pane meeting the requirements of Section R308 Safety Glazing, or
 2. Be constructed of glass block units, or
 3. Have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 257, or
 4. Be tested to meet the performance requirements of SFM Standard 12-7A-2.
- R337.8.2.2 Operable Skylights.** Operable skylights shall be protected by a noncombustible mesh screen where the dimensions of the openings in the screen shall not exceed 1/8 inch.
- R337.8.2.3 Structural Glass Veneer.** The wall assembly behind structural glass veneer shall comply with Section R337.7.3 Exterior walls.
- R337.8.3 Exterior Doors.** Exterior doors shall comply with one of the following:
1. The exterior surface or cladding shall be of noncombustible material, or
 2. The exterior surface or cladding shall be of ignition resistant material, or
 3. The exterior door shall be constructed of solid core wood that complies with the following requirements:
 - a. Stiles and rails shall not be less than 13/8 inches thick
 - b. Panels shall not be less than 11/4 inches thick, except for the exterior perimeter of the panel that shall be permitted to taper to a tongue not less than 3/8 inch thick.
 4. The exterior door assembly shall have a fire-resistance rating of not less than 20 minutes when tested according to NFPA 252.
 5. The exterior surface or cladding shall be tested to meet the performance requirements of Section R337.7.3.1 when tested in accordance with ASTM E2707.
 6. The exterior surface or cladding shall be tested to meet the performance requirements of SFM Standard 12-7A-1.
- R337.8.3.1 Exterior Door Glazing.** Glazing in exterior doors shall comply with Section R337.8.2.1.

Garage Door

- R337.8.4 Garage Door Perimeter Gap.** Exterior garage doors shall resist the intrusion of embers from entering by preventing gaps between doors and door openings, at the bottom, sides and tops of doors, from exceeding 1/8 inch. Gaps between doors and door openings shall be controlled by one of the following methods:
1. Weather stripping products made of materials that: (a) have been tested for tensile strength in accordance with ASTM D638 (Standard Test Method for Tensile Properties of Plastics) after exposure to ASTM G155 (Standard Practice for Operating Xenon Arc Light Apparatus for Exposure of Non Metallic Materials) for a period of 2,000 hours, where the maximum allowable difference in tensile strength values between exposed and non exposed samples does not exceed 10 percent and (b) exhibit a V-2 or better flammability rating when tested to UL 94, Standard for Tests for Flammability of Plastic Materials for Parts in Devices and Appliances.
 2. Door overlaps onto jambs and headers.
 3. Garage door jambs and headers covered with metal flashing.



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Decking

- R337.9.1 General.** The walking surface material of decks, porches, balconies and stairs shall comply with the requirements of this section.
- R337.9.1.1 Flashing.** A minimum of a 6-inch metal flashing, applied vertically on the exterior of the wall, shall be installed at all deck-to-wall intersections.
- R337.9.2 Where Required.** The walking surface material of decks, porches, balconies and stairs shall comply with the requirements of this section when any portion of such surface is within 10 feet of the building.
- R337.9.3 Decking Surfaces.** The walking surface material of decks, porches, balconies and stairs shall be constructed with one of the following materials:
 1. Material that complies with the performance requirements of Section R337.9.4 when tested in accordance with both ASTM E2632 and ASTM E2726.
 2. Ignition-resistant material that complies with the performance requirements of Section R337.9.4.
 3. Material that complies with the performance requirements of both SFM Standard 12-7A-4 and Section R337.4.3.
 4. Exterior fire-retardant-treated wood.
 5. Noncombustible material.
 6. Any material that complies with the performance requirements of SFM Standard 12-7A-4A when attached exterior wall covering is also composed of noncombustible or ignition-resistant material.
Exception: Wall material shall be permitted to be of any material that otherwise complies with this chapter when the decking surface material complies with the performance requirements ASTM E84 with a Class B flame spread index.
 7. Any material that complies with the performance requirements of Section R337.9.5 when tested in accordance with ASTM E2632 and when attached exterior wall covering is also composed of only noncombustible or ignition-resistant materials.
Exception: Wall material shall be permitted to be of any material that otherwise complies with this chapter when the decking surface material complies with the performance requirements ASTM E84 with a Class B flame spread index.

Accessory Buildings and Miscellaneous Structures

- R337.10.3.1 Structures and Accessory Buildings Within 3 Feet.** Miscellaneous structures that require a permit, and accessory buildings attached to or separated from an applicable building on the same lot by a distance of less than 3 feet shall be constructed of noncombustible materials or of ignition resistant materials as described in Section R337.4.2.
- R337.10.3.4 Miscellaneous Structures Located 3 Feet or More but Less Than 50 Feet.** When required by the enforcing agency, miscellaneous structures that require a permit and are separated from an applicable building on the same lot by a distance of 3 feet or more but less than 50 feet shall be constructed of noncombustible materials or of ignition-resistant materials as described in Section R337.4.3.