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R101.2 Scope	Increases min. size of accessory structure to 3 stories instead of 2	Allows the construction of the listed uses previously constructed in accordance with IBC to now be constructed under the IRC provided they are fully sprinklered. 1) Live/work unit 2) Owner occupied lodging house with 5 or fewer guests 3) A care facility with 5 or fewer persons receiving care
R104.11 Alternative Materials, Design, and Methods of Construction	When proposed alternatives are not approved, it must be stated in writing by the BO	Owner or authorized agent must make written application for approval of modification to BO
R105.1.1 Determination of Substantially Improved or Damaged Existing Buildings in FHA	Determination of substantial improvement is the responsibility of the BO instead of BOAA	
R110.1 Required		A definition of Change of Occupancy has been added and now requires a C of O to be issued.
R202 Definitions		<ul style="list-style-type: none"> •Definitions added: <i>'crawl space'</i> <i>'carbon monoxide alarm'</i> <i>'carbon monoxide detector'</i> •Further clarification of some other definitions
R301	Various changes occur in the climatic design criteria, the most significant for this area is the change in Wind Speed from 90 to 115	Additional modifications and changes but nothing that affects our seismic area.
R301.2.1.1.1 Sunrooms	Requires habitable and non-habitable sunrooms to comply with AAMA/NPEA/NSA 2100 (includes provisions for aluminum framed sunrooms)	
R301.2.1.2 Protection of Openings in Wind Borne Debris Regions	Does not apply to our region	
R301.2.2.6 Irregular Buildings		Changes in seismic provisions for Seismic Design categories C & D only – does not apply to B
R301.3 Story Height	Story height of wood and steel wall framing, insulated concrete, and SIP walls may not exceed 11' 7". Masonry wall height is limited to 13' 7".	
R302.1 Exterior Walls		<ul style="list-style-type: none"> •Exterior wall <5' from property line no longer requires fire rated construction on the underside of projections if the SFD is sprinklered. •Fire rated construction is not required if fire blocking is provided from wall top plate to underside of roof sheathing •Projections <2' are prohibited.

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R302.2 Townhouse Separation		Two paths for achieving the fire-resistant separation between townhouse units are spelled out in the townhouse provisions.
R302.3 Two-Family dwelling Separation		Adds a reference to Section 703.3 in the IBC for determining fire-resistance rating
R302.5 Dwelling-Garage Opening Protection		Door equipped with self-closing device may be <i>automatic closing device</i>
R302.13 Fire Protection of Floors	Moved from Chapter 5	Fire-resistant membrane required for applicable floor framing materials above crawlspaces containing fuel-fired or electric-powered heating appliances.
R303.7 & 8 Stairway Illumination	Interior/exterior stairway illumination provisions have been separated to remove conflicting language and clarify requirements.	
R304.1 Minimum Habitable Room Area	Requirement for one habitable room with min. floor area of 120sf has been removed. Now min. 70sf now applies to habitable rooms.	
R305 Ceiling Height	Min. ceiling height for bathrooms, toilet and laundry rooms has been reduced to 6' 8". Reduction of ceiling height to allow for beams, girders, ducts has been expanded to basements with habitable area.	
R308.4.2 Glazing Adjacent to Doors		Safety glazing within 24" of the hinge side of the door where glazing is at an angle less than 180° from the plane of the door.
R308.4.4 Glazing in Guards and Railings		Unless laminated glass is used, structural glass panels in guards now require a top rail or handrail.
R308.4.5 Glazing and Wet Surfaces	Exception for safety glazing beyond the 60" from the water's edge has been expanded to include showers, saunas and steam rooms.	
R308.4.7 Glazing Adjacent to the Bottom Stair Landing	Glazing adjacent to the bottom stair landing is now better defined.	
R310 Emergency Escape and Rescue Openings	The provisions of this section have been reorganized to better spell out the requirements for egress doors and windows	Emergency escape and rescue openings are no longer required in basements where the dwelling is protected with a sprinkler system.
R310.3 Area Wells for Emergency Escape and Rescue Doors		<ul style="list-style-type: none"> •Replaces terminology "bulkhead enclosure" with "area wells" •Added provisions for ladders and steps for area wells

