

**ORDINANCE NO. 8  
SERIES OF 2022**

**AN ORDINANCE REPEALING AND REENACTING TITLE 10, CHAPTER 1 OF THE VAIL TOWN CODE AND ADOPTING BY REFERENCE THE 2021 EDITIONS OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL RESIDENTIAL CODE, INTERNATIONAL FIRE CODE, INTERNATIONAL ENERGY CONSERVATION CODE, INTERNATIONAL PLUMBING CODE, INTERNATIONAL FUEL GAS CODE, INTERNATIONAL MECHANICAL CODE, INTERNATIONAL EXISTING BUILDING CODE AND THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE, WITH AMENDMENTS; AND ADOPTING THE 1997 EDITION OF THE UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS, WITH AMENDMENTS**

WHEREAS, the 2021 editions of the International Building Code, International Residential Code, International Fire Code, International Energy Conservation Code, International Plumbing Code, International Fuel Gas Code, International Mechanical Code, International Existing Building Code; and the 2020 Edition of the National Electrical Code; and the 1997 Edition of the Uniform Code for the Abatement of Dangerous Buildings have been published;

WHEREAS, the adoption and use of the 2020 edition of the National Electrical Code is required by the State of Colorado;

WHEREAS, the 2018 International Codes currently adopted by the Town of Vail lack the updates contained within in the 2021 International Codes that address modern construction means, methods, safety improvements, and code clarity; and

WHEREAS, the Town's Building and Fire Code Appeals Board has recommended adoption of the codes as set forth in this ordinance.

**NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF VAIL, COLORADO, THAT:**

Section 1. Chapter 1 of Title 10 of the Vail Town Code is hereby repealed in its entirety and reenacted to read as follows:

**10-1-1: CODES ADOPTED BY REFERENCE:**

The following codes are hereby adopted by reference, as amended. Copies shall be available for inspection at the office of the Town Clerk during regular business hours and can be viewed online at [www.iccsafe.org](http://www.iccsafe.org) and [www.vailgov.com](http://www.vailgov.com):

A. The International Building Code, 2021 edition, including Appendices B, E, G, J, K, and O published by the International Code Council, 4051 Flossmoor Road, Country Club Hills, IL 60478-5975.

B. Chapters 1-10 of The International Residential Code, 2021 edition, including Appendices AF, AJ and AV, published by the International Code Council, 4051 Flossmoor Road, Country Club Hills, IL 60478-5975.

C. The International Fire Code, 2021 edition, including Appendices A, B, C, D, E, F, G, H, I, J, and N published by the International Code Council, 4051 Flossmoor Road, Country Club Hills, IL 60478-5975.

D. The International Energy Conservation Code, 2021 edition, including Appendices CA and RA, published by the International Code Council, 4051 Flossmoor Road, Country Club Hills, IL 60478-5975.

E. The International Plumbing Code, 2021 edition, including Appendices C and F, published by the International Code Council, 4051 Flossmoor Road, Country Club Hills, IL 60478-5975.

F. The International Fuel Gas Code, 2021 edition, including Appendix E, published by the International Code Council, 4051 Flossmoor Road, Country Club Hills, IL 60478-5975.

G. The International Mechanical Code, 2021 edition, including Appendix C, published by the International Code Council, 4051 Flossmoor Road, Country Club Hills, IL 60478-5975.

H. The International Existing Building Code, 2021 edition, including Appendix D, published by the International Code Council, 4051 Flossmoor Road, Country Club Hills, IL 60478-5975.

I. NFPA 70 - The National Electrical Code, 2020 Edition, published by the National Fire Protection Association, Inc., 1 Batterymarch Park, Quincy, MA 02269.

J. The Uniform Code for the Abatement of Dangerous Buildings, 1997 Edition, published by the International Conference of Building Officials, 5360 Workman Mill Road, Whittier, CA 90601-2298.

#### **10-1-2: AMENDMENTS TO THE INTERNATIONAL BUILDING CODE:**

The following amendments are hereby made to the International Building Code, 2021 Edition:

Section 101.1 is amended to read as follows:

**101.1 Title.** These regulations shall be known as the Vail Building Code.

Section 101.4 is amended to read as follows:

**101.4 Referenced codes.** The codes specified in Sections 101.4.1-101.4.7 and referenced elsewhere in this code shall not be considered a part of this code unless specifically adopted.

Section 103.1 is amended to read as follows:

**103.1 Creation of agency.** The Town's Building Department is hereby created and the official in charge shall be known as the building official. The

function of this agency shall be the implementation, administration, and enforcement of this code.

Section 105.2, item 14 of the Building portion, is amended to read as follows:

14. Decks not exceeding 200 sq/ft (18.6 m<sup>2</sup>) in area, not more than 30 inches (762 mm) above grade at any point and are not part of a means of egress or accessible route.

Section 110.3.10 is amended to read as follows:

**110.3.10 Other Inspections.** In addition to the inspections specified in Sections 110.3.1-110.3.9, the building official is authorized to make or require other inspections of any construction work to ascertain compliance with this code and any other Town code, standard, requirement or regulation.

Section 202 is amended by the addition of the following definitions:

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

**FIRE CHIEF.** The Vail Fire Chief or designee.

**FIRE-RESISTANCE-RATED CONSTRUCTION.** The use of materials and systems in the design and construction of a structure to safeguard against the spread of fire within a structure and the spread of fire to or from structures to the wildland-urban interface area.

**IGNITION-RESISTANT BUILDING MATERIAL.** A type of building material that resists ignition or sustained flaming combustion sufficiently to reduce losses from wildland-urban interface conflagrations under worst-case weather and fuel conditions with wildfire exposure of burning embers and small flames, as prescribed in Chapter 7A.

**IGNITION-RESISTANT CONSTRUCTION.** As described in Section 7A06, the schedule of additional requirements for construction in wildland-urban interface areas based on fire hazard levels.

**LOG WALL CONSTRUCTION.** A type of construction in which exterior walls are constructed of solid wood members and where the smallest horizontal dimension of each solid wood member is at least 6 inches (152 mm).

**NONCOMBUSTIBLE.** A building construction material that, in the form in which it is used, is either:

1. Material of which no part will ignite and burn when subjected to fire (any material conforming to ASTM E136 shall be considered noncombustible); or

2. Material having a structural base of noncombustible material as defined in Item 1 above, with a surfacing material not over 1/8 inch (3.2 mm) thick, which has a flame spread index of 50 or less.

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

**SAFETY COVER.** A structure, fabric or assembly, along with attendant appurtenances and anchoring mechanisms, that is temporarily placed or installed over an entire pool, spa or hot tub and secured in place after all bathers are absent from the water.

**UNENCLOSED ACCESSORY STRUCTURE.** An accessory structure without a complete exterior wall system enclosing the area under the roof or floor above.

**WILDLAND-URBAN INTERFACE AREA.** That geographical area, as depicted and defined in the Community Wildfire Protection Plan, where structures and other human development meets or intermingles with wildland or vegetative fuels.

CHAPTER 7A is added as follows:

## **CHAPTER 7A FIRE-RESISTIVE CONSTRUCTION**

### **7A01 GENERAL**

**7A01.1 Scope.** This Chapter shall apply to the construction, alteration, movement, repair, maintenance and use of any building, structure, or premises into or within the wildland-urban interface areas of the Town.

