

ORDINANCE 670

AN ORDINANCE PROVIDING FOR THE ADOPTION OF THE 2018 INTERNATIONAL RESIDENTIAL BUILDING CODE AND AMENDMENTS AND ADDITIONS THERETO; AND FOR THE REPEAL OF ALL ORDINANCES AND RESOLUTIONS IN CONFLICT THEREWITH.

BE IT ORDAINED BY THE CITY OF HARTFORD, SOUTH DAKOTA:

SECTION 9.1201. Adoption International Residential Building Code 2018.

The International Residential Code, 2018 edition including Appendix E, Appendix G, and Appendix H and Appendix Q as published by the International Code Council Inc. as amended is hereby adopted as the residential building code by the city for regulating the design, construction, quality of materials, erection, installation, alteration, movement, repair, equipment, use and occupancy, location, removal, and demolition of detached one- and two-family dwellings and town houses not more than three stories in height with a separate means of egress and their accessory structures, and provides for the issuance of permits and the collection of fees therefore. The minimum building standards in the 2018 edition of the International Residential Code and amendments thereto shall be applied to any building permit issued after July 3, 2019. The adoption of the International Residential Building Code, 2018 edition will become effective July 3, 2019. A printed copy as amended is on file with the City of Hartford.

SECTION 9.1202. Amendments, additions and deletions to the 2018 International Residential Building Code. The following sections and subsections of building code adopted in this subchapter shall be amended, added, or deleted as follows. All other sections or subsections of the 2018 International Building Code shall remain the same.

R101.1 Title. These provisions shall be known as the Residential Code for One- and Two-family Dwellings of the City of Hartford and shall be cited as such and will be referred to herein as "this code."

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 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.

Exception 1: The following shall be permitted to be constructed in accordance with this code where provided with a residential fire sprinkler system complying with Section P2904:

1. A care facility with five or fewer persons receiving custodial care within a dwelling unit.
2. A care facility with five or fewer persons receiving medical care within a dwelling unit.
3. A care facility for five or fewer persons receiving care that is within a single-family dwelling.

Exception 2:

1. Live/work units located in townhouses and complying with the requirements of

- Section 419 of the International Building Code.
2. Owner-occupied lodging houses with five or fewer guestrooms.

Exception 3: Existing buildings undergoing repair, alteration or additions and change of occupancies may be permitted to comply with the International Existing Building Code.

R102.5.1 Electrical. The term ICC Electrical Code shall mean the 2017 National Electrical Code as adopted by the State of South Dakota. The electrical code shall be administered by the State of South Dakota.

R102.5.2 Gas. The term International Fuel Gas Code shall mean the International Fuel Gas Code as adopted by the State of South Dakota.

R102.5.3 Mechanical. The term International Mechanical Code shall mean the International Mechanical Code as adopted by the State of South Dakota.

R102.5.4 Plumbing. The 2018 Uniform Plumbing Code shall be administered by the State of South Dakota.

R102.5.6 Fire prevention. The term International Fire Code shall mean the International Fire Code as adopted by the State of South Dakota. The International Fire Code shall be administered by the State of South Dakota.

R102.5.7 Energy. The term International Energy Conservation Code shall mean the International Energy Conservation Code as adopted by the State of South Dakota. The International Energy Conservation Code shall be administered by the State of South Dakota.

R103.1 Enforcement agency. The City of Hartford shall be the enforcement agency and person in charge thereof shall be known as the zoning administrator or designee.

R103.2 Appointment. This section does not apply to the City of Hartford.

R104.8 Liability. The zoning administrator, building official, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be afforded all the protection provided by the City's liability insurance and any immunities and defenses provided by other applicable state and federal law and defended by legal representative of the jurisdiction until the final termination of the proceedings. The zoning administrator, building official or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code.

This code shall not be construed to relieve from or lessen the responsibility of any person owning, operating, or controlling any building or structure for any damages to persons or property caused by defects, nor shall the code enforcement agency or the city be held as assuming any such liability by reason of the inspection authorized by this code or any permits or certificates issued under this code.

R105.1 Required. Any owner or authorized agent who intends to construct, enlarge, alter, repair, move, demolish or change the occupancy of a building or structure, or to cause any such work to be done, shall first make application to the zoning administrator or designee and obtain the required permit. The zoning administrator may exempt permits for minor work.

Exclusive of a homeowner, no person or firm shall be issued a building permit for residential building defined as owner-occupied one- and two-family dwellings, including accessory garages, until that person or firm has been issued a residential contractor's license required by this chapter and City Ordinance # 430.

R105.2 Work exempt from permit. Permits shall not be required for the following. Exemption from permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

Building:

1. Play houses.
2. Gutters/Downspouts
3. Retaining walls that are not over 4' feet in height measured from the bottom of the grade elevation to the top of the wall, unless supporting a surcharge.
4. Water tanks.
5. Painting, papering, tiling, carpeting, cabinets, counter-tops and similar finish work.
6. Prefabricated swimming pools that are less than 24" inches (610 mm) deep.
8. Swings and another playground equipment.
9. Window awnings supported by an exterior wall that do not project more than 54" inches from the exterior wall and do not require additional support.
10. Drain-tile work.