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R310.5 & 6 Emergency Escape and Rescue Openings for Additions and Repairs	Remodeling of an existing basement does not trigger the emergency egress/rescue opening requirement unless a bedroom is added.	
R311.7.1, R311.7.8		Exception to the handrail projection limitation to provide adequate clearance where it passes a projection of floor/landing/tread
R311.7.3	<ul style="list-style-type: none"> •Total vertical rise of a staircase increased from 144" to 147" •Clarifies the requirement for open risers (solid risers req. >30" from floor/grade) 	Total vertical rise of a staircase increased from 147" to 151"
R311.7.5.3 Stair Nosings		Clarifies that nosings must be consistent throughout the stairway
R311.7.11 & 12 Alternating Tread Devices and Ships Ladders	Alternating tread devices/ship ladders have been added to the stair provision but not approved as a means of egress	Alternating tread devices and ships ladders are now permitted as a means of egress for serving lofts that do not exceed 200sf
R311.7.10.1 Spiral Stairways	Adds a definition and better clarifies spiral stairways and introduces a new method of measuring treads	
R311.8 Ramps	Ramps not serving the required egress door are permitted to be 1:8	
R312.1 Guards	Provision requiring guard height to be measured from the surface of fixed seating has been removed	Guard requirements only apply to areas where walking surface is >30" from grade
R312.2.1 Window Fall Protection	Revised to clarify meaning and achieve consistency	
R314 Smoke Alarms R315 Carbon Monoxide Alarms	<ul style="list-style-type: none"> •Battery-operated smoke detectors are now permitted when alterations, repairs and additions occur. •Addresses provisions for placement of smoke alarms – may not be placed within 20' horizontally from a permanent cooking appliance or with 3' of a bathroom with shower/tub •Combination smoke and carbon monoxide alarms shall be permitted to be used in lieu of smoke alarms 	<p>Exemption for interconnection has been removed – <i>Where more than one smoke alarm is required to be installed, the alarm devices shall be interconnected.</i></p> <p>Interconnection also applies where combination units are used.</p>
R317.3 Fasteners in Treated Wood	Staples used in PTW and fire-retardant treated wood are now required to be stainless steel	
R324.4 Rooftop-Mounted Photovoltaic Systems		<ul style="list-style-type: none"> •Structural requirements for rooftop-mounted photovoltaic panel systems have been revised and consolidated into Section R324.4 •Requirements for roof access and pathways for firefighters have been introduced

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		•Panels may not be installed directly below emergency escape/rescue openings
R325 Mezzanines	New provisions place limitations on mezzanines where it applies to height and openness ('mezzanine' shall not exceed one third of floor area of the room where it is located and clear ceiling height not less than 7')	Mezzanine area has been increased from one third to one half of the floor area where a fire sprinkler has been installed
R325.6 Habitable Attics	Definition of 'habitable attic' has been revised and technical requirements added	
R403.1.1 Minimum Footing Size	New chart for min. width and thickness for concrete footings (Table attached, #1)	
R403.1.6 Foundation Anchorage	Anchor bolts are now required to be placed in the middle third of the sill plate. Approved anchors may be used instead of ½ " anchor bolts.	
R403.4 Crushed Stone Footings		Table R403.5 is updated to include both min. width and depth of a crushed stone footing for a precast concrete wall. (Table attached, #2)
R404.4 Retaining Walls	<ul style="list-style-type: none"> •Freestanding retaining wall with 48" unbalanced backfill and •Retaining walls that resist lateral loads with more than 24" unbalance backfill must be designed by an engineer 	
R408.3 Unvented Crawl Spaces		Ventilation of the under-floor space is not required when an adequately sized dehumidifier is provided.
Tables R502.3.1(1) & (2) Floor Joist Spans for Common Lumber Species	Max. spans have been updated (Table attached, #3)	
R502.10 Framing of Floor Openings	Header joist and trimmer connections have been deleted, refer to Section R502.6 containing min. bearing lengths for all joists/headers	
Table R505.3.2 Cold Formed Steel Joist Spans		Max. spans have been updated
R507.1 & 4 Decking R507.2 Ledger Connection to Band R507.2.4 Alternative Deck Lateral Load Connection R507.3 Deck Footings R507.5, 6 & 7 Deck joists and Beams R507.8 Deck Posts	Sets the max. allowable spacing for deck joists, connections of ledgers to band joists, supporting the various types of decking materials	Section R507 is reorganized and additional provisions are added to simplify prescriptive construction of a deck (Table attached, #4) This section has many modifications in 2015 and 2018, it's worthy of an in-depth review/discussion
Table 602.3(1) Fastening Schedule -Roof Requirements -Wall Requirements -Floor Requirements	•Now contains multiple nail size options.	