#### **Exceptions:**

1. Additions or alterations less than 500 gross sq/ft in size.
2. Repair or replacement of less than 25% of a deck surface or structure.
3. Repair or replacement of less than 25% of the exterior siding of a structure.
4. Accessory structures not exceeding 120 sq/ft in floor area where located not less than 30 feet from buildings containing habitable spaces.
5. Agricultural buildings located not less than 30 feet from buildings containing habitable spaces.

**7A01.2 Objectives.** Because the unrestricted use of property in wildland-urban interface areas is a potential threat to life and property from fire and

resulting erosion, the objectives of this Chapter are to establish minimum regulations consistent with nationally recognized good practice for the safeguarding of life and for property protection, and to mitigate the risk to life and structures from intrusion of fire from wildland fire exposures and fire exposures from adjacent structures and to mitigate structure fires from spreading to wildland fuels. These regulations are intended to be tiered commensurate with the relative level of hazard present. This Chapter supplements the Town's codes to provide for special regulations to mitigate fire and life-safety hazards in the wildland-urban interface areas.

**7A01.3 Additions or alterations.** Additions or alterations shall be permitted to be made to any building or structure without requiring the existing building or structure to comply with the requirements of this chapter; provided that the addition or alteration conforms to that required for a new building or structure.

## **7A02 APPLICABILITY**

**7A02.1 General.** Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall apply. Where, in any specific case, different sections of this Chapter specify different materials, methods of construction or other requirements, the most restrictive shall apply.

**7A02.2 Existing conditions.** The legal occupancy or use of any structure or condition existing on the date of adoption of this Chapter shall be permitted to continue without change, except as is specifically governed by the International Fire Code.

## **7A03 COMPLIANCE ALTERNATIVES**

**7A03.1 Practical difficulties.** Where there are practical difficulties involved in carrying out provisions of this Chapter, the building official or fire chief are authorized to grant modifications for individual cases upon application, in writing, by the owner or owner's authorized agent. The building official or fire chief shall first find that a special individual reason makes enforcement of this Chapter impractical, that the modification is in conformance to the intent and purpose of this Chapter, and that the modification does not lessen any fire protection requirements or any degree of structural integrity.

**7A03.2 Technical assistance.** To determine the acceptability of technologies, processes, products, facilities, materials and uses attending the design, operation or use of a building or premises subject to the inspection of the building official or fire chief, the building official or fire chief are authorized to require the owner, the owner's authorized agent or the person in possession or control of the building or premises to provide, without charge to the Town, a technical opinion and report. The opinion and report shall be prepared by a qualified engineer, specialist, laboratory, or fire safety specialty organization acceptable to the code official and the

owner or the owner's authorized agent, and shall analyze the fire safety of the design, operation or use of the building or premises, the facilities and appurtenances situated thereon and fuel management for purposes of establishing fire hazard severity to recommend necessary changes.

**7A03.3 Alternative materials or methods.** This Chapter is not intended to prevent the use of any material, design or method not specifically prescribed by this Chapter, provided that any such alternative is approved. An alternative material, design or method shall be approved where the building official and fire chief find that the proposed design is satisfactory and complies with the intent of this Chapter, and that the material, method or work offered is, for the purpose intended, not less than the equivalent of that prescribed in this Chapter in quality, strength, effectiveness, fire resistance, durability, and safety. If an alternative material, design or method is not approved, the building official or fire chief shall provide written reasons as to why the alternative was not approved.

## **7A04 SPECIAL CONSTRUCTION REGULATIONS**

**7A04.1 General.** Structures shall be constructed in accordance with this Section, unless previously exempted in Section 7A01.1.

**7A04.2 Fire-resistance-rated construction.** Where this Chapter requires 1-hour fire-resistance-rated construction, the fire-resistance rating of building elements, components or assemblies shall be determined in accordance with the test procedures set forth in ASTM E 119 or UL 263.

### **Exceptions:**

1. The fire-resistance rating of building elements, components or assemblies based on the prescriptive designs prescribed in Section 721.
2. The fire-resistance rating of building elements, components or assemblies based on the calculation procedures in Section 722.

## **7A05 IGNITION-RESISTANT MATERIAL**

**7A05.1 General.** Structures hereafter constructed, modified, or relocated into or within wildland-urban interface areas shall meet the requirements of Section 7A06. Materials required to be ignition-resistant shall comply with the requirements of Section 7A05.2.

**7A05.2 Ignition-resistant building materials.** Ignition-resistant building materials shall comply with any one or more of the following:

1. Material shall be tested on all sides with the extended ASTM E 84 (UL 723) test or ASTM E 2768, except panel products shall be permitted to test only the front and back faces. Panel products shall be tested with a ripped or cut longitudinal gap of 1/8 inch (3.2 mm). Materials that, when tested in accordance with the test procedures set forth in ASTM E 84 or UL 723 for a test period of 30 minutes, or with ASTM E 2768, comply with the following:

1.1. Flame spread. Material shall exhibit a flame spread index not exceeding 25 and shall not show evidence of progressive combustion following the extended 30-minute test.

1.2. Flame front. Material shall exhibit a flame front that does not progress more than 10½ feet (3200 mm) beyond the centerline of the burner at any time during the extended 30-minute test.

1.3. Weathering. Ignition-resistant building materials shall maintain their performance in accordance with this section under conditions of use. Materials shall meet the performance requirements for weathering (including exposure to temperature, moisture, and ultraviolet radiation) contained in the following standards, as applicable to the materials and the conditions of use:

1.3.1. Method A "Test Method for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing" in ASTM D 2898, for fire-retardant-treated wood, wood-plastic composite and plastic lumber materials.

1.3.2. ASTM D 7032 for wood-plastic composite materials.

1.3.3. ASTM D 6662 for plastic lumber materials.

1.4. Identification. Materials shall bear identification showing fire test results.

**Exceptions:**

1. Materials composed of a combustible core and a noncombustible exterior covering, made from either aluminum at a minimum 0.019-inch (0.48 mm) thickness or corrosion-resistant steel at a minimum 0.0149-inch (0.38 mm) thickness shall not be required to be tested with a ripped or cut longitudinal gap.

2. Noncombustible material. Material that complies with the requirements for noncombustible materials.

3. Fire-retardant-treated wood. Fire-retardant-treated wood identified for exterior use and meeting the requirements of Section 2303.2.

4. Materials meeting the following standards of quality.

4.1. SFM Standard 12-7A-1, Exterior Wall Siding and Sheathing. A fire resistance test standard consisting of a 150 kW intensity direct flame exposure for a 10-minute duration.

4.2. SFM Standard 12-7A-3, Horizontal Projection Underside. A fire resistance test standard consisting of a 300kW intensity direct flame exposure for a 10-minute duration.

4.3. SFM Standard 12-7A-4, Decking. A two-part test consisting of a heat release rate (Part A) deck assembly combustion

test with an under-deck exposure of 80 kW intensity direct flame for a 3-minute duration and a (Part B) sustained deck assembly combustion test consisting of a deck upper surface burning ember exposure with a 12 mph wind for 40 minutes using a 2.2lb (1kg) burning "Class A" size 12"x12"x2.25" (300mm x 300mm x 57mm) roof test brand.

4.4. SFM Standard 12-7A-4A, Decking Alternate Method A. A heat release deck assembly combustion test with an under-deck exposure of 80kW intensity direct flame for a 3-minute duration.