R105.5: EXPIRATION OF A BUILDING PERMIT

Every building permit issued under the provisions of this chapter shall expire by limitation and become null and void if the work or use authorized by such permit is not completed within 365

days from the date of such permit, Before such work can be recommenced, a new permit shall first be obtained to do so, provided and changes have been made or will be made in the original plans and specifications for such work; and provided further that such suspension or abandonment has not exceeded one year.

The zoning administrator may, except as otherwise provided herein, extend the time for action by the permittee for a period not exceeding 90 days upon written request by the permittee showing that circumstances beyond the control of the permittee have prevented action from being taken. No permit shall be extended more than once.

R106.1 Submittal documents. Submittal documents consisting of construction documents and other data shall be submitted with each application for a permit. The construction documents shall be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed. Where special conditions exist, the building official is authorized to require additional construction documents to be prepared by a registered design professional.

Exception: The building official is authorized to waive the submission of construction documents and other data not required to be prepared by a registered design professional if it is found that the nature of the work applied for is such that reviewing of construction documents is not necessary to obtain compliance with this code.

R106.1.5 Foundation reinforcement. Construction for detached one- and two-family dwellings and town houses shall be provided with the intended reinforcement of foundation walls referenced in Tables R404.1. I (2), R404.1.1 (3), and R404.1.1 (4) for reinforced masonry foundation walls; Tables R404.1.2(2), R404.1.2(3), R404.1.2(4), and R404.1.1 (8) for flat concrete foundation walls; Tables 404.1.2(5) and R404. I .2(6) for waffle-grid basement walls; and Table R404.1.2(7) for screed-grid basement walls where the foundation wall exceeds the provisions for plain masonry and concrete foundation walls.

R106.3.1 Approval of construction documents. Where the zoning administrator issues a permit, the construction documents shall be submitted and reviewed. One set of construction documents for reviewed shall be retained by the building department.

R108.2 Permit Fees. A fee for each permit shall be paid as required in accordance with city ordinances.

R108.6. Work commencing before permit issuance. Any person who commences any work on a building or structure before obtaining the necessary permits shall be subject to the doubling of the standard permit fee and could be subject to an additional fine. Legal and/or civil proceedings may also be commenced.

R108.7 Delinquent Accounts. The City of Hartford may refuse to issue permits or conduct inspections for any person or business whose account is delinquent.

R109.1.1 Footing inspection. Inspection of the footings shall be made after poles or piers are set or trenches or basement areas are excavated, and any required forms erected and any required reinforcing steel is in place and supported prior to the placing of concrete. The footing inspection shall include excavations for thickened slabs intended for the support of bearing walls, partitions, structural supports, or equipment and special requirements for wood foundations.

R109.1.2 Electrical systems inspections shall be made by the State of South Dakota.

R109.1.3 Floodplain inspections. Shall be made in accordance with the City of Hartford's Floodplain Ordinance.

R109.1.4 Frame inspection. Inspection of the framing shall be made after the roof, all framing, fire blocking and bracing are in place and all pipes, chimneys and vents are complete.

R109.1.6.1 Elevation documentation. If located in a flood hazard area, the documentation of elevations is required and shall be submitted to the zoning administrator prior to the final inspection.

R110.1 Use and occupancy. No building or structure shall be used or occupied, and no change of occupancy or a change of use of a building or structure or portion thereof shall be made until the Building Official has completed a final inspection and all construction and code requirements have been met to the Building Official's satisfaction, including obtaining the final approved plumbing and electrical inspections. An inspection sticker shall be posted on the electrical panel signed off by the Building Official. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the city.

Exceptions:

1. Accessory buildings or structures.
2. Certificates of occupancy are not required for work exempt from permits.

R110.5 Revocation. The Building Official shall, in writing, suspend or revoke occupancy allowed under the provision of this code wherever occupancy was allowed in error, or on the basis of incorrect information supplied, or where it is determined that the building or structure or portion thereof is in violation of any ordinance or regulation or any of the provision of this code.

R110.6 Inspection Stickers: Inspection record stickers placed on the job by the inspectors to indicate approval of the work inspected shall not be removed, except when authorized by the building official.

R112.1 General. In order to hear and decide appeals of orders, decisions or determinations made by the building official or employee relative to the application and interpretation of this code, to review all proposed changes to the respective codes and to submit recommendations to the responsible official and the city council, here shall be and is hereby created a Board of

Appeals consisting of the members of the Planning and Zoning Board. The Planning and Zoning Board, acting as the board of appeals, may call upon experts in the field of architecture, engineering and construction before making a decision on any appeal coming before them.

R112.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted there under have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The board shall have no authority relative to the interpretation of the administrative provisions of this code nor shall the board be empowered to waive requirements of this code.

R113.3 Prosecution of violation. If the notice of violation is not complied with in the time prescribed by such notice, the building official is authorized to request the legal counsel of the City of Hartford to deem the violation as a strict liability offense and institute the appropriate proceeding at law or in equity to restrain, correct or abate such violation, or to require the removal or termination of the unlawful occupancy of the building or structure in violation of the provisions of this code or of the order or direction made pursuant thereto.

Section R202. Definitions. Add the following definition.

Strict liability offense. An offense in which the prosecution in a legal proceeding is not required to prove criminal intent as a part of its case. It is enough to prove that the defendant either did an act which was prohibited or failed to do an act which the defendant was legally required to do.

