

**EDGERTON CITY COUNCIL
WORK SESSION AGENDA
CITY HALL
404 EAST NELSON STREET
June 8, 2023**

**Work Session will begin following adjournment
of the regularly scheduled city council meeting.**

1. Call to Order

2. Roll Call

____ Roberts ____ Longanecker ____ Lewis ____ Beem ____ Lebakken ____ Malloy

3. Proposed Update to the 2018 International Residential Code (IRC)

4. Adjourn



June 8, 2023

TO: Mayor Roberts and City Council Members

FROM: Zachary Moore, Development Services Director

SUBJECT: Proposed Update to the 2018 International Residential Code (IRC)

The City of Edgerton currently uses the 2006 suite of International Building Codes (I-Codes), which includes the International Building Code (IBC), International Residential Code (IRC), International Fire Code (IFC), and more. Since adoption of the 2006 suite of I-Codes, the suite has been updated 5 times, with the most recent being the 2021 IBC update. In the 2022-2026 Capital Improvement Plan (CIP) for the City, the update to the International Building Code that the City uses was proposed as an unfunded project, and with the 2023-2027 CIP, the proposal was funded and approved.

The majority of communities in Johnson County updated their I-Codes suite to the 2018 edition in 2019, and it has received generally positive feedback from the development community in the region. An update to the 2018 I-Code suite would make Edgerton's building regulations more consistent with those of nearby communities that are seeing a good amount of residential and non-residential growth.

Several sections of Code have changed between the 2006 I-Codes suite to the 2018 I-Codes suite, which implement new requirements for developers in our City. To help assess the changes that would be made, the City has engaged with George Butler and Associates (GBA) to consult staff throughout the Code update process and identify impacts to the community that an update to the 2018 Code would present. Attached is a spreadsheet identifying a large amount of the changes that are in the IRC, and whether or not those changes would be more or less restrictive than the 2006 edition of the IRC, and a symbol identifying the general cost impact to developers that the regulation update would create. Also attached is a list of proposed amendments to the 2018 IBC that were recommended by GBA, should the City decide to update to the 2018 IBC.

On March 23, 2023, the Governing Body held a Work Session to discuss a potential update from the 2006 IBC to the 2018 IBC. This Work Session regarding a potential update to the 2018 IRC is a follow up of that discussion, as the IRC is a key part of the I-Codes suite that pertains to one- and two-family dwellings (single family homes and duplexes). Future Work Sessions will be held with the Governing Body to discuss the impact of the changes in the overall Codes in each update.

Significant Changes between 2006 IRC and 2018 IRC – Applicable to City of Edgerton

2018 IRC Section	Magnitude of Change	Is 2018 IRC more or less restrictive?	Cost Implications
R105.2	-One-story detached accessory structures (such as a garden shed) is exempt from a permit when 200 sf or less (in 2006, it was 120 sf or less). -Fences with heights of 7 feet or less are now exempt from permit (6' maximum in 2009). -Decks 200 sf or less and not more than 30" above the adjacent grade and are not attached to a dwelling are exempt from permit.	Less Less Less	 \$\$ ↓
R106	-Braced wall lines are required on plans. -Site plan is required	More More	\$ ↑
R301.2	-Updates were made to wind, seismic, snow load, and flood plain requirements based off of climate and geologic data	N/A	\$ ↔
R301.5	-New 30psf loading for habitable attics w/permanent staircase (attics built as a living space)	More	\$ ↑
R303.4	-Whole house ventilation is required if a dwelling unit is less than 5 air changes per hour	More	\$ ↔
R302	-Updates to fire separation; detached buildings, and attached garages.	More	\$ ↑
R302.5.1	-Automatic (spring-loaded) closing mechanism and door thickness/construction requirements added for door between garage and dwelling	More	\$ ↑
R302.13	-Added section (in 2012, it was placed in R501.3 but then moved in 2015 to it's current location) concerning the protection of engineered floor trusses	More	\$ ↑
R308.4.2	-Glazing (glass) within 24 inches of the hinge side of an in-swing door now requires safety glazing where the glazing is at angle less than 180 degrees from the plane of the door.	More	\$ ↑
R313*	-Sprinkler systems are now required for townhomes and one- & two-family dwellings. NOTE: this is overridden by KS 2019 Statute 12-16,219. Link: http://www.kslegislature.org/li_2020/b2019_20/statute/012_000_0000_chapter/012_016_0000_article/012_016_0219_section/012_016_0219_k/	N/A	\$\$ ↑
R315	-Carbon monoxide alarm requirements have been added	More	\$ ↔
R325	-Added requirements for Mezzanines and habitable attics (Max. floor areas, limitations on wall height to open areas)	More	\$ ↑
R326	-Added requirements for pools and spas to comply with the ISPSC	More	\$ ↑

