

2018 Recommended Residential Code with Amendments

A **resolution** of the **Central Iowa Code Consortium** recommending adoption the 2018 edition of the *International Residential Code*, regulating and governing the construction, alteration, movement, enlargement, replacement, repair, equipment, location, removal and demolition of detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with separate means of egress.

The **Executive Committee** of the **Central Iowa Code Consortium** does ordain as follows:

Section 1. That a certain document, being marked and designated as the *International Residential Code*, 2018 edition, including Appendix Chapters **M**, as published by the International Code Council, be and is hereby recommended as the Residential Code of the participating communities of the **Central Iowa Code Consortium**, for regulating and governing the construction, alteration, movement, enlargement, replacement, repair, equipment, location, removal and demolition of detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories in height with separate means of egress as herein provided; and each and all of the regulations, provisions, penalties, conditions and terms of said Residential Code are hereby referred to, adopted, and made a part hereof, as if fully set out in this recommendation, with the additions, insertions, deletions and changes, if any, prescribed in Section 2 of this recommendation.

A community participating in the Central Iowa Code Consortium may elect to adopt the International Residential Code (IRC) in its entirety as described above, recognizing that it is intended to be a standalone code for the purposes of constructing residential structures, or may elect to adopt all portions of the IRC, except the plumbing and fuel gas chapters (chapters 24-33) to avoid conflicting provisions between the IRC and the state adopted plumbing and fuel gas codes.

Section 2. The following sections are hereby revised:

Section R101.1. Insert: **[NAME OF JURISDICTION]**

Table R301.2 (1) Insert: **[APPROPRIATE DESIGN CRITERIA]**

Section P2603.6.1 Insert: **[NUMBER OF INCHES IN TWO LOCATIONS]**

Modify Code Section: IRC R101.2

Replace with and add the following language:

R101.2 Scope. *The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of the following:*

- 1. Detached one- and two-family dwellings and townhouses not more than three stories above grade plane in height with a separate means of egress and their accessory structures not more than three stories above grade plane in height.*
- 2. Owner-occupied lodging houses with five or fewer guestrooms.*
- 3. Detached one- and two-family dwellings and townhouses that contain offices of up to 20 percent of the dwelling unit area.*
- 4. Live/work units within detached one- and two-family dwellings and townhouses that comply with the requirements of Section 419 of the International Building Code.*
- 5. Care facilities within detached one- and two-family dwellings and townhouses with eight or fewer persons receiving care who have the ability to respond to emergency situations and evacuate.*
- 6. In-home child care facilities within detached one- and two-family dwellings and townhouses where in-home child care is provided to no more than eight children, and of these eight children no more than six are five years old or younger, no more than four are twenty-four months old or younger, and no more than three are eighteen months old or younger.*
- 7. In-home child care facilities that provide custodial care for 16 or fewer persons in detached one- and two-family dwellings and townhouses that were registered with the State of Iowa Department of Human Services as child development homes and have held such registration continuously in good standing since on or before January 1, 2017.*
- 8. Care facilities within detached one- and two-family dwellings and townhouses that are provided with a residential fire sprinkler system complying with Section P2904 or NFPA 13D with eight or fewer persons receiving care who have impairments that prevent them from responding to emergency situations and evacuating.*

Insert Definition into Code Section: IRC R202

Add the following language:

CARE FACILITY. *A building or structure where care is provided to persons who need some level of assistance or supervision.*

Insert Definition into Code Section: IRC R202

Add the following language:

IN-HOME CHILD CARE. A dwelling where care is provided to children by a person other than the child’s parent, guardian, or custodian for periods of less than twenty-four hours per day per child on a regular basis.

Modify Table: IRC R302.6

Replace with the following revised table:

TABLE R302.6

DWELLING-GARAGE SEPARATION

SEPARATION	MATERIAL
<i>From the residence and attics</i>	<i>Not less than 5/8-inch gypsum board or equivalent applied to the garage side</i>
<i>From habitable rooms above the garage and structure(s) supporting floor/ceiling assemblies used for separation required by this section</i>	<i>Not less than 5/8-inch gypsum board or equivalent</i>
<i>Garages located less than 5 feet from a dwelling unit on the same lot</i>	<i>Not less than 5/8-inch gypsum board or equivalent applied to the interior side of exterior walls and ceilings within the garage</i>

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm.