4.5. SFM Standard 12-7A-5, Ignition-resistant Material. A generic building material surface burning flame spread test standard consisting of an extended 30-minute ASTM E84 or UL 723 test method as is used for fire-retardant-treated wood.

5. Exterior Windows. Dual or triple pane windows that meet the requirements of the International Energy Conservation Code.

## **7A06 IGNITION-RESISTANT CONSTRUCTION**

**7A06.1 General.** Ignition-resistant construction shall comply with Sections 7A06.2-7A06.11.

**7A06.2 Roof covering.** All roof coverings shall comply with Chapter 15 of this code.

**7A06.2.1 Roof valleys.** Where provided, valley flashings shall be not less than 0.019 inches (0.48 mm) (No. 26 galvanized sheet gage) corrosion-resistant metal installed over a minimum 36 inch (914 mm) wide underlayment consisting of one layer of 72 pound (32.4 kg) mineral-surfaced, non-perforated cap sheet complying with ASTM D 3909 running the full length of the valley.

**7A06.3 Protection of eaves.** Eaves and soffits shall be protected on the exposed underside by ignition-resistant building materials or by materials approved for not less than 1 hour fire-resistance-rated construction, 2 inch (51 mm) nominal dimension lumber, or 1 inch (25 mm) nominal fire-retardant-treated wood or  $\frac{3}{4}$  inch (19.1 mm) nominal fire-retardant-treated plywood, identified for exterior use and complying with Section 2303.2. Fascias are required and shall be protected on the back-side by ignition-resistant building materials or by materials approved for not less than 1-hour fire-resistance-rated construction or 2 inch (51 mm) nominal dimension lumber.

**7A06.4 Gutters and downspouts.** Gutters and downspouts shall be constructed of noncombustible material.

**7A06.5 Exterior walls.** Exterior walls of structures shall be constructed with one of the following methods and all such material shall extend from the top of the foundation to the underside of the roof sheathing:



1. Materials approved for not less than 1 hour fire-resistance-rated construction on the exterior side.
2. Approved noncombustible materials.
3. Heavy timber or log wall construction.
4. Ignition-resistant building materials complying with Section 7A05.2 on the exterior side.

**Exception:** Combustible siding materials not complying with Section 7A05.2 may be used but shall not cover more than 33% of a given wall and shall not be within 5 feet of finish grade. Combustible siding which has a profile that may allow ember intrusion such as wood shake or wood shingle is prohibited.

**7A06.6 Underfloor enclosure.** Buildings or structures shall have underfloor areas enclosed to the ground with exterior walls in accordance with Section 7A06.5.

**Exception:** Complete enclosure shall not be required where the underside of exposed floors and exposed structural columns, beams and supporting walls are protected as required for exterior 1-hour fire-resistance-rated construction or heavy timber construction or fire-retardant-treated wood, if labeled for exterior use and complying with Section 2303.2.

**7A06.7 Appendages and projections.** Unenclosed accessory structures attached to buildings with habitable spaces and projections, such as decks, shall be not less than 1 hour fire-resistance-rated construction, heavy timber construction or constructed of one of the following:

1. Approved noncombustible materials.
2. Fire-retardant-treated wood identified for exterior use and meeting the requirements of Section 2303.2.
3. Ignition-resistant building materials in accordance with Section 7A05.2.

**7A06.8 Exterior doors.** Exterior doors shall be constructed of approved noncombustible materials, standard solid core wood not less than 1<sup>3</sup>/<sub>4</sub> inches thick (44 mm) or have a fire protection rating of not less than 20 minutes. Tempered glass doors are permissible.

**Exception:** Vehicle access doors.

**7A06.9 Vents.** Attic ventilation openings, foundation or underfloor vents, or other ventilation openings in vertical exterior walls and vents through roofs shall not exceed 144 square inches (0.0929 m<sup>2</sup>) each and shall be covered with noncombustible corrosion-resistant materials with openings not to exceed 1/4 inch (6.4 mm) or perforated noncombustible materials with perforations not to exceed 1/4 inch (6.4 mm), or shall be designed and approved to prevent flame or ember penetration into the structure.

**7A06.9.1 Vent locations.** Attic ventilation openings shall not be located in the inner two thirds of soffits, eave overhangs, or other overhang areas. Gable end and dormer vents shall be located not less than 10 feet (3048 mm) from lot lines. Underfloor ventilation openings shall be located as close to grade as practical.

**7A06.10 Detached accessory structures.** Detached accessory structures located less than 30 feet (15,240 mm) from a building containing habitable space shall have exterior walls constructed with materials approved for not less than 1-hour fire-resistance-rated construction, heavy timber, log wall construction, or constructed with approved noncombustible materials or ignition resistant building materials in accordance with Section 7A05.2. The fire-retardant-treated wood shall be labeled for exterior use and meet the requirements of Section 2303.2.

**7A06.10.1 Underfloor areas.** Where the detached accessory structure is located and constructed so that the structure or any portion thereof projects over a descending slope surface greater than 10%, the area below the structure shall have underfloor areas enclosed to within 6 inches (152 mm) of the ground, with exterior wall construction in accordance with Section 7A06.5 or underfloor protection in accordance with Section 7A06.6.

**Exception:** Enclosure shall not be required where the underside of exposed floors and exposed structural columns, beams and supporting walls are protected as required for exterior 1-hour fire-resistance-rated construction or heavy-timber construction or fire-retardant-treated wood on the exterior side. The fire-retardant-treated wood shall be labeled for exterior use and comply with Section 2303.2.

**7A06.11 Spark arrestors.** Chimneys serving fireplaces, barbecues, incinerators, or decorative heating appliances in which solid or liquid fuel is used shall include a spark arrester constructed of woven or welded wire screening of 12 USA standard gage wire (0.1046 inch, 2.66 mm) having openings not exceeding ½ inch (12.7 mm). The net free area of the spark arrester shall be not less than 4 times the net free area of the outlet of the chimney.

Section 1505.1 is amended to read as follows:

**1505.1 General.** All roof assemblies and roof coverings shall be Class A. Wood shakes and shingles are prohibited unless exempted for replacement or repair as defined in Section 1505.1.1. Where the roof profile allows space between the roof covering and the roof decking at the eave ends, the spaces shall be constructed to prevent intrusion of flames and embers or have one layer of 72-pound (32.4 kg) mineral-surfaced non-perforated cap sheet complying with ASTM D3909 installed over the combustible decking.

**Exception:** Skylights and sloped glazing that comply with Chapter 24 or Section 2610.

Section 1505.1.1 is added as follows:

**1505.1.1 Replacement or repair.** Each structure with a nonconforming roof covering or roof assembly shall be allowed one replacement or repair of 25% or less of the roof area. Replacement or repair in excess of 25% or a second replacement or repair of the roof covering or roof assembly shall trigger replacement of the nonconforming covering or assembly in its entirety. Emergency repairs of less than 10 sq/ft shall not be subject to the 25% rule.

Table 1505.1 is deleted.

Sections 1505.3, 1505.4, 1505.5, 1505.6, and 1505.7 are deleted.

Section 1507.1.2 is amended to read as follows:

**1507.1.2 Ice barriers.** Ice barriers shall be installed for all shingle types, metal roof panels and mineral-surfaced roll roofing. The ice barrier shall consist of not less than two layers of underlayment cemented together, or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment. The ice barrier shall completely cover all roof surfaces.