Key
\$\$ ↑ Major Cost Increase
\$ ↑ Minor Cost Increase
\$ ↔ No Meaningful Change to Cost
\$ ↓ Minor Cost Decrease
\$\$ ↓ Major Cost Decrease
\$ ↑↓ Mixed Effect on Price
*Amendment to this Regulation Recommended

R403.1*	-Expanded Table 403.1 to include thickness requirements. Also expanded to include multiple house configurations based on number of stories and basement/crawlspace/slab-on-grade. * <i>Recommended amendment specifies the spacing for footings and column pads</i>	Less	\$ ↓
R602.10	-Updated braced wall requirements, included more pre-approved wall bracing methods (such as PFH)	More	\$ ↑
R806	-Multiple updates to the attic venting requirements - requires smaller openings - more conditions for allowance of unvented attic spaces	More	\$ ↑
R1005.8	-Insulation shield is now required for factory-built chimneys that pass through combustible construction	More	\$ ↑
N1102.1	-Increased energy efficiency requirements for windows, as well as wall, ceiling/attic insulation, crawlspace/basement, and slab insulation NOTE: This chapter is currently amended in the 2015 Code of Regulations for Buildings and Construction in Edgerton	More	\$ ↑
N1102.2.3	-Attic access to be weatherstripped and insulated	More	\$ ↑
N1102.4.2	-House tested for air tightness – blower test or 3rd party inspection	More	\$ ↑
N1103.3.3*	-Added requirement for duct leakage testing * <i>Recommended amendment makes this as determined by the Building Official, rather than mandatory for all structures</i>	More	\$ ↑
N1104-N1111	-Added sections for Electrical power and lighting systems, simulated performance alternative, energy rating index compliance alternative, existing buildings-general, additions, alterations, repairs, change of occupancy or use	Less	\$ ↓
M1305	-Added requirements for larger openings if HVAC equipment is located in an attic or crawlspace	More	\$ ↔
M1411.6	-Added requirement for tamper-resistant caps for refrigeration ports on condensing units	More	\$ ↔
M1502	-Multiple changes to clothes dryer vent requirements such as increasing the maximum length to termination, fastening rules and termination distance to windows or doors	More/Less	\$ ↑↓
M1503	-Restructured and redefined the section regarding what is now referred to as "Domestic Cooking Exhaust Equipment" where previously referred to as range hoods and microwaves separately	N/A	\$ ↔
M1804.4	-A 12" door swing is now required at appliance and equipment vent terminals.	More	\$ ↔
M2101.10	-Additional testing requirements have been added to testing of hydronic piping. Additionally, air testing is allowed where approved by the manufacturer.	N/A	\$ ↔
M2301	-Originally, this chapter was exclusively referring to solar water heating devices. A section was added for photovoltaic energy system requirements in 2012, but then relocated to R324. The terminology was changed to "Solar Thermal Energy Systems" and a number of requirements were added for heat exchange, freeze protection, water quality, etc.	More	\$ ↑