Delete Code Section: IRC 302.13, Exception 4

Replace with the following language:

Exception

4. Approved floor assemblies demonstrating equivalent fire performance by an approved testing company showing length and time duration for exposure to fire. It shall be defined by performance equivalent to 26 minutes using ASTM E119 standard fire endurance testing with a superimposed load simulating a maximum load condition (i.e. 100% design load).

Modify Code Section: IRC R303.3

Replace with the following language and exception:

Section R303.3 Bathrooms. Bathrooms shall be provided with a mechanical ventilation system. The minimum ventilation rates shall be 50 cfm for intermittent ventilation or 20 cfm for continuous ventilation. Ventilation air from the space shall be exhausted directly to the outside.

Exception: Toilet rooms containing only a water closet and/or lavatory may be provided with a recirculating fan.

Modify Code Section: IRC R305.11 Exception

Replace with the following exception:

Exception: Existing basements not having a height as specified in this section are allowed to be finished with a ceiling height that is not decreased more than the minimal measurement created by applying a finished ceiling of gypsum board or acoustical ceiling tiles.

Modify Code Section: IRC R308.4.2 (Existing exceptions to remain)

Replace with the following language:

Section R308.4.2 Glazing Adjacent To Doors. Glazing in an individual fixed or operable panel adjacent to a door where the nearest vertical edge of the glazing is within a 24-inch (610 mm) arc of either vertical edge of the door in a closed position and where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the walking surface shall be considered to be a hazardous location.

Exceptions:

1. Decorative glazing.
2. Where there is an intervening wall or other permanent barrier between the door and the glazing.
3. Where access through the door is to a closet or storage area 3 feet (914 mm) or less in depth. Glazing in this application shall comply with Section R308.4.3.
4. Glazing that is adjacent to the fixed panel of patio doors.

Delete Exception 2 of Section: IRC 310.1

Do not replace with any other language:

Insert Exception #1 into Code Section: IRC 310.2.2

Add the following language:

Exception

1. A landing may be provided to meet the maximum sill height of forty-four (44) inches above the floor or landing provided. The landing shall be not less than thirty-six (36) inches wide, not less than twelve (12) inches out from the exterior wall, and not more than twenty-four (24) inches in height. The landing shall be permanently affixed to the floor below or the wall under the window it serves.

Modify Code Section: IRC R310.2.4

Replace with the following language:

Section R310.2.4 Emergency escape windows under decks and porches. Emergency escape and rescue openings installed under decks and porches shall be fully openable and provide a path not less than 36 inches (914mm) in height to a yard or court. Cantilever areas of all construction elements shall be regulated in accordance with this section.

Modify Exception to Code Section: IRC R310.6

Replace with the following language:

Exception: New habitable spaces created in an existing *basement* shall be provided with emergency escape and rescue openings in accordance with Section R310.1.

Modify Exception to Code Section: IRC R311.3.2

Replace with the following language:

Exception: A top landing is not required where a stairway of not more than four risers is located on the exterior side of a door, provided the door does not swing over the stairway.

Insert Exception #3 into Code Section: IRC 311.7.5.1

Add to the following language:

Exception

3. The dimension of the top and bottom riser of a stair may vary up to 1-inch (25.4 mm) from the stairway riser dimension; however, in no case shall the riser height exceed seven and three-quarter inches.

Modify/Add Exceptions to Code Section: IRC R311.7.8.2

Add the following exception:

Exception

2. Handrails within a dwelling unit or serving an individual dwelling unit shall be permitted to be interrupted at one location in a straight stair when the rail terminates into a wall or ledge and is offset and immediately continues.

Modify Code Section: IRC R312.1.1

Replace with the following language and add exception:

R312.1.1 Where required. *Guards* shall be provided for those portions of open-sided walking surfaces, including stairs, ramps and landings, driveways, sidewalks, patios, and decks that are located more than 30 inches (762 mm) measured vertically to the floor or *grade* below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a *guard*.

Exception: Portions of retaining wall where the horizontal distance between the edge of the walking surface and the face of the wall is greater than 36-inches.

Delete Code Section: IRC 313.1

Replace with the following language:

313.1 Townhomes automatic fire sprinkler systems. An automatic residential fire sprinkler system shall be installed in *townhouses*.