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	<ul style="list-style-type: none"> •Clarification of roof rafter connections at ridge, valley and hip is added. •Clarification of double top plate splicing is added •Clarification of joist-to-band joist (rim board) connection is added 	
R602.3.1 Stud Size, Height and Spacing	Table R602.3.1 is deleted and the exception for walls greater than 10' is added Section R602.3.1. If studs in a tall wall meet Ex.2, they do not need engineering or use of an alternate standard. (Excep & e.g. attached, #5)	A new Table-R602.3(6)-is added in 2018 which applies to 11' and 12' tall walls in one- and two-story buildings.
R602.7 Headers Tables R602.7(1) & (2) Girder and Header Spans Table 602.7.5 Lateral Support for Headers	<ul style="list-style-type: none"> •Girder and Header span tables have been moved to Chapter 6. A new section describing rim board headers is added. •A new table-R602.7(3) Girder and Header Spans for Open Porches-has been added 	<ul style="list-style-type: none"> •Tables R602.7(1) & (2) have been updated •Table R602.7.5 has been significantly altered
Table R602.10.3(1) Bracing Requirements Based on Wind Speed	Table values have changed slightly due to change in design wind speed in calculation.	
Table R602.10.3(4) Seismic Adjustment Factors		Clarifies roof and ceiling dead loads in the top of a multi-story dwelling. Some adjustments were made pertaining to SDC D
R602.10.4.1 Mixed Bracing Methods		Mixing of CSM's with an intermittent alternate bracing method is clarified. Braced wall lines containing mixed methods must have sufficient bracing length for the alternative method.
R602.10.6.2 Braced Wall – Method PFH (Portal Frame with Hold-Downs)	The min. capacity of the hold-down is reduced from 4200lbs to 3500lbs and the requirement for 3 sill plates reduces to 2.	
R602.10.6.4 Braced Wall – Method CS-PF (Continuously Sheathed Portal Frame)		This method has been tweaked slightly, adding a note emphasizing that when using this method, the side of the portal frame that has a post must have continuous sheathing beyond that end of the portal frame.
R602.10.11 Cripple Wall Bracing	A reduction is no longer required in determining the max distance between braced wall panels.	
R602.12 Simplified Wall Bracing	SWB is now allowed for one- to three-story dwellings and townhouses in Wind Exposure Cat B or C with UDS of 130mph or less.	