GROUND SNOW LOAD ^o	WIND DESIGN				SEISMIC DESIGN CATEGORY ¹	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP ^o	ICE BARRIER UNDERLAYMENT REQUIRED ^o	FLOOD HAZARDS ^o	AIR FREEZING INDEX	MEAN ANNUAL TEMP ^o
	Speed ^d (mph)	Topographic effects ^x	Special wind region ¹	Windborne debris zone ^m		Weathering ^a	Frost line depth ^b	Termite ^e					
40 psf	115	no	no	no	A	Severe	42 inches (1067 mm)	Slight to Moderate	-11° F	Yes	Sioux Falls entered the regular phase of the National Flood Insurance Program on September 17, 1979	3,000	46° F

MANUAL J DESIGN CRITERIA^o

Elevation	Latitude	Winter heating	Summer cooling	Altitude correction factor	Indoor design temperature	Design temperature cooling	Heating temperature difference
1418	43 degrees North	-11° F	90° F	none	=	=	=
Cooling temperature difference	Wind velocity heating	Wind velocity cooling	Coincident wet bulb	Daily range	Winter humidity	Summer humidity	=
=	=	=	72° F	M	=	=	=

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

- a. Where weathering requires a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code the frost line depth strength required for weathering shall govern. The weathering column shall be filled in with the weathering index, "negligible," "moderate" or "severe" for concrete as determined from Figure R301.2(4). The grade of masonry units shall be determined from ASTM C34, C55, C62.
- b. Where the frost line depth requires deeper footings than indicated in Figure R403.1(1), the frost line depth strength required for weathering shall govern. The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
- c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
- d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(5)A]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
- e. The outdoor design dry-bulb temperature shall be selected from the columns of 97 1/2 percent values for winter from Appendix D of the International Plumbing Code. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official. [Also see Figure R301.2(1).]
- f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
- g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and (c) the panel numbers and dates of the currently effective FIRMs and FBFMs or other flood hazard map adopted by the authority having jurisdiction, as amended.
- h. In accordance with Sections R905.1.2 R905.4.3.1 R905.5.3.1 R905.6.3.1 R905.7.3.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."
- i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99 percent) value on the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 320F)."
- j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 320F)."
- k. In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
- l. In accordance with Figure R301.2(5)A, where there are local historical data documenting unusual wind conditions, the jurisdiction shall fill in this part of the table with "YES" and

identify any specific requirements. Otherwise, the jurisdiction shall indicate "NO" in this part the table.

- m. In accordance with Section R301.2.1.2 the jurisdiction shall indicate the wind-borne debris wind zone(s). Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
- n. The jurisdiction shall fill in these sections of the table to establish the design criteria using Table 1a or 1b from ACCA Manual J or established criteria determined by the jurisdiction.
- o. The jurisdiction shall fill in this section of the table using the Ground Snow Loads in Figure R301.2(.6).

TABLE R301.5
MINIMUM UNIFORMLY DISTRIBUTED LIVE
LOADS (in pounds per square foot)

<u>USE</u>	<u>LIVE LOAD</u>
<u>Uninhabitable attics without storage</u> ^b	10
<u>Uninhabitable attics with limited storage</u> ^b ^{1/2}	20
<u>Habitable attics and attics served with fixed stairs</u>	30
<u>Balconies (exterior) and decks</u> ^e	40
<u>Fire escapes</u>	40
<u>Guards and handrails</u> ^d	<u>200h</u>
<u>Guard in-fill components</u>	50h
<u>Passenger vehicle garages</u> ^a	
<u>Rooms</u>	40
<u>Stairs</u>	40C

For SI: 1 pound per square foot = 0.0479 kPa 1 square inch = 645 mm² 1 pound = 4.45 N.

- a. Elevated garage floors shall be capable of supporting a 2,000-pound load applied over a 20-square-inch area.

- b. Uninhabitable attics without storage are those where the clear height between joists and rafters is not more than 42 inches, or where there are not two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42 inches in height by 24 inches in width, or greater, within the plane of the trusses. This live load need not be assumed to act concurrently with any other live load requirements.
- c. Individual stair treads shall be designed for the uniformly distributed live load or a 300pound concentrated load acting over an area of 4 square inches, whichever produces the greater stresses.
- d. A single concentrated load applied in any direction at any point along the top.
- e. See Section R507.1 for decks attached to exterior walls.
- f. Guard in-fill components (all those except the handrail), balusters and panel fillers shall be designed to withstand a horizontally applied normal load of 50 pounds on an area equal to 1 square foot. This load need not be assumed to act concurrently with any other live load requirement.
- g. Uninhabitable attics with limited storage are those where the clear height between joists and rafters is 42 inches or greater, or where there are two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42 inches in height by 24 inches in width, or greater. within the plane of the trusses. The live load need only be applied to those portions of the joists or truss bottom chords where all of the following conditions are met:

 1. The attic area is accessed from an opening not less than 20 inches in width by 30 inches in length that is located where the clear height in the attic is not less than 30 inches.
 2. The slopes of the joists or truss bottom chords are not greater than 2 inches vertical to 12 units horizontal.
 3. Required insulation depth is less than the joist or truss bottom chord member depth. The remaining portions of the joists or truss bottom chords shall be designed for a uniformly distributed concurrent live load of not less than 10 pounds per square foot.
- h. Glazing used in handrail assemblies and guards shall be designed with a safety factor of 4. The safety factor shall be applied to each of the concentrated loads applied to the top of the rail, and to the load on the infill components. These loads shall be determined independent of one another. and loads are assumed not to occur with any other live load.