**Exception:** Detached accessory structures that do not contain conditioned floor area.

Sections 1507.8 and 1597.9 are deleted.

Section 1511.7.6 is added as follows:

**1511.7.6 Snow retention devices.** New roof assemblies shall be designed to prevent accumulations of snow from shedding onto exterior balconies, decks, stairways, sidewalks, streets, alleys, pedestrian and vehicle exits from buildings, areas directly above or in front of utility meters, and adjacent properties. Snow retention devices shall be designed by a registered design professional or as approved by the building official.

**Exception:** Roof areas with a horizontal projection of less than 48 inches that will not receive snow shedding from a higher roof. The horizontal projection shall be measured perpendicular to the exterior wall line from the edge of the roof or eave to the intersecting wall surface.

Section 1603.2 is added as follows:

**1603.2 Boulder or rock walls.** Boulder or rock walls with a height greater than 4 feet (1219 mm) shall be designed by a registered design professional and comply with Section 1603.1.

Section 1604.1.1 is added as follows:

**1604.1.1 Hazard areas.** All new construction and additions to existing structures located in mapped debris flow, rock fall, avalanche and flood hazard areas shall be designed in compliance with Title 12, Chapter 21 of the Vail Town Code.

Section 1608.1 is amended to read as follows:

**1608.1 General.** Design snow loads shall be determined in accordance with Chapter 7 of ASCE 7, and design roof loads shall be not less than that determined by Section 1608.2.

Section 1608.2 is amended to read as follows:

**1608.2 Ground and roof snow loads.** The ground snow loads to be used in determining the design snow loads shall be 142 pounds per sq/ft. Designs for roof snow loads shall be as follows:

1. Roof pitches of less than 4:12 shall be designed to carry a snow load of 100 pounds per sq/ft.
2. Roof pitches of 4:12 and greater shall be designed to carry a snow load of 80 pounds per sq/ft.

All structures shall be designed in accordance with accepted engineering practice for non-slippery roof surfaces. Snow loads for decks and exterior balconies shall be as required for roofs.

Section 1612.3 is amended to read as follows:

**1612.3 Flood hazard areas.** The Town has adopted a flood hazard map including areas of special flood hazard as identified by FEMA in the report entitled "The Flood Insurance Study for The Town of Vail" dated December 2007, as amended, with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data. The flood hazard map and supporting data are hereby adopted by reference.

Section 2111.1 is amended to read as follows:

**2111.1 General.** The construction of masonry fireplaces, consisting of concrete or masonry, shall comply with this Section and Title 5, Chapter 3 of the Vail Town Code.

Section 2902.2, Exception 2 is amended to read as follows:

2. Separate facilities shall not be required in structures or tenant spaces with a total occupant load, including both employees and customers, of 30 or fewer.

Section 2902.2, Exception 4 is deleted.

Section 3107.1 is amended to read as follows:

**3107.1 General.** Signs shall be designed, constructed and maintained in accordance with this code and Title 11 of the Vail Town Code.

Section 3109 is amended to read as follows:

## **SECTION 3109 SWIMMING POOLS, SPAS AND HOT TUBS**

**3109.1 General.** The design and construction of swimming pools, spas and hot tubs shall comply with the requirements of Sections 3109.2-3109.5, other applicable sections of this code, and the Colorado Department of

Public Health and Environment (CDPHE) Water Quality Control Division standard 5 CCR 1003-5. Where spas or hot tubs are equipped with a lockable safety cover complying with ASTM F1346 and swimming pools are equipped with a powered safety cover that complies with ASTM F1346, the areas where those spas, hot tubs or pools are located shall be exempt from Sections 3109.2-3109.6.

**3109.2 Public and semi-public swimming pools.** Public and semi-public swimming pools shall be completely enclosed by a barrier not less than 60 inches (1524 mm) in height and shall comply with Sections 3109.4-3109.6.

**3109.3 Private swimming pools.** Private swimming pools shall be completely enclosed by a barrier not less than 48 inches (1524 mm) in height and shall comply with Sections 3109.4-3109.6.

**3109.4 Barriers.** The vertical clearance between grade and the bottom of the barrier shall be not greater than 2 inches (51 mm) measured on the side of the barrier that faces away from the swimming pool. Where the top of the pool structure is above grade, the barrier is authorized to be at ground level or mounted on top of the pool structure, and the vertical clearance between the top of the pool structure and the bottom of the barrier shall be not greater than 4 inches (102 mm).

**3109.4.1 Openings.** Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

**3109.4.2 Solid barrier surfaces.** Solid barriers which do not have openings shall not contain indentations or protrusions, except for normal construction tolerances and tooled masonry joints.

**3109.4.3 Closely spaced horizontal members.** Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the *swimming pool* side of the barrier. Spacing between vertical members shall be not greater than 1¾ inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall be not greater than 1¾ inches (44 mm) in width.

**3109.4.4 Widely spaced horizontal members.** Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall be not greater than 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall be not greater than 1¾ inches (44 mm) in width.

**3109.4.5 Chain link dimensions.** Mesh size for chain link fences shall be not greater than a 2¼ inch (57 mm) square unless the fence is provided with slats fastened at the top or the bottom that reduce the openings to not more than 1¾ inches (44 mm).

**3109.4.6 Diagonal members.** Where the barrier is composed of diagonal members, the opening formed by the diagonal members shall be not greater than 1¾ inches (44 mm).

**3109.4.7 Clear zone.** Where any equipment, including pool equipment, are on the same lot as a pool or spa and such equipment is located outside of the barrier protecting the pool or spa, such equipment shall be located not less than 36 inches (914 mm) from the outside of the barrier.

**3109.4.8 Doors and gates.** Access doors or gates shall be equipped to accommodate a locking device. Pedestrian access doors or gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Doors or gates other than pedestrian access doors or gates shall have a self-latching device. If the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the door or gate, the release mechanism shall be located on the pool side of the door or gate 3 inches (76 mm) or more below the top of the door or gate, and the door or gate and barrier shall be without openings greater than ½ inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

**3109.4.9 Structure wall as barrier.** Where a wall of a structure serves as part of the barrier, one of the following shall apply:

1. Doors, gates and operable windows with direct access to the pool through the wall shall be equipped with an alarm that produces an audible warning when the door or its screen, if present, are opened. The alarm shall be listed and labeled in accordance with UL 2017. In dwellings not required to be accessible units, Type A units or Type B units, the alarm deactivation switch(es) shall be located not less than 54 inches (1372 mm) above the finished floor. In dwellings required to be Accessible units, Type A units or Type B units, the alarm deactivation switch(es) shall be located not higher than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the finished floor. In structures other than dwellings, the alarm deactivation switch(es) shall be located not higher than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the finished floor.

2. A safety cover that is listed and labeled in accordance with ASTM F1346 is installed for the pools and spas.

3. An approved means of protection, such as self-closing doors with self-latching devices, that provides a degree of protection that is not less than the protection afforded by Item 1 or 2.

**3109.4.10 Pool structure as barrier.** Where an above-ground pool structure is used as a barrier or the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then the ladder or steps either shall be capable of being secured, locked or removed to prevent access, or the ladder or steps shall be surrounded by a barrier that meets the requirements of Section 3109.4.1-3109.4.8. Where the ladder or

steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch (102 mm) diameter sphere.