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Tables R603.3.1 & R603.3.1.1(2)		Cold-formed steel connection tables are updated for wind speeds less than 140mph
R606 Masonry Walls	Sections R606, R607, R608 & R609 have been organized into one section providing requirements for masonry construction of one- and two-family dwellings and townhouses. (Table 6-1 Summary of Changes attached, #6)	
R606.3.5 Grouting Requirements for Masonry Construction	<ul style="list-style-type: none"> •This section for grouting above-ground masonry walls now provides all the provisions for single, multi-wythe and reinforced masonry construction. •Clarifies grout placement, cleanouts and construction for all three types of masonry construction 	
R610 Structural Insulated Panels	Drilling and notching provisions are clarified	The section has been reorganized. Information on facers, core and adhesive requirements are now located in APA PRS 610.1 and deleted from the IRC.
R703.2 Water Resistive Barrier		<ul style="list-style-type: none"> •Water resistive barrier must be installed following manufacturer's installation instructions. •The exemption for detached accessory buildings has been deleted
R703.3 Siding Material Thickness and Attachment	Table R703.4 Weather Resistant Siding Attachment and Minimum Thickness is simplified. (Table attached, #7)	
R703.3.1 Soffit Installation		Requirements for wood structural panel soffits are added and vinyl soffit requirements are clarified
R703.5 Wood, Hardboard, and Wood Structural Panel Siding	Requirements for vertical wood siding have moved to this section.	
R703.6 Wood Shakes and Shingles on Walls	Reorganized to give more information with tables	
R703.8.4 Veneer Anchorage through Insulation		Masonry veneer is explicitly allowed to attach through insulation into the underlying wood structural panels.
Table R703.8.4(1)		Footnote 'c' allows drainage airspace to contain some mortar spills
R703.9 Exterior Insulation and Finish Systems	Limitations for exterior insulation and finish systems with and without drainage have been added to the IRC	
R703.11.1 Vinyl Siding Attachment	Clarifies nailing penetration and spacing requirements for horizontal and vertical vinyl siding.	

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R703.11.2 Vinyl Siding Over Foam Plastic Sheathing		Shall comply with Section R703.11 and have a design wind pressure resistance in accordance with Table R703.11.2
R703.13 & 14 Insulated Vinyl Siding and Polypropylene Siding	New sections set minimum requirements for insulated vinyl siding and polypropylene siding.	
R703.15, 16, & 17 Cladding Attachment over Foam Sheathing	Three new sections set minimum requirements for attachment to wood framing, cold formed steel framing and masonry or concrete walls	
R802 Roof Framing		Design and construction has been clarified by dividing into three separate sections on roof ridges, rafters and ceiling joists.
Tables R802.4 & 5 Roof Framing	Updated span charts	
R802.1.5.4 Labeling		Each stick of fire-retardant-treated (FRT) lumber will require a label with 8 specific items of information
R806.1 Attic Ventilation	Exception allowing BO to waive ventilation requirements has been deleted	
R806.2 Minimum Vent Area		<ul style="list-style-type: none"> •Minimum vent area exception is clarified – net free ventilation may be less than 1/150 if conditions are met •Lower vents must be located in bottom third of the attic space
Table R806.5 Insulation for Condensation Control in Unvented Attics	New footnote allowing calculation of insulation thickness when insulation is placed above the structural roof sheathing	Item 5.2 is added, it is a new option limited to warm climates and has 10 requirements to address in the installation of air permeable insulation.
R905.1.1 Underlayment	Reorganization of multiple code provisions associated with underlayment type, application and attachment.	Underlayment requirements for photovoltaic (PV) shingles are revised for consistency with other roofing materials
R905.7.5 Wood Shingle Application	Minimum requirements for application of wood shingles are expanded. Fastener type is clarified	
R905.8.6 Wood Shake Application	Minimum requirements for application of wood shingles are expanded. Fastener type is clarified	
R905.16 Photovoltaic Shingles	Additional requirements and limits have been added	
R905.17 Building Integrated Photovoltaic Panels		New Section addresses installation and attachment