Exceptions:

1. An automatic residential fire sprinkler system shall not be required where *additions* or *alterations* are made to existing *townhouses* that do not have an automatic residential fire sprinkler system installed.
2. Townhouse structures that contain eight (8) or less dwelling units.
3. Townhouse structures less than eighteen thousand (18,000) square feet floor space, exclusive of any garages.

Delete Code Section: IRC 313.2

Replace with the following language:

313.2 One- and two-family dwelling automatic fire sprinkler systems. An automatic residential fire sprinkler system shall be installed in one- and two-family dwellings.

Exceptions:

1. An automatic residential fire sprinkler system shall not be required where *additions* or *alterations* are made to existing buildings that are not already provided with an automatic residential fire sprinkler system.
2. One- and two-family dwellings containing less than eight thousand (8,000) square feet of floor space, excluding attached garages and other unenclosed areas.

Modify Exception #1 to Code Section: IRC R403.1.4.1

Replace with the following exception:

Exception

1. Detached garages of light frame wood construction with an area of 1024 square feet or less and located more than 10 feet from a dwelling or attached garage may be provided with a floating slab; where all the following conditions are met:
 - 1.1 The bottom portion of the thickened slab area shall be twelve (12) by twelve (12) inches with one (1) number four (4) bar placed near the top and bottom of the edge.
 - 1.2 The slab floor shall be not less than four (4) inches thick with one (1) number four (4) bar placed every two (2) feet on center or in a 6 by 6 mesh.
 - 1.3 The slab pour shall be continuous.

Modify Exception #3 to Code Section: IRC R403.1.4.1

Replace with the following exception:

Exception

3. Decks less than 30" above grade (measured at any point within 36" horizontally to the edge of any side), or decks not supported by a dwelling, shall not require footings that extend below the frost line.

Modify Code Section: IRC R404.1

Replace with the following language:

Section R404.1 Concrete and masonry foundation walls. Concrete foundation walls shall be selected and constructed in accordance with the provisions of Section R404.1.3. Masonry foundation walls shall be selected and constructed in accordance with the provisions of Section R404.1.2. If backfill prior to a poured in place floor slab is desired, one of the following methods to provide bottom lateral support shall be completed: (1) a full depth (minimum 1-1/2") nominal 2" x 4" keyway may be formed into the footings to secure the bottom of the foundation wall -or- (2) 36" long vertical # 4 rebar may be embedded a minimum of 6" into the footings not to exceed 7' on center spacing.

Add Code Section: IRC R404.1.3.2.3

Insert the following language and Table:

R404.1.3.2.3 Foundation Walls for Conventional Light Frame Wood Construction. Concrete and masonry foundation walls shall be permitted to be designed in accordance with the following Table ‘Foundation Walls for Conventional Light Frame Construction’ may be used:

Table R404.1.3.2.3 - ‘Foundation Walls for Conventional Light Frame Construction’

Height of Foundation Wall (Net measured from top of basement slab to top of foundation wall)*		Thickness of Foundation Walls		Reinforcement type and placement within Foundation Wall**	Reinforcement type and placement within Foundation Wall** (maximum 12’ span between corners and supporting cross walls.)	Type of Mortar
		Unit				
Gross	Net	Concrete	Masonry	Concrete	Masonry	Masonry
8	7’ 8”	7 ½”	8”	½” horizontal bars, placement in the middle, and near the top & bottom – ½” bars @ 6’ max. vertically	0.075 square inch bar 8’ o.c. vertically in fully grouted cells. If block is 12” nominal thickness, may be unreinforced.	Type M or S. Grout & Mortar shall meet provisions of Chapter 21 IBC
9	8’ 8”	8”	See Chapter 18 IBC	½” bars 2’ o.c. horizontally & 20” vertically o.c.	See Chapter 18 IBC	Same as above
10	9’ 8”	8”	See Chapter 18 IBC	(5/8” bars 2’ o.c. horizontally & 30” vertically o.c.)	See Chapter 18 IBC	Same as above

*Concrete floor slab to be nominal 4”. If such floor slab is not provided prior to backfill, provide 1) 36” vertical #4 rebar embedded in the footing @ maximum 7’ O.C. spacing -and/or- 2) full depth nominal 2” depth x 4” width keyway in footing

** All reinforcement bars shall meet ASTM A6175 grade 40 minimum and be deformed. Placement of bars shall be in center of wall and meet the provisions of chapters 18, 19, and 21 of the International Building Code.