**3109.5 Indoor swimming pools.** Walls surrounding indoor swimming pools shall not be required to comply with Section 3109.4.9.

**3109.6 Prohibited locations.** Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb over the barriers.

**3109.7 Entrapment avoidance.** Suction outlets shall be designed and installed in accordance with ANSI/APSP-7.

### 10-1-3: AMENDMENTS TO THE INTERNATIONAL RESIDENTIAL CODE:

The following amendments are hereby made to the International Residential Code, 2021 Edition:

Section 101.1 is amended to read as follows:

**101.1 Title.** These regulations shall be known as the Vail Residential Code.

Section R105.2, Item 10 in the Building portion, is amended to read as follows:

10. Decks not exceeding 200 sq/ft (18.6 m<sup>2</sup>) in area, not more than 30 inches (762 mm) above grade at any point, and not serving the exit door required by Section R311.4.

Section R109.1.5 is amended to read as follows:

**R109.1.5 Other inspections.** In addition to inspections in Sections R109.1.1-R109.1.4, the building official is authorized to make or require other inspections of any construction work to ascertain compliance with this code and any other Town code, standard, requirement or regulation.

Table R301.2 is amended to read as follows:

#### CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD <sup>o</sup>	WIND DESIGN				SEISMIC DESIGN CATEGORY <sup>f</sup>	SUBJECT TO DAMAGE FROM			ICE BARRIER UNDERLAYMENT REQUIRED <sup>h</sup>	FLOOD HAZARDS <sup>g</sup>	AIR FREEZING INDEX <sup>i</sup>	MEAN ANNUAL TEMP <sup>j</sup>
	Speed <sup>d</sup> (mph)	Topographical effects <sup>k</sup>	Special wind region <sup>l</sup>	Windborne debris zone <sup>m</sup>		Weathering <sup>a</sup>	Frost line depth <sup>b</sup>	Termite <sup>c</sup>				
140	115	NO	NO	NO	B	SEVERE	48"	None to Slight	YES, 100%	-	2500	37.4 <sup>o</sup>

#### MANUAL J DESIGN CRITERIA<sup>n</sup>

Elevation	Altitude correction factor <sup>o</sup>	Coincident wet bulb	Indoor winter design relative humidity	Indoor winter design dry-bulb temperature	Outdoor winter design dry- bulb temperature	Heating temperature difference
8150'	.745	54 <sup>o</sup>	30%	70 <sup>o</sup>	-5 <sup>o</sup>	75 <sup>o</sup>
Latitude	Daily Range	Indoor summer design relative humidity	Summer design gains	Indoor summer design dry-bulb temperature	Outdoor summer design dry-bulb temperature	Cooling temperature difference
39.64° N	H	50%	-33 to -53	75 <sup>o</sup>	82 <sup>o</sup>	7 <sup>o</sup>

Section R301.2.3 is amended to read as follows:

**R301.2.3 Snow loads.** The ground snow loads to be used in determining design snow loads shall be 142 pounds per sq/ft. Designs for roof snow loads shall be as follows:

1. Roof pitches of less than 4:12 shall be designed to carry a snow load of 100 pounds per sq/ft.
2. Roof pitches of 4:12 and greater shall be designed to carry a snow load of 80 pounds per sq/ft.

All buildings and structures shall be designed in accordance with accepted engineering practice for non-slippery roof surfaces. Snow loads for decks and exterior balconies shall be as required for roofs.

Section 311.7.11, Exception is amended to read as follows:

**Exception:** Alternating tread devices are allowed to be used as an element of a means of egress for lofts, mezzanines and similar areas of 200 gross sq/ft (18.6 m<sup>2</sup>) or less where an emergency escape and rescue opening is provided for the area served and such devices do not provide exclusive access to a kitchen or bathroom.

Section R311.7.12, Exception is amended to read as follows:

**Exception:** Ships ladders are allowed to be used as an element of a means of egress for lofts, mezzanines and similar areas of 200 gross sq/ft (18.6 m<sup>2</sup>) or less where an emergency escape and rescue opening is provided for the area served and such devices do not provide exclusive access to a kitchen or bathroom.

Section R313.1, Exception is amended to read as follows:

**Exception:** An automatic sprinkler system is required when a Level 3 alteration, as classified by the Vail Existing Building Code, occurs to a townhouse unit that is 3600 sq/ft or greater, including attached garages.

Existing townhouses that are 3600 sq/ft or more may add up to 100 sq/ft of floor area without triggering the sprinkler retrofit requirement. This exemption may only be taken once and does not include a detached garage.

Section R313.1.1 is amended to read as follows:

**R313.1.1 Design and installation.** Automatic residential fire sprinkler systems for townhouses shall be designed and installed in accordance with NFPA 13D, NFPA 13R or NFPA 13 standards and Vail Fire and Emergency Services sprinkler installation standards.

Section R313.2, Exception is amended to read as follows:

**Exception:** An automatic sprinkler system is required when a Level 3 alteration, as classified by the Vail Existing Building Code, occurs to a one- or two-family dwelling that is 3,600 sq/ft or greater, including attached garages.



Existing one- or two-family dwellings of 3600 sq/ft or more may add up to 100 sq/ft of floor area without triggering the sprinkler retrofit requirement. This exemption may only be taken once. This does not include a detached garage.

For purposes of this Section, a two-family dwelling shall be considered two separate structures.

Section R313.2.1 is amended to read as follows:

**R313.2.1 Design and installation.** Automatic residential fire sprinkler systems for one- and two-family dwellings shall be designed and installed in accordance with NFPA 13D, NFPA 13R or NFPA 13 standards and Vail Fire and Emergency Services sprinkler installation standards.

Section R315.2 is amended to read as follows:

**R315.2 Where required.** Carbon monoxide alarms shall be provided in accordance with NFPA 72, NFPA 720, C.R.S. § 38-45-101 and Vail Fire and Emergency Services alarm installation standards.

Section R315.2.1 is amended to read as follows:

**R315.2.1 New construction.** For new construction, carbon monoxide alarms shall be provided in accordance with NFPA 72, NFPA 720, C.R.S. § 38-45-101 and Vail Fire and Emergency Services alarm installation standards.

Section R315.3 is amended by the addition of the following text:

In addition to the above locations, carbon monoxide alarms shall be provided in accordance with NFPA 72, NFPA 720, C.R.S. § 38-45-101 and Vail Fire and Emergency Services alarm installation standards.

Section R315.7 is amended to read as follows:

**R315.7 Carbon monoxide detection systems.** Carbon monoxide detection systems shall be permitted to be used in lieu of carbon monoxide alarms and shall comply with NFPA 72, NFPA 720, C.R.S. § 38-45-101 and Vail Fire and Emergency Services alarm installation standards.

Section R315.7.2 is amended to read as follows:

**R315.7.2 Location.** Carbon monoxide detectors shall be installed in accordance with Section R315.3.

Section R327.1 is amended to read as follows:

**R327.1 General.** The design and construction of swimming pools and spas shall comply with Section 3109 of the Vail Building Code.

Section R329.2 is amended to read as follows:

**R329.2 Installation.** The installation of stationary engine generators shall be in an approved location and in accordance with the listing, the manufacturer's installation instructions and NFPA 70.

Section R507.2.1 is amended by the addition of the following exception:

**Exception:** An approved flashing detail in accordance with Section R507.2.4 that prevents moisture and water accumulation on member surfaces and joints may be utilized in-lieu of preservative-treated materials.