**TABLE R302.1(1)
EXTERIOR WALLS**

Exterior Wall Element		Minimum Fire-Resistance Rating	Minimum Fire Separation Distance
Walls	Fire-resistance rated	1 hour—tested in accordance with ASTM E 119 or UL 263 or Section 703.3 of the International Building Code with exposure from both sides	< 5 feet
	Not fire-resistance rated	0 hours	> 5 feet
Projections	Fire-resistance rated	1 hour on the underside, or heavy timber or fire-retardant treated wood ^{a,b}	> 2 to < 3 feet
	Not fire-resistance rated	0 hours	3 feet
Openings	Not allowed	N/A	< 3 feet
	25% Maximum of Wall Area	0 hours	3 feet
Penetrations	Unlimited	0 hours	5 feet
	All	Comply with Section R302.4	< 5 feet
		None required	5 feet

For SI: 1 foot = 304.8 mm. N/A

= Not Applicable.

- a. The fire resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave overhand if the fire blocking is provided from the wall top plate to the underside of the roof sheathing.
- b. The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the rake overhang where gable vent openings are not installed.

R302.2.2 Common walls. Common walls separating townhouses shall be assigned a fire resistance rating in accordance with Item 1 or 2. The common wall shared by two townhouses shall be constructed without mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be in accordance with the National Electric Code. Penetrations of the membrane of common walls for electrical outlet boxes shall be in accordance with Section R302.4. Plumbing installations shall be in accordance with the Uniform Plumbing Code. Membrane or through penetrations of common walls for plumbing systems shall be in accordance with Section 302.4.

1. Where a fire sprinkler system in accordance with Section P2904 is provided, the

common wall shall be not less than a 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E1 19, UL 263 or Section 703.3 of the International Building Code.

2. Where a fire sprinkler system in accordance with Section P2904 is not provided, the common wall shall be not less than a 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E1 19, UL 263 or Section 703.3 of the International Building Code.

R307.1 Space required. Fixtures shall be spaced in accordance with Figure R307.1.

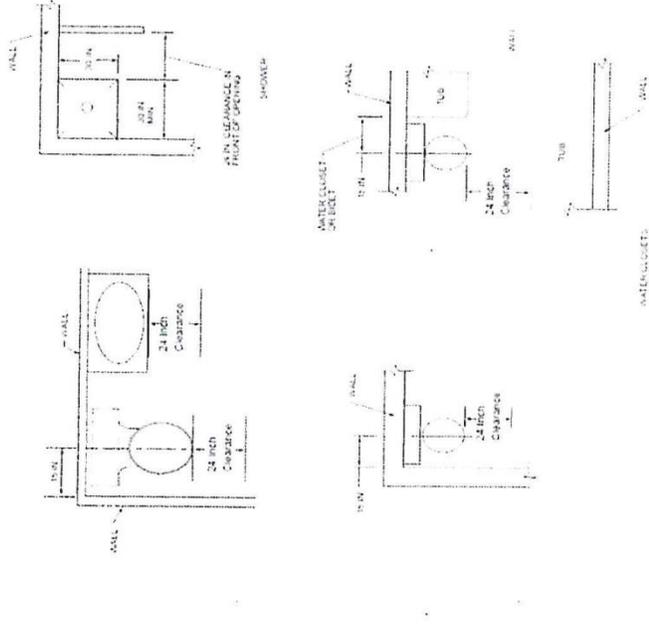


FIGURE R307.1
MINIMUM FIXTURE CLEARANCES

R302.2.3 Continuity. The fire-resistance-rated wall or assembly separating townhouses shall be continuous from the foundation to the underside of the roof sheathing, deck or slab. The fire resistance rating shall extend the full length of the wall or assembly, including wall extensions through and separating attached enclosed accessory structures.

Exterior walls that extend beyond an adjacent structure that has a fire separation distance less than 5 feet (1,523 mm) to a common property line shall have not less than a one-hour fire rating with exposure from both sides with no openings allowed therein.

Projections such as a deck that have a fire separation distance of less than 3 feet (914 mm) to a common property line shall have a 1-hour fire rating with exposure from both sides with no openings allowed therein that extends at least 30 inches (762 mm) above the projection.

R302.13 Fire protection of floors. Not adopted by the city.

R303.5.1 Intake openings. Mechanical and gravity outdoor air intake openings shall be located not less than 10 feet (3048 mm) from any hazardous or noxious contaminant, such as vents, chimneys, plumbing vents, streets, alleys, parking lots and loading docks, except as otherwise specified in this code.

For the purpose of this section, the exhaust from dwelling unit toilet rooms, bathrooms and kitchens shall not be considered as hazardous or noxious.

Exceptions:

- 1) For equipment replacements on existing structures, gravity outdoor intake openings for combustion air shall be located a minimum of 3 feet from any hazardous or noxious contaminant.
- 2) The 10-foot separation is not required where the intake opening is located 3 feet or greater below the contaminant source.
- 3) Clothes dryer exhaust ducts shall be terminated in accordance with Section MI 502.3
- 4) Vents and chimneys serving fuel-burning appliances shall be terminated in accordance with the applicable provisions of Chapters 18 and 24.