<u>Key</u>
\$↑ Major Cost Increase
\$↑ Minor Cost Increase
\$↔ No Meaningful Change to Cost
\$↓ Minor Cost Decrease
\$↓ Major Cost Decrease
\$↑↓ Mixed Effect on Price
*Amendment to this Regulation Recommended

G2411.1.1	-Included bonding requirements for CSST gas piping	More	\$ ↑
G2415.4	-Gas piping is no longer allowed to penetrate a foundation below grade	More	\$ ↔
G2420	-Added requirements for gas shutoff valve location and rigid support	More	\$ ↑
P2503.6	-A test for a shower pan liner was added (2" static water)	More	\$ ↑
P2503.7	-An air test is now allowed for PEX piping where permitted by the manufacturer	Less	\$ ↓
P2601.2	-Certain fixtures are now allowed to drain to an approved greywater system. These fixtures include bathtubs, showers, lavatories, clothes washers, and laundry trays.	Less	\$ ↓
P2801.6	-Plastic pan is now allowed for water heaters in locations where a pan is required (previously only galvanized metal was allowed)	Less	\$ ↓
P2903.5	-A water hammer arrestor is now required where quick-closing valves are used in the water distribution system.	More	\$ ↑
P2906.6.1	-Saddle tap fittings are no longer permitted on water distribution system piping.	More	\$ ↔
P3111	-Food waste disposers are now permitted to connect to a combination waste and vent system	Less	\$ ↓
P3201.2.1	-Relaxed requirements for trap seals for emergency drains	Less	\$ ↓
P3301	-Added chapter relating only to storm drainage and corresponding requirements	More	\$ ↑
Chapter 34-44	-Adding of the storm drainage chapter increased these chapter numbers by 1	N/A	\$ ↔
P3405.1	-Panels are no longer allowed to be located in closets/bathrooms/over a stairway	More	\$ ↔
P3405.2	-Relaxed clearance requirements for a panel where the amperage is not in excess of 200 amps	Less	\$ ↓
E3608.4	-Multiple forms of grounds are now required for electrical services (if no ufer is present)	More	\$ ↑
E3703.5	-A separate 20-ampere Branch circuit is now required to serve receptacle outlets of attached garages and detached garages with electric power.	More	\$ ↑
E3906.1	-Bath vanity GFCI can be located on sides below countertop	Less	\$ ↔
E3901.7	-Decks now 20sf or larger require at least one GFCI * recommended amendment is an exception for balconies less than 9 square feet	More	\$ ↑
E3901.9	-A receptacle outlet must be in each vehicle bay in a garage.	More	\$ ↑
E3902.4	-Ground-fault circuit-interrupter (GFCI) protection is now required for lighting outlets of crawl spaces.	More	\$ ↑
E3902.16	-Arc-fault protection has been extended to almost all areas of the home that are normally occupied	More	\$ ↑
E4002.14	-All 15A & 20A receptacles shall be tamper-resistant (with few exceptions)	More	\$ ↑
E4101.3	-The maximum cord lengths for range hoods and built-in dishwashers have increased, and the code clarifies that the receptacle outlet for the dishwasher must be in a space adjacent to the appliance.	Less	\$ ↓

Key
\$↑ Major Cost Increase
\$↑ Minor Cost Increase
\$↔ No Meaningful Change to Cost
\$↓ Minor Cost Decrease
\$↓ Major Cost Decrease
\$↑↓ Mixed Effect on Price
*Amendment to this Regulation Recommended