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R1005.8		Factory-built chimneys required to maintain minimum clearance to insulation are now required to have an insulation shield to provide the clearance
N1102.2.2 Reduction of Ceiling Insulation		Insulation in ceilings without attics (vaulted) the insulation must extend to outside of top plate. Reduction to R30 is limited to 500sf or 20% whichever is less
M1502.3.1 Dryer Exhaust Duct Termination		Terminal outlet of dryer vent must meet minimum area of 12.5 square inches
M1502.4.2 Concealed Dryer Exhaust Ducts		Wall/ceiling cavities must provide sufficient space (4 1/8") so that a 4" duct is not squeezed out of its round shape.
M1503.6 Makeup Air for Kitchen Exhaust		Gas kitchen appliance capable of exhausting in excess of 400cfpm and is not direct vented will require mech makeup to be provided.
M1502.4.4, M1502.4.5	Allows the use of dryer exhaust duct power ventilators (DEDPVs) to increase allowable dryer duct length	
M1502.4.6 Dryer Duct Length Identification	No longer required where duct length does not exceed 35'	
M1506.2 Exhaust Duct Length	Establishes a max duct lengths based on duct diameter, type of duct and exhaust fan airflow.	
M1601.4 Duct Installation	Tapes and mastics used to seal duct must be listed to UL 181 A-H (heat sensitive) and shall be supported at each connection	
M1602 Return Air	Must be ducted from unit to wall when unit is located in closet	
G2406.2 Prohibited Locations for Appliances		Gas dryer is now permitted in a bathroom or toilet room as long as there is a permanent opening to another permitted space
G2426.7.1 Door Clearance to Vent Terminals	An appliance vent terminal is not permitted to be located within 12" of the arc of a swinging door.	
G2427.4.1 Plastic Piping for Venting Appliances	Is now the responsibility of the manufacturer to permit	
G2427.8 Venting Termination Location	10' min. separation between sidewall vent and adjacent buildings	
G2439.4 & 7 Clothes Dryer Exhaust Ducts	Requires mechanical fastening – RC will accept the above UL listed mastic tape for heat Duct length exceeding 35' is permitted, length must be identified	

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	<p>on a permanent label or tag within 6' of dryer connection</p> <p>Duct length exceeding 35' should be equipped with dryer exhaust duct power ventilator (DEDPV)</p>	
<p>G2447.2 Commercial Cooking Appliances</p>		<p>Commercial cooking appliances are now permitted in dwelling units when installed in accordance with an engineered design and the manufacturer's instructions</p>
<p>P2502.1, 2503.4. Inspection and tests for building sewers</p>		
<p>P2503.5. Drain, waste, and vent systems testing</p>		<p>DWV shall be tested at rough-in by water (to a point not less than 5' above the highest fitting) or air (at 5psi for a min of 15 minutes)</p>
<p>P2603.2.1. Protection against physical damage</p>	<p>The minimum thickness of sheathing material for protection of piping is corrosion has been reduced from .0025 inches to 0.008 inches (8 mil). The corrosion protection requirement applies to metallic piping other than cast-iron, ductile iron, and galvanized steel that is in direct contact with concrete, masonry or steel framing. Previously, protection was only required for materials passing through walls and floors of these materials. All metallic piping requires corrosion protection when located in corrosive soils.</p>	
<p>P2603.3. Protection against corrosion</p>	<p>For piping installed through bored holes or in notches, the minimum clearance distance from concealed piping to the edge of the framing member has been reduced from 1-1/2 inches to 1-1/4 inches. Protection is required for piping installed less than 1-1/4 inches from the edge of the framing member. The head pressure for a water test on drain, waste, and vent systems has been reduced from 10 feet to 5 feet.</p>	
<p>P2605 Sway Bracing for Drainage Piping</p>		<p>Sway bracing provisions only apply to horizontal drainage piping.</p>
<p>Table 2605.1. Piping support</p>	<p>Support spacing requirements for PEX and PE-RT tubing 1-1/4 inches and greater in diameter have been added to the table. Footnote b of Table 2605.1 clarifies the new mid-story guide requirements for some</p>	

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	types of vertical pipe 2 inches and smaller in diameter.	
P2702.1, 2706.1. Waste Receptors	A new definition of waste receptor has been added to the code. Waste receptors are now permitted in bathrooms and closets.	
P2704 Slip Joint Connections		Slip joint connections are permitted anywhere between the fixture outlet and the drainage piping and are no longer limited to the trap inlet, outlet and trap seal locations.
P2713.1. Bathtub Overflow		Overflow outlets are no longer required for bathtubs.
P2717. Dishwashing Machines	Now references the applicable standards for integral Air gaps protecting the potable water supply to dishwashers. The term “food waste disposer” now replaces “food waste grinder.” Sections 2717.2 and 2717.3 regarding dishwasher discharge to a sink tailpiece or the food waste disposer have been combined into a single section 2717.2, eliminating redundant language and improving understanding of the provisions.	
P2801. Water Heater Drain Valves and Pans	Now specifically requires drain valves with a threaded outlet for water heaters. The water heater pan requirements have been expanded to accept aluminum and plastic pans of the prescribed thickness. The code clarifies that a pan drain is not required when a water heater is replaced and there is no existing drain.	
P2801.6. Plastic Pan for Gas Fired Water Heaters		Plastic safety pans are now allowed under gas water heaters provided the material falls within the prescribed flame spread and smoke developed indices
P2804.6.1. Water Heater Relief Valve Discharge Piping	The temperature and pressure (T&P) relief valve discharge pipe termination must have an air gap suitable to protect the potable water supply distribution system of the building. PEX and PE – RT tubing used for relief valve discharge piping must be one size larger than the T&P valve discharge outlet, the outlet end of the tubing must be fastened in place	