R308.4.2 Glazing adjacent to doors. Glazing in an individual fixed or operable panel adjacent to a door shall be considered to be a hazardous location where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) above the floor or walking surface and it meets either of the following conditions:

1. Where the glazing is within 24 inches (610 mm) of either side of the door in the plane of the door in a closed position.

2. Where the glazing is on a wall perpendicular to the plane of the door in a closed position and within 24 inches (610 mm) of the hinge side of an in-swinging door. 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.

R309.5 Fire sprinklers. Not adopted by the city.

R310.2.1 Minimum opening area. Emergency and escape rescue openings shall have a net clear opening of not less than 5.0 square feet (720 sq. inches). The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. The net clear height opening shall be not less than 24" inches and the net clear width shall be not less than 20" inches.

R310.2.2 Window Sill height. Where a window is provided as the emergency escape and rescue opening, it shall have a sill height of not more than 48" inches above the finished floor, when the sill height is below grade, it shall be provided with a window well in accordance with Section R 310.2.3.

R310.3.2.1 Ladder and steps. Area wells with a vertical depth greater than 48 inches (1219 mm) shall be equipped with a permanently affixed ladder or steps usable with the door in the fully open position. Ladders or steps required by this section shall not be required to comply with Section R311.7. Ladders or rungs shall have an inside width of not less than 12 inches (305 mm), shall project not less than 3 inches (76 mm) from the wall and shall be spaced not more than 18 inches (457 mm) on center vertically for the full height of the exterior stairwell.

R311.3.1 Floor elevations at the required egress doors. Landings or finished floors at the required egress door shall not be more than 1 1/2 inches (38 mm) lower than the top of the threshold.

Exception: The landing or floor on the exterior side shall not be more than 8" inches (202 mm) below the top of the threshold provided the door does not swing over the landing or floor.

Where exterior landings or floors serving the required egress door are not at grade, they shall be provided with access to grade by means of a ramp in accordance with Section R311.8 or a stairway in accordance with Section R311.7.

R311.3.2 Floor elevations for other exterior doors. Doors other than the required egress door shall be provided with landings or floors not more than 8" inches (202 mm) below the top of the threshold.

Exception: A landing is not required where a stairway of two or fewer risers is located on the exterior side of the door, provided the door does not swing over the stairway.

R311.7.5.1 Risers. The maximum riser height shall be 8" inches (202 mm). The riser shall be measured vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm). Risers shall be vertical or sloped from the underside of the nosing of the tread above at an angle not more than 30 degrees (0.51 rad) from the vertical. Open risers are permitted.

Exceptions:

1. The opening between adjacent treads is not limited on spiral stairways.
2. The riser height of spiral stairways shall be in accordance with Section R311.7.10.1.

R311.7.8.4 Continuity. Handrails for stairways shall extend for the full length of the flight from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1 1/2 inch (38 mm) between the wall and the handrails.

Exceptions:

1. Handrails shall be permitted to be interrupted by a newel post at the turn.
2. The use of a volute, turnout, starting easing or starting newel shall be allowed over the lowest tread.

R311.7.8.5 Grip-size. All required handrails shall be of one of the following types or provide equivalent grasp ability.

1. Type I. Handrails with a circular cross section shall have an outside diameter of at least 1 1/4 inches (32 mm) and not greater than 2 inches (51 mm). If the handrail is not circular, it shall have a perimeter dimension of at least 4 inches (102 mm) and not greater than 6 1/4 inches (160 mm) with a maximum cross section of dimension of 2 1/4 inches (57 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).
2. Type II. Handrails with a perimeter greater than 6 1/4 inches (160 mm) shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within a distance of 3/4 inch (19 mm) measured vertically from the tallest portion of the profile and achieve a depth of at least 5/16 inch (8 mm) within 7/8 inch (22 mm) below the widest portion of the profile. This required depth shall continue for at least 3/8 inch (10 mm) to a level that is not less than 1 3/4 inches (45 mm) below the tallest portion of the profile. The minimum width of the handrail above the recess shall be 1/4 inches (32 mm) to a maximum of 2 3/4 inches (70 mm). Edges shall have a minimum radius of 0.01 inch (0.25 mm).

Exception: Exterior stairs are allowed to have a horizontal 2X member to form a 1 1/2-inch graspable dimension in lieu of the above-referenced perimeter dimensions.

R312.1.3 Opening limitations. Required guards shall not have openings from the walking surface to the required guard height which allow passage of a sphere 5 inches (127 mm) in diameter.

Exceptions: The triangular openings at the open side of stair, formed by the riser, tread and bottom rail of a guard, shall not allow passage of a sphere 6 inches (153 mm) in diameter.

R313.1 Townhouse automatic fire sprinkler systems. This section not adopted by the city.

R313.1.1 Design and installation. When an automatic residential fire sprinkler system for townhouses is installed, it shall be designed and installed in accordance with Section P2904.

R313.2 One- and two-family dwellings automatic fire systems. This section not adopted by the city.

R313.2.1 Design and installation. When an automatic residential fire sprinkler system is installed, it shall be designed and installed in accordance with Section P2904 or NFPA 13D.

R314.2.2 Alterations, repairs and additions. Where alterations, repairs or additions requiring a permit occur with a valuation of more than \$1,000, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings.

Exceptions:

1. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, the addition or replacement of windows or doors, or the addition of a porch or deck.
2. Installation, alteration or repairs of plumbing or mechanical systems.