E4203.1.1	-Pool area receptacles at least 6’ from pool edge	N/A	\$ ↔
E4203.1.4	-Pool pump outlet to be GFCI even if direct wired; 6’-10’ from pool	More	\$ ↑
E4204.2	-Many additional requirements for bonding of pool related parts	More	\$ ↑
R324	-Added a section for solar energy systems NOTE: marked as N/A concerning more/less restrictive since this is a construction technology update to the code.	N/A	\$ ↔
R327	-Added section for Stationary Storage Battery Systems NOTE: marked as N/A concerning more/less restrictive since this is a construction technology update to the code.	N/A	\$ ↔
R502.3.1	-Updated floor joist span tables NOTE: marked as N/A concerning more/less restrictive since this is a construction technology update to the code.	N/A	\$ ↔
R507	-Added section for the construction of decks NOTE: marked as N/A concerning more/less restrictive since this is a ease-of-use update to the code.	N/A	\$ ↔
R602.3	-Updated fastener schedule for modern framing methods NOTE: marked as N/A concerning more/less restrictive since this is a construction technology update to the code.	N/A	\$ ↔
R613	-Added section for Structural Insulated Panel wall construction NOTE: marked as N/A concerning more/less restrictive since this is a construction technology update to the code.	N/A	\$ ↔
R703.12-17	-Added sections for multiple types of siding materials including adhered masonry veneer installation, insulated vinyl siding, polypropylene siding, cladding attachment over foam sheating to wood framing, and cladding attachment over foam sheating to masonry or concrete wall construction. NOTE: marked as N/A concerning more/less restrictive since this is a construction technology update to the code.	N/A	\$ ↔
R905	-Added sections for PV shingles and building-integrated PV roof panels NOTE: marked as N/A concerning more/less restrictive since this is a construction technology update to the code.	N/A	\$ ↔

Key
\$↑ Major Cost Increase
\$↑ Minor Cost Increase
\$↔ No Meaningful Change to Cost
\$↓ Minor Cost Decrease
\$↓ Major Cost Decrease
\$↑↓ Mixed Effect on Price
*Amendment to this Regulation Recommended

M1701	-Moved from prescriptive requirements for combustion air in the body of the code to relying on manufacturer's instructions. NOTE: This only applies to oil-fired and solid-fuel-fired appliances.	Less	\$ ↓
P2910-3	-Sections were created to pose requirements for non-potable water systems such as warning labels, freeze protection, storage tanks.	N/A	\$ ↔
P3009	-A section was added for requirements outlining greywater recycling systems (later renamed "Subsurface Landscape Irrigation Systems") NOTE: marked as N/A concerning more/less restrictive since this is a construction technology update to the code.	N/A	\$ ↔
P3010	-A section was added for requirements outlining pipe bursting (sewer line replacement) NOTE: marked as N/A concerning more/less restrictive since this is a construction technology update to the code.	N/A	\$ ↔
P3011	-A section was added for requirements outlining PVC Fold-and-Form NOTE: marked as N/A concerning more/less restrictive since this is a construction technology update to the code.	N/A	\$ ↔

Key
\$\$ ↑ Major Cost Increase
\$ ↑ Minor Cost Increase
\$ ↔ No Meaningful Change to Cost
\$ ↓ Minor Cost Decrease
\$\$ ↓ Major Cost Decrease
\$ ↑↓ Mixed Effect on Price
*Amendment to this Regulation Recommended

International Residential Code – 2018 Edition

City of Edgerton

Proposed Code Amendments

The International Residential Code, 2018 Edition, including Appendices A, B, C, D, E, G, J, K, and, M, published by the International Code Council, Inc., are hereby adopted by reference.

Section R101.1 shall be amended to read as follows:

R101.1 Title. These regulations shall be known as the Residential Code for One- and Two-family Dwellings of ~~[NAME OF JURISDICTION]~~ the City of Edgerton, Kansas, hereinafter referred to as “this code.”

Section R113.4 shall be amended to read as follows:

R113.4 Violation Penalties. At the end of the paragraph add the following language, "Violation of any provision of this Code shall be a public offense, punishable upon conviction as provided in Article 20 of the City of Edgerton Code of Regulations for Buildings and Construction, 2010 Edition. Each separate day or any portion thereof, during which any violation of this Code occurs or continues, shall also be deemed to constitute a separate offense, and shall be punishable as provided in Article 20 designated above."

