

SIGNIFICANT CHANGES TO THE CALIFORNIA RESIDENTIAL CODE

2019 EDITION

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A book report summery is prepared by the Sacramento Valley Association of Building Officials Code Development and Review Committee.

NOTE: This report is not intended to replace the book Significant Changes to the California Residential Code 2019 Edition. SVABO members are encouraged to purchase the publication for insights, additional information, and comments regarding the significance of the changes.

Legend:

California changes to the International Residential Code are *italicized*

Changes that appear in both the International Residential Code and the California Residential Code are shown in normal font

Portions of the International Residential Code that are not adopted by California are shown in ~~strikeout~~

Section	Code Change	Significance	Remarks
PART 1 ADMINISTRATION AND DEFINITIONS			
R101.2	All instances where the IBC permits construction under the IRC are now listed in the exception to the scope of the IRC	This exception to the IRC scope matches the scope of the IBC, bringing the two codes into alignment, by cleaning up the language and adding three uses of care facilities for 5 or fewer persons receiving various levels of care.	

R104.11	Modification to the process to gain compliance through the alternative materials and methods provisions. Now requires an application by the owner or owner's authorized agent and gives authority to the B.O. to approve based on a prescriptive list of equivalencies.	The wording has changed from the B.O. "shall approve" to the B.O. "shall have the authority to approve" Also, the basis for the approval is now more specific, picking up a list of criteria from the corresponding section of the IBC for determining that the alternative was at least equivalent to that prescribed by the code, and now adds to that "in quality, strength, effectiveness, fire resistance, durability and safety"	
R105.1, R110.1, R202	Clarification to the definition for "Change of Occupancy"	Clarifies the application of a change of use or change of occupancy applies only to the 5 special-use buildings in the exception to the scope of the IRC.	
R106.1.5	Modification adding new language to "Align the exterior balcony criteria with the CBC"	This modification deals with exterior balconies and elevated walking surfaces and adds the language to align with the language in the 2019 CBC	
R106.4	Modification "Provides an exception for EV charging for Accessory Dwelling Units."	This modification is intended to address the recent ADU and JADU laws which do not allow local jurisdictions to require parking for newly constructed ADUs and JADUs if certain conditions are met.	
R106.4.2	Modification to the requirement for EV charging stalls are now 10 percent of the provided parking for new multi-family dwellings	This modification changes the percentages from 3 percent to 10 percent of the total number of parking spaces on site.	
R202	New definitions for "Access (To)" and Ready Access (To)"	Clarification applies to equipment and devices that must be reached for service or replacement.	
R202	Adds new definition for "Crawl Space"	Clarifies the use of what a crawl space is " an Underfloor space that is not a basement" in the IRC	

R202	Add new definition of "Carbon Monoxide Alarm"	Clarifies and differentiate carbon monoxide alarm from carbon monoxide detector.	
R202	Modify definition for Fenestration"	Clarification to encompass a new definition for vertical fenestration and the modified the definition for skylights and sloped glazing.	
R202	New definitions related to solar energy systems, "Solar Energy System", "Solar Thermal Collector", and "Solar Thermal System".	Clarification to assist in understanding and using the new solar energy provisions in chapters 3 and 9.	
Part 2: BUILDING PLANNING			
Table R301.2(1)	Modification to existing table to add "Manual J Design Criteria" Residential Load Calculations	The new code provisions keep design options open by requiring a jurisdiction to set local values based on local data for consistent application of the standard	
R301.2.2.1	Add a new alternative seismic map to the "Seismic Design Category". Allows potentially a lower seismic design category based on the determination of the soil.	Updated seismic design maps prepared by the U.S Geological Survey (USGS) in collaboration with (FEMA) and the Building Seismic Safety Council (BSSC) reflect updated information on identified faults and potential ground motion attenuation.	
R301.2.2.6	Modification to "Irregular Buildings" section of the seismic provisions has been rearranged for greater ease of use.	Reformatted and clarified the requirements for irregular building: no technical changes were intended by the reformat.	
Table R301.5	Modification to "Live load on balconies and decks"	Changes the loading designs in the CRC from 40 to 60psf loading	
R302.1	Modification to "Exterior Walls" reference the IBC to offer additional options to provide flexibility in determining fire-resistance rating of exterior wall assemblies.	Clarifies that there are a number of tried-and-true methods available in the IBC and have been added to the IRC to satisfy the fire-resistance-rating requirements of this section in the IRC	