Section R902.1 is amended to read as follows:

**R902.1 Roofing materials.** All roof assemblies and roof coverings shall be Class A. Wood shakes and shingles are prohibited unless exempted for replacement or repair as defined in Section 1505.1.1. Where the roof profile allows space between the roof covering and the roof decking at the eave ends, the spaces shall be constructed to prevent intrusion of flames and embers or have one layer of 72-pound (32.4 kg) mineral-surfaced non-perforated cap sheet complying with ASTM D3909 installed over the combustible decking.

Section R902.1.1 is added as follows:

**R902.1.1 Replacement or repair.** Each structure with a nonconforming roof covering or roof assembly shall be allowed one replacement or repair of 25% or less of the roof area. Replacement or repair in excess of 25% or a second replacement or repair of the roof covering or roof assembly shall trigger replacement of the nonconforming covering or assembly in its entirety. Emergency repairs of less than 10 sq/ft are not subject to the 25% rule.

For purposes of this Section, a two-family dwelling shall be considered two separate structures.

Section R902.2 is deleted.

Section R903.5 is added as follows:

**R903.5 Snow retention devices.** New roof assemblies shall be designed to prevent accumulations of snow from shedding onto areas directly above or in front of utility meters or adjacent properties. The design of snow retention devices shall be provided by a registered design professional or as approved by the building official.

**Exception:** Roof areas with a horizontal projection of less than 48 inches that will not receive snow shedding from a higher roof. The horizontal projection shall be measured perpendicular to the exterior wall line from the edge of the roof or eave to the intersecting wall surface.

Section R905.1.2 is amended to read as follows:

**R905.1.2 Ice barriers.** Ice barriers shall be installed for all shingle types, metal roof panels and mineral-surfaced roll roofing. The ice barrier shall consist of not less than two layers of underlayment cemented together, or a self-adhering polymer modified bitumen sheet shall be used in place of normal underlayment. The ice barrier shall completely cover all roof surfaces.

**Exception:** Detached accessory structures that do not contain conditioned floor area.

Sections R905.7 and R905.8 are deleted.

Section R1001.1 is amended to read as follows:

**R1001.1 General.** Masonry fireplaces shall be constructed in accordance with this Section, the applicable provisions of Chapters 3 and 4 of this code, and Title 5, Chapter 3 of the Vail Town Code.

Chapters 11-43 are deleted from the Vail Residential Code and replaced with the corresponding Vail Codes and the National Electrical Code.

#### **10-1-4: AMENDMENTS TO THE INTERNATIONAL FIRE CODE:**

The following amendments are hereby made to the International Fire Code, 2021 Edition:

Section 101.1 is amended to read as follows:

**101.1 Title.** These regulations shall be known as the Vail Fire Code.

Section 202 is amended by the addition of the following definitions:

**FALSE ALARM.** See Title 4 of Vail Town Code.

**PORTABLE OUTDOOR FIREPLACE.** A portable, outdoor, solid fuel burning fireplace constructed of steel, concrete, clay or other non-combustible material and equipped with a screen or other approved spark arrestor, of open design or equipped with a small hearth opening and a short chimney or chimney opening in the top.

Section 307.1.1 is amended to read as follows:

**307.1.1 Prohibited open burning.** The following burning activities are prohibited:

1. Open burning.
2. Bonfires.
3. Recreational fires.
4. The burning of any materials when a National Weather Service Red Flag Warning is activated.
5. The burning of any materials when Stage 2 or 3 fire restrictions are in place.
6. The use of portable outdoor fireplaces when Stage 2 or 3 fire restrictions are in place.

#### **Exceptions:**

1. Burning conducted for training purposes by Vail Fire and Emergency Services.

2. If the burning is a smokeless flare or safety flare used to indicate danger to the public.

3. Open burning conducted pursuant to a permit issued by the Fire Code Official upon written application, if the Fire Code Official determines that such burning will be performed without hazard to the public health, safety or welfare.

4. Prescribed burning for the purpose of reducing the impact of wildland fire when authorized by the Fire Code Official.

5. The use of propane or natural gas appliances equipped with automatic shut-off controls.

Section 307.3 is amended to read as follows:

**307.3 Extinguishment authority.** Where any open burning, permitted or otherwise (including the use of a portable outdoor fireplace), creates or adds to a hazardous situation or creates a nuisance or health risk due to smoke or other products of combustion, the fire shall be ordered to be extinguished by Vail Fire and Emergency Services or the Vail Police Department.

Sections 307.4.1 and 3.07.4.2 are deleted.

Section 307.4.3 is amended to read as follows:

**307.4.3 Portable outdoor fireplaces.** Use of a portable outdoor fireplace shall be permitted, subject to the following restrictions:

1. Portable outdoor fireplaces shall be equipped with a properly fitting spark screen or arrestor.

2. Portable outdoor fireplaces shall be used in accordance with manufacturer's instructions.

3. Portable outdoor fireplaces shall maintain a minimum clearance of 15 feet from any structure or other combustible materials.

4. Smoke created from a portable outdoor fireplace shall be maintained in such a manner as to avoid causing a nuisance or hazardous condition.

5. Use of a portable outdoor fireplace shall be in accordance with Section 307.5, as amended.

6. Use of a portable outdoor fireplace on short-term rental property is strictly prohibited.

7. Use of a portable outdoor fireplace is prohibited when Stage 2 or 3 fire restrictions are in place.

Section 308.1.4, Exception 3 is amended to read as follows: 3. LP-gas cooking devices having LP-gas container with a water capacity not greater than 20 pounds [nominal 17-pound (0.454 kg) LP gas capacity].

Section 308.3.1 is amended to add: 11. Candles may only be used in constantly attended locations.

Section 308.1.6.3 is amended to read as follows:

**308.1.6.3 Sky lanterns.** The use of sky lanterns is prohibited.

Section 503.6 is amended to read as follows:

**503.6 Security gates.** The installation of security gates across a fire apparatus access road or driveway shall be approved by the fire code official. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

Section 605.9 is amended to read as follows:

**605.9 Gas meters.** Above-ground gas meters, regulators and piping subject to damage shall be protected by a barrier complying with Section 312 or otherwise protected in an approved manner. Snow & ice build-up around gas and other utility meters shall be kept clear and maintained at all times.

Section 903.2.10, item 2 is amended by deleting the exception.

Section 903.3.1.3 is amended to read as follows:

**903.3.1.3 NFPA 13D sprinkler systems.** Automatic sprinkler systems in one- and two-family dwellings and townhouses shall be installed in accordance with NFPA 13D and Vail Fire and Emergency Services installation standards.

Section 903.4 is amended by deleting all exceptions.

Section 907.2 is amended to read as follows:

**907.2 Where required.** An approved fire alarm system installed in accordance with this code, NFPA 72 and Vail Fire and Emergency Services installation standards is required in new buildings, structures, one- and two-family dwellings and townhomes in accordance with Sections 907.2.1-907.2.23, with occupant notification in accordance with Section 907.5, unless other requirements are provided by another section of this code. Not fewer than one manual fire alarm box is required in an approved location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or waterflow detection devices. Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.

**Exceptions:**

1. The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service.
2. The manual fire alarm box is not required for Group R-2 occupancies unless required by the Fire Code Official to provide a means for fire watch personnel to initiate an alarm during a sprinkler system impairment event. Where provided, the manual fire alarm box shall not be located in an area that is open to the public.
3. The manual fire alarm box is not required for fire alarm systems dedicated to one- and two-family dwellings and townhouses.