Table R301.2(1) shall be amended to read as follows:

GROUND SNOW LOAD ^o	WIND DESIGN				SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP ^e	ICE BARREIR UNDERLAY- MENT REQUIRED ^h	FLOOD HAZARDS ^g	AIR FREEZING INDEX ⁱ	MEAN ANNUAL TEMP ^j
	Speed ^d (mph)	Topographic effects ^k	Special wind region ^l	Windborne debris zone ^m		Weathering ^a	Frost line depth ^b	Termite ^c					
20	115	NO	NO	NO	A	Severe	36"	Mod- Hvy	6	Yes	-	824	54.8
MANUAL J DESIGN CRITERIA ⁿ													
Elevation		Latitude	Winter heating	Summer cooling	Altitude correction factor		Indoor design temperature	Design temperature cooling		Heating temperature difference			
-		-	-	-	-		-	-		-			
Cooling temperature difference		Wind velocity heating	Wind velocity cooling	Coincident wet bulb	Daily range		Winter humidity	Summer humidity		-			
-		-	-	-	-		-	-		-			

Section R302.7 shall be amended to read as follows:

R302.7 Stair Fire Protection. Under-stair surfaces shall be protected with 1/2-inch gypsum board.

Exceptions:

1. Exterior stairways.
2. Stairways constructed of noncombustible materials.
3. Interior and garage combustible stairways where there are less than 4 risers total.
4. Stairways constructed with partially open risers.

Section R302.7 shall be amended to add the following paragraph:

Signage based on Johnson County Fire District 1 guidelines is required to be placed at the locations outlined in Section J101.1.

Section R303.7 shall be amended to read as follows:

R303.4 Mechanical Ventilation. Where the air infiltration rate of a dwelling unit is less than three (3) air changes per hour when tested with a blower door at a pressure of 0.2 inch w.c. (50 Pa) in accordance with Section N1102.4.1.2, the dwelling unit shall be provided with whole-house ventilation in accordance with Section M1505.4.

Section R306.5 shall be added to read as follows:

R306.5 New single family dwellings toilet facilities. Toilet facilities shall be provided within 500 feet (measured from the property line adjacent to the street for platted subdivisions along the public way) for all new single-family dwellings starting from the time of the first footing inspection until facilities are available in the dwelling. If the facilities are not located on the job site, the location of the required facilities shall be posted on the job site or other certification provided to the Building Code Official to verify the availability of toilet facilities. The facilities on the site shall be removed prior to issuance of a Temporary Certificate of Occupancy.

Section R306.6 shall be added to read as follows:

R306.6 New single family dwellings construction site maintenance. All construction sites shall be maintained in a good, clean, and safe condition, including, but not limited to, the following minimum requirements:

1. Construction materials shall be stored, maintained and secured so as to prevent safety risk or danger. Accumulated construction debris shall be hauled away and disposed of at an approved land fill. Dumpsters shall be emptied or removed when full and may be used only for construction debris. Construction materials shall not be stored in a public right-of-way.
2. All mud, dirt, or debris deposited on any street, crosswalk, sidewalk, or other public property as a result of excavation, construction, or demolition shall be immediately broom cleaned to the extent possible and disposed of in an acceptable manner.
3. It shall be unlawful to intentionally place, deposit, or otherwise dispose of construction debris in any public or private sewer, or in any public right-of-way.
4. Airborne particles shall be controlled on the property at all times during work by means of a water truck and/or spraying equipment, or other water sources capable of spraying and thoroughly saturating all portions of the structure and surrounding property affected by the work. Spraying shall be undertaken at all times necessary to thoroughly control the creation and migration of airborne particles, including, without limitation, dust, from the subject property.
5. No person shall operate or cause to be operated any radio, media player, telecommunications device or other such object at such a volume or in any other manner that would cause a nuisance or disturbance to any person of reasonable sensibilities.
6. Every contractor shall be responsible for all actions of their employees, agents, and subcontractors under this subsection, and shall be responsible for all violations of the provisions of this subsection committed by such employees, agents, or subcontractors.