R302.2	Modification to "Townhouse Separation" for achieving the fire-resistant between townhouse dwelling units	To clarify the application of the code, the IRC recognizes all the options in Chapter 7 of the IBC to determine fire separation requirements in the townhouse provisions of this section	
R302.3	Modification to "Two-Family Dwelling Separations" reference section 703.3 of the IBC.	Provide alternatives for determining the fire resistance rating of wall and floor/ceiling assemblies for separation of dwelling units and clarifies that there are a number of tried-and-true methods available to satisfy the fire-resistance-rating requirements of this section in the IRC	
R302.4.2	Modification to "Membrane Penetrations" new exception added.	Add exception #4 for listed luminaires that have been tested for fire-resistant-rated ceiling. The new exception recognizes listed luminaires for penetrating the ceiling membrane or fire-resistant-rated floor/ceiling assembly, provided the luminaire has been tested as part of that assembly.	
R302.5	Modification to "Dwelling-Garage Opening and Penetration Protection"	This add is an alternative to a self-closing device to allow an automatic-closing device at dwelling-garage opening	
R302.10	Clarification to "Flame Spread Index and Smoke-Developed index for insulation"	Clarification to insulation flame spread. First the term "insulating materials" replaces the term "insulation" to clarify it is all-inclusive and does not only apply to the base material, second cleans up the language to clarify the intent.	
R302.13	Modification of "Fire Protection of Floors" above crawl spaces	Modified to add electric-powered appliances in addition to fuel-fired appliances, and further specifies that this crawl space provision only applies to heating appliances.	

R308.4.2	Modification to "Glazing Adjacent to Doors" within 24" of the hinged side of an in-swing door.	Modify the code to remove the word "perpendicular to" the wall, to now read "less than 180 degrees (3.14 rad) from" within 24" of the hinged side of an in-swinging door.	
R308.4.4	Modification to "Glazing in Guards and Raiings" structural glass changes.	This change states, structural glass balusters panels now require an attached top rail or handrail as an additional safety feature in case the glass should fail.	
R308.4.7	Clarification to "Glazing Adjacent to the Bottom Stair Landing"	Figure R308.4.7 has been replaced with a new Figure and caption to more accurately reflect the related code provision, and the verbiage of the exception has been cleaned up for clarification.	
R310.1	Modification to "Emergency Escape and Recue Opening Required" due to automatic-sprinklers.	Emergency escape and rescue openings are no longer required for bedrooms in basements when the dwelling unit is protected with an automatic fire sprinkler system and all other conditions are met.	
R310.3	Modification to "Emergency Escape and Recue Doors" language	A change in terminology replaces "Bulkhead Enclosures" with Area Wells" and provisions for ladders and steps for area wells have been added to better describe it's function and clarify the application of the code.	

R311.7.1, R311.7.8	Modification to "Handrail Projections" for stairways	Added new exceptions to the handrail projection limitation provides for adequate clearance behind the handrail when it passes a projection of a floor, landing or tread return.	
R311.7.3	Modification to "Vertical Rise" stair rise between landings"	The maximum rise of a flight of stairs has increased by 4", from 147" to 151". To accommodate new construction practices of 10' ceiling heights and 24" floor trusses.	
R311.7.5.3	Clarification of the text for "Stair Nosing"	The revised text clarifies that the nosing must be consistent throught the stairway.the language referring to nosing projections between stories has been removed. This change is considered editorial for clarification.	
R311.7.11, R311.7.12	Modification to "Alternating Tread Devises" and to "Ship Ladders"	Alternating tread devices and ship ladders are now permitted as means of egress for serving lofts that do not exceed 200 square feet in area. Kitchens and bathrooms are excludedfrom this provision.	
R312.1	Clarification of "Guard" requirements of walking surfaces that exceed 30" above grade	Clarifies requirements that only apply to the Specific portion of the walking surface that exceeds 30" above grade	
R314	Modification to the exemption for interconnected "Smoke Alarms"	The exemption for interconnection of alarms during alterations base on feasibility has been removed for the code. Permits for alterations, repairs and additions now require interconnection of alarms through wiring or wireless connections	
R315	Modification to "Carbon Monoxide Alarms" Requirements in dwellings	Carbon monoxide alarms must be interconnection where multiple carbon monoxide alarms are required in a dwelling unit through wire or wireless connections	
R315.5	Modification to "Carbon Monoxide Alarms" Exceptions	Clarifies the application of carbon monoxide alarms when access into the dwelling is restricted	