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P2901, P2910 through P2913. Non-Potable Water Systems	Non-potable water outlets such as hose connections that use non-potable water must be identified with a warning and a symbol that non-potable water is being used. The color purple is established for identifying distribution piping conveying non-potable water	
2902.5.4, 2904.1. Backflow Protection for Fire Sprinkler Systems		These sections were revised and coordinated to clarify that the standalone multipurpose fire sprinkler systems complying with section 2904 or NFPA 13 D do not require backflow protection under most circumstances
P2903.5. Water Hammer Arrestors		A water hammer arrestor is now required where quick closing valves are used in the water distribution system.
P2905. Heated Water Distribution Systems	Pointers have been added to the IRC plumbing provisions to direct the user to the applicable energy conservation provisions of the IRC chapter 11 related to heated water distribution systems. Section 1103.5 requires automatic controls to maintain hot water temperature for heated water circulation systems and for heat trace temperature maintenance systems when such systems are installed.	
P2906.2. Lead Content of Drinking Water Pipe and Fittings	The code has a more stringent limitation for lead content in pipe, fittings, joints, valves, faucets, and fixture fittings that convey water used for drinking and cooking	
P2906.6.1. Saddle Tap Fittings on Water Distribution Piping		Saddle tap fittings are no longer permitted on water distribution system piping
P2906.1 8.2. Joints Between PVC and CPVC Piping		A single solvent cemented transition joint is now an acceptable method for connecting a CPVC water distribution system to a PVC water service pipe
P3003.2. Prohibited Joints for Sanitary Drainage		A solvent cement joint is now permitted for joining ABS and PVC piping at the connection of the building drain to the building sewer

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P3003.9. Solvent Cementing of PVC Joints	The application of a primer to drain, waste, and vent PVC pipe and fittings prior to solvent cementing is not required for 4" pipe size and smaller, providing that the piping is for a non-pressure application.	.
P3005.1.6. Reduction in Pipe Size		Water closet flanges, offset bend fittings and offset flanges are now specifically listed as exceptions to the provision that drainage piping must not be reduced in size in the direction of flow.
P3005.2. Cleanouts	The section on clean-outs has been completely re-organized and reworded for clarity. Brass cleanout plugs are only permitted for metallic piping. Where located at a finished wall, the clean out must be within 1 1/2 inches of the finished surface. The clean-out is no longer required at the base of each waste or soil stack.	
P3008.1. Backwater Valves	For existing buildings, fixtures that are located above the next upstream manhole cover are allowed to discharge through a backwater valve.	
P3103.1, P3103.2. Vent Terminals.	Where a minimum 3" diameter vent terminal is required to prevent frost blockage in cold climates, the 3" diameter pipe must extend at least 12" inside the building's thermal envelope. The minimum 7' height requirement for vent termination supplies only to roofs used for purposes similar to residential decks, patios and balconies.	Vent terminals have been reorganized and a new option has been added to allow 2-inch vent extension through a sloped roof when vent is covered.
P3201.2. Trap Seal Protection Against Evaporation	Traps seal protection against evaporation can now be accomplished in a variety of ways, including trap seal primer valves supplied with non-potable water and barrier-type trap seal protection devices.	
P3111. Combination Waste and Vent System		Food waste disposers are now permitted to connect to a combination waste and vent system.
3114.8. Prohibited installations for air admittance valves.		An air admittance valve cannot be used to resolve the problem of an open vent terminal that is too close to a building air intake.