Section R309.6 shall be added to read as follows:

R309.6 Residential driveways. Residential concrete and asphalt driveway slabs shall be a minimum of 4-inches thick. The driveway shall have a constant slope so as to avoid ponding of water. The slope shall be away from the house or building or drain by means approved by the City Engineer.

Section R313.2 shall be deleted.

Section R319.1 shall be added to read as follows:

R319.1 Premises identification. Building address identification on all one-and two-family dwellings and townhouses shall be posted on the dwelling in accordance with section 505.1 of the International Fire Code as adopted and amended.

Section R319.1 shall be added to read as follows:

R323.1 Storm protection area required. All new one- and two-family dwellings and townhouses shall contain a storm protection area meeting the standards set forth for Group R occupancies in accordance with the International Building Code as adopted and amended.

Section R328 shall be added to read as follows:

R328.1 Purpose. The purpose of this section is to establish minimum standards that incorporate physical security to make dwelling units resistant to unlawful entry.

R328.1.1 Scope. The provisions of this section shall apply to all new residential structures and to alterations, additions and repairs to existing residential structures as stipulated in Appendix J.

R328.2 Doors. Except for vehicular access doors, all exterior swinging doors of residential buildings and attached garages, including the doors leading from the garage area into the dwelling unit, shall comply with Sections R328.2.1 through R328.2.5 for the type of door installed.

R328.2.1 Wood doors. Where installed, exterior wood doors shall be of solid core construction such as high-density particleboard, solid wood, or wood block core with a minimum thickness of one and three-fourths inches (1 ¾") at any point. Doors with panel inserts shall be solid wood. The panels shall be a minimum of one (1) inch thick. The tapered portion of the panel that inserts into the groove of the door shall be a minimum of one-quarter inch (1/4") thick. The groove shall be a dado groove or applied molding construction. The groove shall be a minimum of one-half inch (1/2") in depth.

R328.2.2 Steel doors. Where installed, exterior steel doors shall be a minimum thickness of 24 gauge.

R328.2.3 Fiberglass doors. Fiberglass doors shall have a minimum skin thickness of one-sixteenth inch (1/16") and have reinforcement material at the location of the deadbolt.

R328.2.4 Double doors. Where installed, the inactive leaf of an exterior double door shall be provided with flush bolts having an engagement of not less than one inch into the head and threshold of the doorframe.

R328.2.5 Sliding doors. Where installed, exterior sliding doors shall comply with all of the following requirements:

1. Sliding door assemblies shall be installed to prevent the removal of the panels and the glazing from the exterior with the installation of shims or screws in the upper track.
2. All sliding glass doors shall be equipped with a secondary locking device consisting of a metal pin or a surface mounted bolt assembly. Metal pins shall be installed at the intersection of the

inner and outer panels of the inside door and shall not penetrate the frame's exterior surface. The surface mounted bolt assembly shall be installed at the base of the door.

R328.3 Door frames. The exterior door frames shall be installed prior to a rough-in inspection. Door frames shall comply with Sections R328.3.1 through R328.3.3 for the type of assembly installed.

R328.3.1 Wood frames. Wood door frames shall comply with all of the following requirements:

1. All exterior door frames shall be set in frame openings constructed of double studding or equivalent construction, including garage doors, but excluding overhead doors. Door frames, including those with sidelights, shall be reinforced in accordance with ASTM F476-84 Grade 40.
2. In wood framing, horizontal blocking shall be placed between studs at the door lock height for three (3) stud spaces or equivalent bracing on each side of the door opening.

R328.3.2 Steel frames. All exterior door frames shall be constructed of 18 gauge or heavier steel and reinforced at the hinges and strikes. All steel frames shall be anchored to the wall in accordance with manufacturer specifications. Supporting wall structures shall consist of double studding or framing of equivalent strength. Frames shall be installed to eliminate tolerances inside the rough opening.