R317.1	Modification to "Balcony or Elevated Surface Moisture Protection"	Clarifies the requirements for positive drainage for any water that could infiltrate moisture-permeable floors and changes regarding ventilation beneath balcony or elevated walking surfaces	
R317.3	Modification to "Fasteners for Preservative-treated wood" for staples.	Staples in preservative-treated wood and fire-retardant-treated wood are now required to be made of <u>stainless steel</u> .	
R322.3	Modification to "Coastal High-Hazard Flood Zones"	In coastal high-hazard areas (V Zones) and Coastal A Zones, the IRC now provides specific guidance for the design and construction of concrete slabs, stairs, guards, decks and porches to reduce damage to the dwelling in a flood event.	
R324.4	Modification to "Rooftop-Mounted Photovoltaic Systems" structural requirements.	Structural requirements for rooftop-mounted Photovoltaic panel systems have been revised and consolidated from R907.2, 907.3, and 909.3 to R324.4, also this chapter now considers two way to look at the loads on a roof	
R324.6	Addition- "Roof Access and Pathways" for photovoltaic solar energy systems.	Requirements in the latest editions of the IFC for roof access and pathways for firefighters has been introduced and mirrors the IFC into the IRC	
R324.6.2.2	Addition- for Solar panels near "Emergency escape and rescue openings"	Roof mounted PV modules are not permitted to be installed directly below emergency escape and rescue openings.	
R325.3	Modification to mezzanine "Area Limitations"	The area limitations for mezzanines new exception allows increases from the existing one-third of the area to, one-half of the area of the room containing the mezzanine under certain conditions	

R325.6, R202	Addition- "Habital attics" section and revised definition in R202	Reconizing that technical requirements should not be placed in a definition, the definition of habitable attic has been revised and the technical requirements have been placed in this new section	
R337.1.3	Modification to "Group C Special Buildings" In WUI areas	Group C special Building now have specific construction criteria when built in Fire Severity Zones	
R337.7.3	Modification New criteria for construction in Fire Severity Zones allowing the use of Heavy timber construction	The change removes the term "heavy timber" and spells out the definition from WUI/CBC Chapter 7A to eliminate confusion	
R337.8.2.2	Modification to "Operable Skylights"	Operable Skylights are allowed to be installed in Fire Severity Zones as long as a noncombustible mesh screen is installed to prevent combustible materials, debris, and embers from entering into a functional open skylight	
R337.8.4	Modification to "Garage Door Perimeter Gap"	This modification addresses the protection of the garage gap from embers	
R337.10.2	Modification to "Roof or Wall Top Cornices"	Roof and Wall top surfaces are now required to comply with the noncombustibility requirements of the CRC	
PART 3 BUILDING CONSTRUCTION			
Table R403.3(1)	Modification to insulation requirements for "Minimum Footing Depth and Insulation Requirments for Frost-Protected Footings in Heated Buildings"	Insulation thickness requirements for Type II and IX expanded polystyrene (EPS) have changed. The minimum R-value for specific types of EPS has been clarified while requirements for horizontal insulation were added.	

Table R403.4	Modification to "Minimum Depth and Width of Crushed Stone Footings"	The updated table now includes both a minimum depth and width for the crushed stone footings.	
R408.3	Modification to "Unvented Crawl Spaces" Method for moisture control.	Additional method was added for ventilation of the under-floor space, it is not required when adequately-sized dehumidifier is provided.	
Table R505.3.2	Modification to " Allowable Spans for Cold-Formed steel joist- Single or Continuous Spans"	Maximum spans are updated for wind speeds up to 140 miles per hour in single or continuous spans. A foot note "f" is added to clarify that 33 and 43 mil thickness joist need to be single span joist when using this prescriptive table.	
R507	Modification to "Decks" reorganization of Section	Section R507 is reorganized for ease of use and additional provisions are added to simplify prescriptive construction of a deck. Table 5-1 shows this reorganization with the 2012 and 2015 IRC deck section listed as a comparison.	
R507.2	Modification to deck "Materials"	Adds all materials in one place, to now include wood materials, adds requirements for fasteners and fastener connections, flashing and alternative materials.and adds a new Table R507.2.3 "Fastener and Connector Specifications for Decks"	
R507.3	Addition of deck "Footings" minimum size	New section on minimum size is added to help describe minimum prescriptive (non-engineered) requirements for an exterior deck footing based on snow load, soil quality and footing size and shape. New Table R507.3.1 "Minimum Footing Size for Decks"	
R507.4	Modification to "Deck Post"	Moves to the middle of the section to continue the flow of construction and clarified adding prescriptive or non-engineered options.	
R507.5	Modification to "Deck Beams"	The table on maximum beam spans now includes single-ply Southern pine beams. Beam bearing and connection to post are clarified.	