R314.3 Location. Smoke alarms shall be installed in the following locations:

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

4. Where the ceiling height of a room is open to the hallway serving a bedroom exceeds that of the hallway by 24 inches (610 mm) or more, smoke detectors shall be installed in the hallway and in the adjacent room.
5. Smoke alarms shall be installed not less than 3' feet horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by Section R314.3.

Exception:

- 1) Hallways less than 4 feet (1,220 mm) in length are allowed to omit the smoke detector within the hallway adjacent to the bedrooms.

R314.4 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit in accordance with Section R314.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.

Exception: Interconnection of smoke alarms in existing areas shall not be required where alterations or repairs do not result in removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available that could provide access for interconnection without the removal of interior finishes.

R315.2.2 Alterations, repairs and additions. Where alterations, repairs or additions requiring a permit occur with a valuation of more than \$1, 000, the individual dwelling unit shall be equipped with carbon monoxide alarms located as required for new dwellings.

Exceptions:

1. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck.
2. Installation, alteration or repairs of plumbing or mechanical systems.

POOLS

SECTION 7. Appendix G.

AG102.1 General. For the purposes of these requirements, the terms used shall be defined as follows and as set forth in Chapter 2.

ABOVE-GROUND/ON-GROUND POOL. see "Swimming pool."

BARRIER. A fence, wall, building wall or combination thereof that completely surrounds the swimming pool and obstructs access to the swimming pool.

HOT TUB. see "Swimming pool."

IN-GROUND POOL. see "Swimming pool."

RESIDENTIAL. That which is situated on the premises of a detached one- or two-family dwelling, or a one-family town house not more than three stories in height.

SPA, NONPORTABLE. see "Swimming pool."

SPA, PORTABLE. A nonpermanent structure intended for recreational bathing, in which all controls, water-heating and water-circulating equipment are an integral part of the product.

SWIMMING POOL. Any structure intended for swimming or recreational bathing that contains water more than 24 inches (457 mm) deep. This includes in-ground, aboveground, and on ground swimming pools, hot tubs and spas.

SWIMMING POOL, INDOOR. A swimming pool that is totally contained within a structure and surrounded on all four sides by the walls of the enclosing structure.

SWIMMING POOL, OUTDOOR. Any swimming pool that is not an indoor pool. | 12

AG105.1 Application. The provisions of this appendix shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near-drownings by restricting access to swimming pools, spas and hot tubs.

This requirement shall be applicable to all new swimming pools hereafter constructed, other than indoor pools, and shall apply to all existing pools, which have a depth of 24 inches or more of water. No person in possession of land within the city, either as owner, purchaser, lessee, tenant, or a licensee, upon which is situated a swimming pool having a depth of 24 inches or more shall fail to provide and maintain such barrier as herein provided.

AG105.2 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, aboveground or on-ground pool, hot tub or spa, shall be surrounded by a barrier that shall be installed, inspected, and approved prior to filling with water that completely surrounds and obstructs access to the swimming pool, which shall comply with the following:

1. The top of the barrier shall be at least 48 inches above grade measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51 mm) measured on the side of the barrier that faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).
2. Openings in the barrier shall not allow the passage of a 4-inch-diameter (102 mm) sphere.
3. Where an aboveground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure and the means of access is a ladder or steps, then:
 - 3.1. The ladder or steps shall be capable of being secured, locked, or removed to prevent access; or
 - 3.2. The ladder or steps shall be surrounded by a barrier, which meets the requirements of Item 1 above. When the ladder or steps are secured, locked, or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.
4. All gates or door openings through the barrier shall be equipped with self-closing and self-latching devices for keeping the door or gate securely closed at all times when the pool is not in actual use, except that the door of any dwelling that forms part of the enclosure need not be so equipped.

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AG105.3 Indoor swimming pool. This section not adopted by the city.

AG105.4 Prohibited locations. This section not adopted by the city.

AG105.5 Barrier exceptions. This section not adopted by the city.

R403.1.4.1 Frost protection. Except where otherwise protected from frost, foundation walls, piers and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:

1. Extended below the frost line specified in Table R301.2.(1);
2. Constructing in accordance with Section R403.3;
3. Constructing in accordance with ASCE 32; or
4. Erected on solid rock.

** Footings shall not bear on frozen soil unless the frozen condition is permanent.

Exceptions:

1. Protection of freestanding accessory structures with an area of 1,500 square feet (139 m²) or less of light-frame construction, with an eave height of 10 feet (3048 mm) or less shall not be required.
2. Protection of freestanding accessory structures with an area of 400 square feet (37 m²) or less, of other than light-frame construction, with an eave height of 10 feet (3048 mm) or less shall not be required.
3. Decks not supported by a dwelling need not be provided with footings that extend below the frost line.

R501.3 Fire protection of floors. This section not adopted by the city.

R502.3.1 Sleeping areas and attic joists. Table R502.3.1(1) shall be used to determine the maximum allowable span of floor joists that support sleeping areas and attics that are accessed by means of a fixed stairway in accordance with Section R311.7, provided that the design live load does not exceed 40 pounds per square foot (1.92 kPa) and the design dead load does not exceed 20 pounds per square foot (0.96 kPa). The allowable span of ceiling joists that support attics used for limited storage or no storage shall be determined in accordance with Section R802.4.

R507.3.1 Minimum size. Not adopted by the city.

Table R507.3.1 Not adopted by the city.