R328.3.3 Door jambs. Door jambs shall be installed with solid backing in a manner so that no void exists between the strike side of the jamb and the frame opening for a vertical distance of twelve inches (12") each side of the strike. Filler material shall consist of a solid wood block. Door stops on wooden jambs for in-swinging doors shall be of one-piece construction. Jambs for all doors shall be constructed or protected so as to prevent violation of the strike.

R328.4 Door hardware. Exterior door hardware shall comply with Sections R328.4.1 through R328.4.6.

R328.4.1 Hinges. Hinges for exterior door hardware shall comply with the following:

1. At least two (2) screws, three inches (3") in length, penetrating at least one inch (1") into wall structure shall be used. Solid wood fillers or shims shall be used to eliminate any space between the wall structure and door frame behind each hinge.
2. Hinges for out-swinging doors shall be equipped with mechanical interlock to preclude the removal of the door from the exterior.

R328.4.2 Strike plates. Exterior door strike plates shall be a minimum of eighteen (18) gauge metal with four (4) offset screw holes. Strike plates shall be attached to wood with not less than three inch (3") screws, which shall have a minimum of one inch (1") penetration into the nearest stud. Note: For side lighted units, refer to Section R328.4.6.

R328.4.3 Escutcheon plates. All exterior doors shall have escutcheon plates or wraparound door channels installed around the lock protecting the door's edge.

R328.4.4 Locks. Exterior doors shall be provided with a locking device complying with one of the following:

Single Cylinder Deadbolt shall have a minimum projection of one inch (1"). The deadbolt shall penetrate at least three-fourths inch (3/4") into the strike receiving the projected bolt. The cylinder shall have a twist-resistant, tapered hardened steel cylinder guard. The cylinder shall have a minimum of five (5) pin tumblers, shall be connected to the inner portion of the lock by solid metal connecting screws at least one-fourth inch (1/4") in diameter and two and one-fourth inches (2 1/4") in length. Bolt assembly (bolt housing) unit shall be of single piece construction. All deadbolts shall meet ANSI grade 2 specifications.

R328.4.5 Entry vision and glazing. All main or front entry doors to dwelling units shall be arranged so that the occupant has a view of the area immediately outside the door without opening the door. The view may be provided by a door viewer having a field of view of not less than one hundred eighty degrees (180°) through windows or through view ports.

R328.4.6 Side lighted entry doors. Side light door units shall have framing of double stud construction or equivalent construction complying with Sections R328.3.1, R328.3.2 and R328.3.3. The doorframe that separates the door opening from the side light, whether on the latch side or the hinge side, shall be double stud construction or equivalent construction complying with Sections R328.3.1 and R328.3.2. Double stud construction or construction of equivalent strength shall exist between the glazing unit of the side light and wall structure of the dwelling.

R328.5 Street numbers. Street numbers shall comply with Section R319.

R328.6 Exterior lighting. Exterior lighting shall comply with Section E3903.3.

R328.7 Alternate material and methods of construction. The provisions of this section are not intended to prevent the use of any material or method of construction not specifically prescribed by this section, provided any such alternate has been approved by the enforcing authority, nor is it the intention of this section to exclude any sound method of structural design or analysis not specifically provided for in the section. The materials, methods of construction, and structural design limitations provided for in this section shall be used, unless the enforcing authority grants an exception. The enforcing authority is authorized to approve any such alternate provided they find the proposed design, materials, and methods of work to be at least equivalent to those prescribed in the section in quality, strength, effectiveness, burglary resistance, durability, and safety.

Section R401.4.3 shall be added to read as follows:

R401.4.3 Soils report required. Foundation designs for new dwellings using the Tables referenced in Subsection R404.1.2 shall submit a report from a registered design professional specifying the properties of the soil based on Table 405.1 prior the inspection of footings, if deemed necessary by the Building Code Official.