R507.6	Modification to "Deck Joists"	Maximum joist spacing and total span length have been clarified. Table R507.6 now list maximum span length followed by maximum cantilever length.	
R507.7, R507.8, R507.9	Modifications to "Decking", "Vertical and Lateral Supports", "Vertical and Lateral Supports at Band Joist"	Decking material options and fastener systems are clarified. Vertical and horizontal support of an exterior deck is updated, while additional details on support and attachment of ledgers are added.	
Table R602.3(6)	Addition to "Alternate Stud Height" new exception	A prescriptive requirement is added for studs greater than 10 feet in height, in a new exception to section R602.3.1, as well as a reference to a new Table R602.3(6) that applies to 11 & 12 foot tall walls in one and two-story buildings.	
Tables R602.7(1) R602.7(2)	Modification to Tables "Girder Spans and Header Spans for Exterior Bearing Walls" and "Girder Spans and Header Spans for Interior Bearing Walls"	Girder and header spans are updated assuming No. 2 Southern pine rather than No. 1 Southern pine as used in the 2015 IRC. A footnote was added to clarify that headers and girders are assumed to be braced. For headers with pony walls above, a further reduction in span is taken for 2x8 and larger headers.	
Table R602.7.5	Modification to Table "Minimum Number of Full Height Studs at Each End of Headers in Exterior Walls"	The updated table significantly alters the table in- from the 2015 IRC, simplifies the full-height stud, or king stud requirement while removing conservative assumptions and 16" maximum stud spacing.	
Table R602.10.3(4)	Modification to Table "Seismic Adjustment Factors to the Required Length of Wall Bracing"	Attempts to clarify roof and ceiling dead loads in the top story of a multi-story dwelling and an alternative to use of the BV-WSP bracing method have been added. The table now allows use of methods WSP and CS-WSP with brick veneer in the second story of a dwelling.	

R602.10.4.1	Modification to "Mixing Methods" for wall bracing	Mixing of continuous sheathing methods with an intermittent alternate bracing method is clarified. Brace wall line(s) containing an intermittent alternate method must have sufficient bracing length for the alternate method, not just continuous sheathing method.	
R602.10.6.4	Modification to "Method CS-PF: Continuously Sheathed Portal Frame"	A note was added emphasizing that when a single CS-PF is built, the side that has a post must have continuous sheathing beyond that end of the portal frame. In other words no breaced wall panel over an extended header, must have structural panels beyondof the portal frame.	
R602.10.6.5	Modification to "Wall Bracing for Dwellings with Stone and Masonary Veneer in all Seismic Design Categories D"	Clarifies use of BV-WSP method, new alternative is included for cases where the second story has veneer on a quarter or less of the story.	
Tables R603.3.1 and R603.3.1(2)	Modification to Tables "Wall to Foundation or Floor Connection Requirments" and "Gable Endwall Bottom Track to Foundation Connection Requirments", cold-formed steel wall constructions	Cold-formed steel connection tables are updated for wind speeds less than 140 miles per hour. Values in the IRC now match AISI S230.	
R610	Modification and reorganize "Structural Insulated Panels"	Has been reorganized for clarity and intended to bring the SIP provisions in line with other sections of the IRC. It also references ANSI/APA PRS 610.1 as a result much of the manufacturing information on SIP core, facers and adhesive requirements is deleted from the IRC and located only in the PRS 610.1	