R602.10.1.2 Offsets along a braced wall line. All exterior walls parallel to a braced wall line shall be offset not more than 4 feet (1219 mm) from the designated braced wall line location as is shown on Figure R602.10.1.1. Interior walls used as bracing shall be offset not more than 4 feet (1219 mm) from a braced wall line through the interior of the building as shown in Figure R602.10.1.1.

Exception: The offset out-of-plane may exceed 4 feet (1219 mm) and the out-to-out offset dimension may exceed 8 feet (2438 mm) if the area of the offset is less than 200 square feet.

R602.12 Simplified wall bracing. Buildings meeting all of the conditions listed in Items 1—8 shall be permitted to be braced in accordance with this section as an alternative to the requirements of Section R602.10. The entire building shall be braced in accordance with this section; the use of other bracing provisions of R602.10, except as specified herein, shall not be permitted.

1. There shall be no more than two stories above the top of a concrete or masonry foundation or basement wall. Permanent wood foundations shall not be permitted.
2. Floors shall not cantilever more than 24 inches (607 mm) beyond the foundation or bearing wall below.
3. Wall height shall not be greater than 12 feet (3292 mm).
4. The building shall have a roof eave-to-ridge height of 20 feet (6096 mm) or less.
5. All exterior walls shall have gypsum board with a minimum thickness of 1/2 inch (12.7 mm) installed on the interior side fastened in accordance with Table R702.3.5.
6. The structure shall be located where the basic wind speed is less than or equal to 90 mph (40 m/s), and the Exposure Category is A, B or C.
7. The structure shall be located in Seismic Design Category A, B or C for detached one- and two-family dwellings or Seismic Design Category A or B for town houses.
8. Cripple walls shall be permitted below two-story buildings.

R602.12.1 Circumscribed rectangle. The bracing required for each building shall be determined by circumscribing a rectangle around the entire building on each floor as shown in Figure R602.12.1. The rectangle shall surround all enclosed offsets and projections such as sunrooms and attached garages. Open structures, such as carports and decks, shall be permitted to be excluded. The rectangle shall have no side greater than 80 feet (24,384 mm), and the ratio between the long side and short side shall be a maximum of 3:1.

TABLE R602.12.4
MINIMUM NUMBER OF BRACING UNITS ON EACH SIDE OF THE
CIRCUMSCRIBED RECTANGLE

ULTIMATE DESIGN WIND SPEED (mph)	STORY LEVEL	EAVE- RIDGE HEIGHT (FEET)	MINIMUM NUMBER OF BRACING UNITS ON EACH LONG SIDE ^{a b d}								MINIMUM NUMBER OF BRACING UNITS ON EACH SHORT SIDE ^{a b d}							
			Len th of short side feet c								Len th of Ion side feet c							
			10	20	30	40	50	60	70	80	10	20	30	40	50	60	70	80
115																		
			2	3				6	6	7	2	3	3			6		
			1	2	3	3				5	1			3			5	

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 mile per hour = 0.447m/s.

- a. Interpolation shall not be permitted.
- b. Cripple walls or wood-framed basement walls in a walk-out condition shall be designated as the first story and the stories above shall be redesignated as the second and third stories, respectively, and shall be prohibited in a three-story structure.
- c. Actual lengths of the sides of the circumscribed rectangle shall be rounded to the next highest unit of 10 when using this table.
- d. For Exposure Category C, multiply bracing units by a factor of 1.20 for a one-story building, 1.30 for a two-story building and 1.40 for a three-story building.

R602.12.3 Bracing unit. A bracing unit shall be a full height sheathed segment of the exterior wall with no openings or vertical or horizontal offsets and a minimum length as specified herein for intermittent sheathing. Bracing units shall be considered per story for continuously sheathed structural wood panels. Interior walls shall not contribute toward the amount of required bracing. Mixing of Items 1 and 2 is prohibited on the same story.

1. Where all framed portions of all exterior walls are sheathed in accordance with Section R602.12.2, including wall areas between bracing units, above and below openings and on gable end walls, the minimum length of a bracing unit shall be 3 feet (914 mm).
2. Where the exterior walls are braced with sheathing panels in accordance with Section R602.12.2 and areas between bracing units are covered with other materials, the minimum length of a bracing unit shall be 4 feet (1219 mm).

R802.11.1 Uplift resistance. Roof assemblies shall be connected to wall plate by the use of approved connectors, consisting of truss/rafter to wall connector, having a resistance to uplift of not less than 175 installed in accordance with the manufacturer's specifications or have uplift resistance in accordance with Sections R802.11.1.2 and R802.11.1.3.

Where the uplift force does not exceed 200 pounds, rafters and trusses spaced not more than 24 inches (610 mm) on center shall be permitted to be attached to their supporting wall assemblies in accordance with Table R602.3(1) and be connected to the wall plate by the use of approved connectors, consisting of truss/rafter to wall connector, having a resistance to uplift of not less than 175 pounds installed in accordance with the manufacturer's specifications.

Where the basic wind speed does not exceed 90 mph, the wind exposure category is B, the roof pitch is 5:12 or greater, and the roof span is 32 feet (9754 mm) or less, rafters and trusses spaced not more than 24 inches (610 mm) on center shall be permitted to be attached to their supporting wall assemblies in accordance with Table R602.3(1).

R806.2 Minimum vent area. The minimum net free ventilating area shall be 1/150 of the area of the vented space.