Section 907.2.11.2 is amended to read as follows:

**907.2.11.2 Groups R-2, R-3, R-4, I-2, and all residential properties for rent or lease.** Single or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-3, R-4, I-2, and all residential properties that are available for rent or lease, regardless of occupant load, in all of the following locations:

1. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms.
2. In each room used for sleeping purposes.
3. In each story within a dwelling unit, including basements but not including crawl spaces and uninhabitable attics. In dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

Section 907.4.1 is amended by the addition of the following Exception: 2. In residential installations where the control panel is located in a closet or room with no mechanical equipment.

Section 907.6.6 is amended by deleting all exceptions.

Section 915.1.1 is amended to read as follows:

**915.1.1 Where required.** Carbon monoxide detection shall be provided in Group I-1, I-2, I-4, R, one- and two-family dwellings and townhomes, and in classrooms in E occupancies in the locations specified in Section 915.2 where any of the conditions in Sections 915.1.2-915.1.6 exist.

Section 1103.8 is amended to read as follows:

**1103.8 Single- and multiple-station smoke alarms.** Single- and multiple-station smoke alarms shall be installed in existing I-1, R, one- and two-family dwellings and townhomes in accordance with Sections 1103.8.1-1103.8.3.

Section 1103.8.1 is amended by deleting Exception 2.

Appendix B, Section B101.1 is amended by the addition of the following:  
The maximum flow reduction for sprinklered buildings shall not exceed 50%.

**10-1-5: AMENDMENTS TO THE INTERNATIONAL ENERGY CONSERVATION CODE:**

The following amendments are hereby made to the International Energy Conservation Code, 2021 Edition:

Section C101.1 is amended to read as follows:

**C101.1 Title.** These regulations shall be known as the Vail Energy Conservation Code.

Section C202 is amended by the addition of the following definitions:

**EV-CAPABLE PARKING SPACE.** A parking space for an electric vehicle (EV) with the electrical panel capacity and conduit installed to support future implementation of EV charging with a 208/240-volt (or greater), 40-ampere (or greater) circuit, and a dedicated, labeled space in the electrical panel.

**EV-INSTALLED PARKING SPACE.** A parking space for an electric vehicle (EV) that has the EV supply equipment (EVSE) fully installed from the electrical panel to the parking space, including charging equipment.

Section C405.13 is added as follows:

**C405.13 EV charging.** EV charging capabilities and required parking spaces shall be determined according to Table C405.13.

**Exception:** A request for a reduction in the number of required EV-installed parking spaces can be made if DC fast charging stations are installed to fulfill the requirements of this subsection. An EV parking study must be submitted to support the request and based on the findings of the analysis or study, the building official is authorized to approve a reduction in the number of required EV-installed parking spaces.

Table C405.13 is added as follows:

**TABLE C405.13 EV PARKING SPACES<sup>a</sup>**

Property Type	Space Requirements
All commercial properties (incl. multi-family developments)	5% EV-installed parking spaces + 50% EV-capable parking spaces

a. These provisions are for new construction only.

Section R101.1 is amended to read as follows:

**R101.1 Title.** These regulations shall be known as the Vail Energy Conservation Code.

Section R202 is amended by the addition of the following definitions:

**EV-CAPABLE PARKING SPACE.** An EV parking space with the electrical panel capacity and conduit installed to support future implementation of EV charging with a 208/240-volt (or greater), 40-ampere (or greater) circuit, with a dedicated, labeled space within the electrical panel.

**SOLAR-READY ZONE.** A section of the roof or building overhang designated and reserved for the future installation of a solar photovoltaic or solar thermal system.

Table R402.1.3 is amended by deleting footnote i.

Section R403.7 is amended to read as follows:

**R403.7 Equipment sizing and efficiency rating.** Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other heating and cooling calculation methodologies. All new heating and cooling equipment shall have an efficiency rating of 92% AFUE or better.

**Exception:** The replacement, alteration or repair of an existing system.

Section R403.13 is added as follows:

**R403.13 Fire pits.** Gas fueled fire pits and other outdoor fireplaces and appliances require automatic shut-off controls with a maximum 60-minute timer.

Section R403.14 is added as follows:

**R403.14 Solar-ready zone.** New one- and two-family dwellings and townhouses with not less than 600 sq/ft (55.74 m<sup>2</sup>) of roof area oriented between 110 degrees and 270 degrees of true north, shall comply with Sections R403.14.1-R403.7.

**Exceptions:**

1. A new residential building with a permanently installed on-site renewable energy system.
2. A building where all areas of the roof that would otherwise meet the requirements of Section R403.14 are in full or partial shade for more than 70% of daylight hours annually.

**R403.14.1 Construction document requirements for solar-ready zone.** Construction documents shall indicate the solar-ready zone.

**R403.14.2 Solar-ready zone.** The solar-ready zone shall be not less than 300 sq/ft (27.87 m<sup>2</sup>) exclusive of mandatory access or setback areas as required by the Vail Fire Code. New townhouses of 3 stories or less in height above grade plane and with a total floor area less than or equal to 2,000 sq/ft (185.8 m<sup>2</sup>) per dwelling shall have a solar-ready zone area of not less than 150 sq/ft (13.94 m<sup>2</sup>). The solar-ready zone shall be composed of areas not less than 5 feet (1524 mm) in width and not less than 80 sq/ft



(7.44 m2) exclusive of access or set-back areas as required by the Vail Fire Code.

**R403.14.3 Obstructions.** Solar-ready zones shall be free from obstructions, including but not limited to vents, chimneys, and other roof-mounted equipment.

**R403.14.4 Capped roof penetration sleeve.** A capped roof penetration sleeve shall be provided adjacent to all solar-ready zones located on roofs. The capped roof penetration sleeve shall be sized to accommodate the future photovoltaic system conduit and shall have an inside diameter of not less than 1½ inches (38 mm).

**R403.14.5 Roof load documentation.** The structural design loads for roof dead load and roof live load shall be clearly indicated on the construction documents.

**R403.14.6 Interconnection pathway.** Construction documents shall indicate pathways for routing of conduit or plumbing from the solar-ready zone to the electrical service panel or service hot water system.

**R403.14.7 Electrical service reserved space.** The main electrical service panel shall have a reserved space to allow installation of a dual pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the opposite (load) end from the input feeder location or main circuit location.

**R403.14.8 Certificate.** A permanent certificate, indicating the solar-ready zone and other requirements of this section, shall be posted near the electrical distribution panel, water heater or other conspicuous location by the builder or registered design professional.

Section R404.4 is added as follows:

**R404.4 EV charging.** EV charging capabilities and required parking spaces shall be determined according to Table R404.4.

Table R404.4 is added as follows:

**TABLE R404.4 EV PARKING SPACES<sup>a</sup>**

Property Type	Space Requirements
One- and two-family dwellings, townhouses	1 EV-capable space per dwelling unit

a. These provisions are for new construction only.

Section R404.5 is added as follows:

**R404.5 Electric readiness.** Systems using gas or propane to serve individual dwelling units shall comply with R404.5.1 and R404.5.2.

**R404.5.1 Receptacle required.** A dedicated electrical receptacle connected to the electric panel with an appropriately sized branch circuit

shall be provided within 36 inches (914 mm) of each gas or propane water heater, clothes dryer, and conventional cooking appliance.