NOTE: Cast in place concrete shall have a compressive strength of 3,000 lbs @ 28 days. Footings shall contain continuous reinforcement of minimum 2 – ½” diameter rebar throughout. Placement of reinforcement and concrete shall meet the requirements of Chapter 19 of the International Building Code.

NOTE: Material used for backfilling shall be carefully placed granular soil of average or high permeability and shall be drained with an approved drainage system as prescribed in Section 1805.4 of the International Building Code. Where soils containing a high percentage of clay, fine silt or similar materials of low permeability or expansive soils are encountered or where backfill materials are not drained or an unusually high surcharge is to be placed adjacent to the wall, a specially designed wall shall be required.

Note: Foundation plate or sill anchorage shall be installed in accordance with the respective codes as applicable.

Add Code Section: IRC R506.2.4

Insert the following language and Exception:

Section R506.2.4. Reinforcement Support. Where provided in slabs-on-ground, reinforcement shall be supported to remain in place from the center to upper one-third of the slab for the duration of the concrete placement.

Exception: Non-structural slabs

Modify Code Section: IRC R1305.1.1

Replace with the following language:

M1305.1.1 Appliances in rooms. *Appliances* installed in a *basement* or similar space shall be accessed by an opening or door and an unobstructed passageway measuring not less than 24 inches (610 mm) wide and large enough to allow removal of the largest *appliance* in the space, provided there is a level service space of not less than 30 inches (762 mm) deep and the height of the *appliance*, but not less than 30 inches (762 mm), at the front or service side of the *appliance* with the door open.

Add Code Section: IRC R1305.1.1.1

Insert the following language:

M1305.1.1.1 Appliances in Closets, Alcoves, or similar compartments. Appliances installed within a closet, alcove or compartment, such space shall measure no less than 30 inches wide and the opening into such space shall also be no less than 30 inches wide.

Modify Code Section: IRC M1502.4.2

Replace with the following language and exception:

M1502.4.2 Duct installation. Exhaust ducts shall be supported at intervals not to exceed 4 feet, (3658 mm) and shall be secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Exhaust duct joints shall be sealed in accordance with Section M1601.4.1 and shall be mechanically fastened. Ducts shall not be joined with screws or similar fasteners. Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall be of sufficient size to allow the installation of the duct, without changing the configuration of the duct.

Exception: Dryer duct sections that are longer than 4 feet shall be supported minimally every 6 feet.

Add additional item to Code Section: IRC M1601.3

Insert the following language:

5. The use of air-inflated/encapsulated duct wrap to achieve required R-values shall be prohibited.

Add additional item to Code Section: IRC M1602.3

Insert the following language:

4. Return air openings shall be a minimum four (4) feet measured in any direction from Supply Air Diffusers.

Delete Code Section: IRC G2414.5.3 (403.5.4)

Replace with the following language:

G2414.5.3 (403.5.4): Corrugated Stainless Steel Tubing.

Arc resistant corrugated stainless steel tubing shall be listed in accordance with ANSI LC 1 (Optional Section 5.16)/CSA 6.26.

Delete Code Section: IRC G2415.5.2 (404.2)

Replace with the following language:

G2415.2 (404.2) CSST.

Only CSST with an Arc Resistant Jacket or Covering System listed in accordance with ANSI LC-1 (Optional Section 5.16)/CSA 6.26-2016 shall be installed in accordance with the terms of its approval, the conditions of listing, the manufactures instructions and this code including electrical bonding requirements in Section G2411. CSST shall not be used for through wall penetrations from the point of delivery of the gas supply to the inside of the structure. CSST shall not be installed in locations where subject to physical damage unless protected in an approved manner.

Add Code Section: IRC E3704.7.1

Insert the following language:

3704.7 Prohibited Locations. Feeders supplying a Townhome shall not cross a property line other than the individual unit served. For the purposes of this provision, the term Townhome shall mean a single-family dwelling unit constructed in a group of two or more attached units in which each unit extends from foundation to roof and with a yard or public way on not less than two sides.