Section R403.1.1.1 shall be added to read as follows:

R403.1.1.1 Continuous footing reinforcement. Continuous footings for basement foundation walls shall have minimum reinforcement consisting of not less than two No. 4 bars, uniformly spaced, located a minimum 3 inches (3") clear from the bottom of the footing.

Section R403.1.1.2 shall be amended to read as follows:

R403.1.1.2 Column pads. Column pads shall be a minimum of 24 inches by 24 inches and 8 inches deep (24" x 24" x 8"). Reinforcement shall consist of a minimum of three No. 4 bars each way, uniformly spaced.

Section R506.2.5 shall be added to read as follows:

R506.2.5 Basement floor slab isolation. Basement floor slabs shall be isolated from column pads, interior columns and interior bearing walls to facilitate differential movement. Nonbearing walls supported on basement floor slabs shall be provided with a minimum one-inch (1") expansion joint to facilitate differential movement between the floor slab and the floor framing above. Isolation and/or an expansion joint is not required within six inches (6") of the exterior walls.

Table N1102.1.2 shall be amended to read as follows:

Climate Zone	Fenestration U-factor ^b	Skylight U-factor ^b	Glazed Fenestration SHGC ^b	Ceiling R-Value ^f	Wood Frame Wall R-Value	Mass Wall R-Value	Floor R-Value	Basement Wall R-Value ^c	Slab R-Value & Depth ^d	Crawl Space Wall R-Value ^e
4	0.32	0.55	0.4	49	13	8/13	19	10/13	NR	10/13

Section N1102.2.9.1 shall be added to read as follows:

N1102.2.9.1 (R402.2.9.1) Concrete and masonry basement walls. Insulation is not required for concrete or masonry portions of basement walls of one- and two-family dwellings which are not adjacent to nor form a common wall with finished space and are more than 50 percent (50%) below grade. Such common walls shall be insulated whenever the adjacent interior space is finished.

Section N1102.4.1.2 shall be amended to read as follows:

N1102.4.1.2 (R402.4.1.2) Testing. Where required by the Building Official, the building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 5 air changes per hour. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (-50 Pascals). Testing shall be conducted by an approved third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the Building Official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed beyond the intended weatherstripping or other infiltration control measures;
2. Dampers including exhaust, intake, makeup, air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures;
3. Interior doors, if installed at the time of the test, shall be open;
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;
5. Heating and cooling systems, if installed at the time of the test, shall be turned off; and
6. Supply and return registers, if installed at the time of the test, shall be fully open.

Section N1103.3.3 shall be amended to read as follows:

N1103.3.3 (R403.3.3) Duct testing. Where required by the Building Official, ducts shall be pressure tested to determine air leakage by one of the following methods:

1. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the system, including the manufacturer's air handler enclosure if installed at the time of the test. Registers shall be taped or otherwise sealed during the test.
2. Postconstruction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including the manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

Exceptions:

1. A duct air-leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.
2. A duct air-leakage test shall not be required for ducts serving heat or energy recovery ventilators that are not integrated with ducts serving heating or cooling systems.

Section N1103.3.5 shall be amended to read as follows:

N1103.3.5 (R403.3.5) Building cavities (Mandatory). Building framing cavities shall be permitted to be used as return air ducts or plenums.

Section N1103.5.1.1 shall be deleted.

Table N1106.4 shall be amended to read as follows:

Climate Zone	Energy Rating Index ^a
1	57
2	57
3	57
4	80
5	61
6	61
7	58
8	58

Section E3901.7 of the International Residential Code, 2018 Edition, Outdoor outlets, is hereby amended to add the following exception:

Exception: Balconies less than nine square feet.

Section E3902.12 shall be amended as follows:

E3902.17 Arc-fault circuit-interrupter protection. All branch circuits that supply 120-volt, single-phase, 15- and 20-ampere outlets installed in bedrooms shall be protected by a combination type arc-fault circuit interrupter installed to provide protection of the entire branch circuit. For this purpose, a smoke detector shall not be considered an outlet and shall not be allowed on the branch circuit.