**R404.5.2 Receptacle identification.** The branch circuits within the electric panel serving the future electric appliances shall be appropriately labeled for their intended use.

#### **10-1-6: AMENDMENTS TO THE INTERNATIONAL PLUMBING CODE:**

The International Plumbing Code, 2021 Edition, is amended by all amendments adopted by the State of Colorado and referred to as the "Colorado Plumbing Code", in addition to the following:

Section 101.1 is amended to read as follows:

**101.1 Title.** These regulations shall be known as the Vail Plumbing Code.

Section 103.1 is amended to read as follows:

**103.1 Creation of Agency.** The Town's Building Department is hereby created and the official in charge shall be known as the building official. The function of this agency shall be the implementation, administration, and enforcement of this code.

Section 115.4 is deleted.

Section 305.4.1 is amended to read as follows:

**305.4.1 Sewer depth.** Per Eagle River Water and Sanitation District (ERWSD) standards, building sewers shall be installed not less than 54 inches (1372 mm) below grade.

Section 903.1 is amended to read as follows:

**903.1.1 Roof extension unprotected.** Open vent pipes that extend through a roof shall be terminated not less than 16 inches (406 mm) above the roof.

Section 903.2 is amended to read as follows:

**903.2 Frost closure.** Vent extensions through a roof or wall shall be not less than 3 inches (76 mm) in diameter. Any increase in size of the vent shall be made not less than 1 foot (305 mm) inside the thermal envelope of the building.

#### **10-1-7: AMENDMENTS TO THE INTERNATIONAL FUEL GAS CODE:**

The International Fuel Gas Code, 2021 Edition is amended by all amendments adopted by the State and referred to as the "Colorado Fuel Gas Code," and the following :

Section 101.1 is amended to read as follows:

**101.1 Title.** These regulations shall be known as the Vail Fuel Gas Code.

Section 103.1 is amended to read as follows:

**103.1 Creation of agency.** The Town's Building Department is hereby created and the official in charge shall be known as the building official. The function of this agency shall be the implementation, administration, and enforcement of this code.

Section 115.4 is deleted.

Table 503.8 is amended as follows:

A	Clearance above finished grade level, veranda, porch, deck, or balcony	36 inches
---	--	-----------

(all other values within the table are unchanged.)

#### **10-1-8: AMENDMENTS TO THE INTERNATIONAL MECHANICAL CODE:**

The following amendments are hereby made to the International Mechanical Code, 2021 Edition:

Section 101.1 is amended to read as follows:

**101.1 Title.** These regulations shall be known as the Vail Mechanical Code.

Section 103.1 is amended to read as follows:

**103.1 Creation of agency.** The Town's Building Department is hereby created and the official in charge shall be known as the building official. The function of this agency shall be the implementation, administration, and enforcement of this code.

Section 115.4 is deleted.

Section 401.4 is amended by the addition of the following text:

5. The bottom of intake openings shall be located not less than 36 inches (914 mm) above finished grade.

Section 701.3 is added as follows:

**701.3 Combustion air ducts.** Combustion air ducts shall terminate to the outside a minimum of 36 inches (914 mm) above finished grade.

Section 804.3.4, Item 6 is amended to read as follows:

6. The bottom of the vent termination shall be located not less than 36 inches (914 mm) above finished grade.

#### **10-1-9: AMENDMENTS TO THE INTERNATIONAL EXISTING BUILDING CODE:**

The following amendments are hereby made to the International Existing Building Code, 2021 Edition:

Section 101.1 is amended to read as follows:

**101.1 Title.** These regulations shall be known as the Vail Existing Building Code.

Section 103.1 is amended to read as follows:

**103.1 Creation of agency.** The Town's Building Department is hereby created and the official in charge shall be known as the building official. The function of this agency shall be the implementation, administration, and enforcement of this code.

Section 101.4.2 is amended to read as follows:

**101.4.2: Buildings previously occupied.** The legal occupancy of any building existing on the date of adoption of this code shall be permitted to continue without change, except as is specifically covered in this code, the Vail Fire Code, or as deemed necessary by the code official for safety.

**10-1-10: AMENDMENTS TO THE NATIONAL ELECTRICAL CODE, NFPA 70:**

The Town hereby adopts, by reference, all amendments to the National Electrical Code, NFPA 70, 2020 Edition, as adopted by the State of Colorado and referred to as the "Colorado Electrical Code".

**10-1-11: AMENDMENTS TO THE UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS:**

The following amendment is hereby made to the Uniform Code for the Abatement of Dangerous Buildings, 1997 Edition:

Section 301 is amended to read as follows:

**Section 301 General.** For the purpose of this code, certain terms, phrases, words, and their derivatives shall be construed as specified in this section or as specified in the Vail Building Code.

**BUILDING CODE** is the 2021 International Building Code, as adopted, amended and titled the Vail Building Code.

**DANGEROUS BUILDING** is any building or structure deemed to be dangerous under the provisions of Section 302 of this code.

**10-1-12: VIOLATION AND PENALTY:**

A. It is unlawful for any person to violate any provision of any code adopted in this Chapter.

B. Violations of this Chapter shall be subject to the penalties provided in Section 1-4-1 of this Code. Each day the violation continues shall constitute a separate offense. In addition, the Town may maintain an action for damages, declaratory relief, specific performance, injunction, or any other appropriate relief for a violation of any provision of this Chapter.

Section 2. The Codes adopted and amended by this Ordinance shall be effective for all complete building permit applications received by the Town's Community Development Department on or after July 1, 2022.

Section 3. If any part, section, subsection, sentence, clause or phrase of this ordinance is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this ordinance; and the Town Council hereby declares it would have passed this ordinance, and each part, section, subsection, sentence, clause or phrase thereof, regardless of the fact that any one or more parts, sections, subsections, sentences, clauses or phrases be declared invalid.

Section 4. The amendment of any provision of the Vail Town Code in this ordinance shall not affect any right which has accrued, any duty imposed, any violation that occurred prior to the effective date hereof, any prosecution commenced, nor any other action or proceeding as commenced under or by virtue of the provision amended. The amendment of any provision hereby shall not revive any provision or ordinance previously repealed or superseded unless expressly stated herein.

Section 5. All bylaws, orders, resolutions and ordinances, or parts thereof, inconsistent herewith are repealed to the extent only of such inconsistency. This repealer shall not be construed to revise any bylaw, order, resolution or ordinance, or part thereof, theretofore repealed.

INTRODUCED, READ ON FIRST READING, APPROVED, AND ORDERED  
PUBLISHED ONCE IN FULL ON FIRST READING this 3<sup>rd</sup> day of May, 2022 and a public  
hearing for second reading of this Ordinance set for the \_\_\_\_ day of \_\_\_\_\_,  
2022, in the Council Chambers of the Vail Municipal Building, Vail, Colorado.

\_\_\_\_\_  
Kim Langmaid, Mayor

ATTEST:

\_\_\_\_\_  
Tammy Nagel, Town Clerk

READ AND APPROVED ON SECOND READING AND ORDERED PUBLISHED  
this \_\_\_\_ day of \_\_\_\_\_, 2022.

\_\_\_\_\_  
Kim Langmaid, Mayor

ATTEST:

\_\_\_\_\_  
Tammy Nagel, Town Clerk