Exception: The minimum net free ventilation area shall be 1/300 of the vented space provided one or more of the following conditions are met:

1. In Climate Zones 6, 7 and 8, a Class I or II vapor retarder is installed on the warm-in winter side of the ceiling.
2. Not less than 40 percent and not more than 50 percent of the required ventilating area is provided by ventilators located in the upper portion of the attic or rafter space. Upper ventilators shall be located not more than 3 feet (914 mm) below the ridge or highest point of the space, measured vertically. The balance of the required ventilation provided shall be located in the bottom one-third of the attic space. Where the location of wall or roof framing members conflicts with the installation of upper ventilators, installation more than 3 feet (914 mm) below the ridge or highest point of the space shall be permitted.

N1101.2 (R101.3) Intent. This chapter shall regulate the design and construction of buildings for the effective use and conservation of energy over the useful life of each new building. Additions, alterations, renovations, or repairs to an existing building, building system or portion thereof may conform to the provisions of this code as they relate to new construction without requiring the unaltered portion(s) of the existing building or building system to comply with this code. This chapter is intended to provide flexibility to permit the use of innovative approaches

and techniques to achieve this objective. This chapter is not intended to abridge safety, health or environmental requirements contained in other applicable codes or ordinances.

TABLE N1102.1.1 (R402.1.1)
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a

CLIMATE ZONE	FENESTRATION UFACTOR ^b	SKYLIGHT ^b UFACTOR	GLAZED FENESTRATION SHGC ^{b,e}	CEILING R-VALUE	WOOD FRAME WALL RVALUE	MASS WALL RVALUE ⁱ	FLOOR R-VALUE	BASEMENT ^c WALL RVALUE	SLAB ^d R-VALUE	CRAWL SPACE ^c WALL VALUE
6	0.32	0.55		49	20 or 13+5	15/19	30g	10/13	10, 4 ft	10/13

For SI: 1 foot = 304.8 mm.
 NR=Not Required

- a. R-values are minimums. U-factors and SHGC are maximums. Where insulation is installed in a cavity is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.
- b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

Exception: Skylights may be excluded from glazed fenestration SHGC requirements in Climate Zones 1 through 3 where the SHGC for such skylights does not exceed 0.30.

- c. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall. "15/19" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home.
- d. R-5 insulation shall be provided under the slab area of a heated slab in addition to required slab edge insulation R-values for slabs, as indicated in the table. The slab edge insulation for heated slabs shall not be required to extend below the slab.
- e. There are no SHGC requirements in the Marine Zone.
- f. Basement wall insulation is not required in warm humid locations as defined by Figure N1101.10 and Table N1101.10.

- g. Alternatively, insulation sufficient to fill the framing cavity providing not less than Rvalue of R-19.
- h. The first value is cavity insulation, the second value is continuous insulation, Therefore, as an example, "13 + 5" means R-13 cavity insulation plus R-5 continuous insulation
- i. Mass walls shall be accordance with Section NI 102.2.5. The second R-value applies where more than half of the insulation is on the interior of the mass wall.
- j. The minimum R-value for ceilings is further based on a minimum 6-inch (152 mm) heel height to allow the ceiling insulation to extend over the top plate.

N1102.2.8 (R402.2.8) Basement walls. Walls associated with conditioned basements shall be insulated from the top of the basement wall down to 10 feet (3,048 mm) below grade or to the basement floor, whichever is less. Walls associated with unconditioned basements shall meet this requirement unless the floor overhead is insulated in accordance with Sections NI 102.1.1 and N1102.2.7.

Exception: Exterior basement walls of enclosed mechanical rooms.

N1102.4.1.2 (R402.4.1.2) Testing. This section not adopted by the city.

N1102.4.4 (R402.44) Rooms containing fuel-burning appliances. This section is not adopted by the city.

N1103.3.2.1 (R403.3.2.1) Sealed Air Handler. This section not adopted by the city.

N1103.3.3 (R403.3.3) Sealing (Mandatory). This section not adopted by the city.

N1103.2.3 (R403.2.3) Building cavities (Mandatory). Building framing cavities shall not be used as ducts or plenums.

Exception: Stud spaces and floor joist cavities may be used for return air plenums.

N1103.5 (R403.5) Service hot water systems. Energy conservation measures for service hot water services shall be in accordance with the Plumbing code.

N1104.1 (R404.1) Lighting equipment-Mandatory. This section not adopted by the city.

SECTION 5 Plumbing. The provisions of the 2018 Uniform Plumbing Code shall apply to the installation, alterations, repairs, and replacement of plumbing systems, including equipment, appliances, fixtures, and appurtenances, and where connected to a water or sewage system for detached one- and two-family dwellings and multiple single-family dwellings (town houses) not more than three stories high with separate means of egress and their accessory structures.

SECTION 6 Electrical: The provisions of the Electrical Code as adopted by the State of South Dakota apply to the installation, alteration, repair, relocation, replacement, addition to, use, or maintenance of any electrical system, apparatus, wiring, or equipment for electrical, light, heat, power, fire alarms, and associate controls for detached one- and two-family dwellings and multiple single-family dwellings (town houses) not more than three stories high with separate means of egress and their accessory structures.

ADOPTED this 4th day of June, 2019

Jeremy Menning
MAYOR

ATTEST: (seal)

Karen Wilber
Municipal Finance Officer

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