R702.7	Deletion of "Table R707.2.1 Class III Vapor Retarders"	The amendment reflects the California Climate Zones as used in the California Energy Code so as to eliminate confusion.	
R703.2	Modification to "Water-Resistive Barrier" for more than one layer of NO.15 asphalt felt.	Water-resistive barrier materials other than NO.15 asphalt felt, has been added to this section to be installed following manufacturer's installation instructions, and the exemption for detached accessory buildings is deleted	
R703.3.1	Modification to "Soffit Installation" requirements for wood structural panel soffits are added to this section	Language added requiring wood structural panel soffits matching the requirements to exterior WSP walls, and vinyl soffit requirements are clarified for previous code.	
R703.8.4	Modification to veneer "Anchorage" to allow through insulation into structural panels.	Table R703.8.4(2) provides tie spacing for attachment through insulation to 7/16-inch or thicker wood structural panels rather than studs.	
Table R703.8.4(1)	Modification to Table "Tie Attachment and Airspace Requirements" for brick veneer	New footnote "c" in the table now allows the Airspace that provides drainage shall be permitted to contain mortar from construction.	
R703.11.2	Modification to vinyl siding "Installation Over Foam Plastic Sheathing" in high wind regions	Requirement is added for foam sheathing and its attachment to be rated for wind pressure resistance per Section R316.8, new Table 703.11.2 gives design wind pressures for vinyl siding resisting all wind loads without reliance on wood structural panel sheathing below.	

R802	Modification to Section 802, Roof Framing	Design and construction of roofs has been clarified by dividing the content into three separate sections on roof ridges, rafters, and ceiling joist. Added to R802.5.2.1 wood structural panel roof sheathing my cantilever nine inches beyond the gable endwall without support.	
R802.1.5.4	Modification to "Labeling" of fire-retardant-Treated (FRT) lumber and structural panel require a lable with eight specific items of information	Clarifies the intent to have (FRT) to have two lables ;one for general grading and identification of the lumber or panel and second for fire-retardant treatment, explicitly states that both marks must be on each piece of lumber.	
R806.2	Modification to "Minimum Vent Area" area is clarified	Clarifies that net free ventilation my be less than 1/150 only if both required conditions are met and added language that lower vents must be located in the bottom 1/3 of the attic space.	
R806.5	Modification to "Unvented Attic and Unvented Enclosed Rafter Assemblies".	Adds subsection 5.2 as an alternative path for unvented attic and rafter assemblies. The new option is limited to warm climates and has 10 requirments to address in the installation of air-permeable Insulation.	
Table R905.1.1(1) R905.1.1(2)	Modification to Tables "Underlayment Types" and Underlayment Application" requirements for photovoltaic shingles are revised for consistency with other roofing materials.	PV shingle underlayment was moved from other sections to this location and revised for consistency with other roof coverings types	
R905.17	Addition of this new section addresses "Building integrated photovoltaic panels applied Directly to the Roof Deck" (BIPV)	Although BIPV shingles are already regulated by the code, BIPV panels have not been included included until now. Additionally a new definition for BIPV is added in Chapter 2 and new text in R324 points to the technical requirements in this section.	
R1005.8	Addition of this section addresses chimney "Insulation Shield" for factory-built chimneys.	Factory-built chimneys are now required to have an insulation shield to help protect against fires beginning within the unconditioned space.	

Appendix Q	Addition of this new section address the provisions for "Tiny Houses"	This new appendix chapter takes a comprehensive approach to tiny house construction, and accepts ship ladders and alternating tread devices as components of the means of egress from lofts not exceeding 200 square feet in area.	
Appendix R	Modification and updates to provisions for "Light Straw-Clay Construction"	Provides clarification and incorporates new information regarding material performance and construction methodologies. Seismic Design in Categories C and all D's require and approved engineered design by a registered design Professional now.	
Appendix S	Modification to "Strawbale Construction" add new figures and tables.	Adds seven new figures illustrate strawbale wall systems and their components. Tables have been updated and sections AS106.2 "Building Limitations", AS106.12.3 "Roof-Bearing Assembly", AS10612.3.1 "Roof-Bearing Assembly Spanning Openings", As106.15 Post-and-Beam with Strawbale Infill" have been added to this section.	
Appendix T	Modification for the "Solar-Ready Zone" for new detached SFD and Townhouses.	Clarification and strengthen the existing Solar-ready Appendix. Modifies the roof are orientation, clarifies the concept of "shading" and new requirements for pipe sleeving to provide path for future solar panels.	