

**ORDINANCE [REDACTED]**  
**AN ORDINANCE PROVIDING FOR THE ADOPTION OF THE 2015  
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 BRANDON, SOUTH DAKOTA:**

**SECTION 1. Adoption International Residential Building Code 2015.**

The International Residential Code, 2015 edition including Appendix E, Appendix G, and Appendix H 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 2015 edition of the International Residential Code and amendments thereto shall be applied to any building permit issued after [REDACTED]. The adoption of the International Residential Building Code, 2015 edition will become effective [REDACTED]. A printed copy as amended is on file with the City of Brandon.

**SECTION 2. Amendments, additions and deletions to the 2015 International Residential Building Code.** The following sections and subsections of building code adopted in this article shall be amended, added, or deleted as follows. All other sections or subsections of the 2015 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 Brandon, and shall be cited as such and will be referred to herein as “this code.”

**R101.2 Scope.** The provisions of the International Residential Code for One- and Two-family Dwellings 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.

**Exceptions:**

1. Live/work units complying with the requirements of Section 419 of the International Building Code shall be permitted to be built as one- and two-family dwellings or town houses. Fire suppression, if installed, may conform to Section P2904.
2. Owner-occupied lodging houses with five or fewer guestrooms shall be permitted to be constructed in accordance with the International Residential Code for One- and Two-family Dwellings. A fire sprinkler system, if installed may be in accordance with Section P2904.

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

**R102.5.1 Electrical.** The term ICC Electrical Code shall mean the 2014 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. The International Fuel Gas Code shall be administered 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. The International Mechanical Code shall be administered by the State of South Dakota.

**R102.5.4 Plumbing.** The 2015 Uniform Plumbing Code shall be administered by the City of Brandon.

**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 Brandon shall be the enforcement agency and person in charge thereof shall be known as the Building Official.

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

**R104.8 Liability.** The 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 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 building official and obtain the required permit. The building official 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 # 6-2.

**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. Children's playhouses which are less than 96 square feet, one story tall with side walls 8' feet or under.
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. Sidewalks and driveways which are replacement only projects.
6. Painting, papering, tiling, carpeting, cabinets, counter-tops and similar finish work.
7. Prefabricated swimming pools that are less than 24" inches (610 mm) deep.
8. Swings and other 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 Building Official may, except as otherwise provided herein, extend the time for action by the permittee for a period not exceeding 180 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. No more than two active (open) building permits are allowed on one property at a time.

**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 R404.1.1(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 R404.1.2(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.** When the building official 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 Brandon 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 Brandon'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 Building Official prior to the final inspection.

**R110.1 Use and occupancy.** No building or structure shall be used or occupied, and no change in the existing occupancy classification 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.

**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 thereunder 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 Brandon 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.

**Table R301.2(1)  
Climatic and Geographic Design Criteria**

1. GROUND SNOW LOAD <sup>1</sup> .....	40 psf contour
WIND DESIGN	
2. Wind Speed <sup>d</sup> .....	115 mph
3. Topographic Effects <sup>k</sup> .....	No
4. SEISMIC DESIGN CATEGORY <sup>f</sup> .....	A
SUBJECT TO DAMAGE FROM	
5. Weathering <sup>a</sup> .....	Severe
6. Frost Line Depth <sup>b</sup> .....	42 inches (1,067 mm)
7. Termite Damage <sup>c</sup> .....	Slight to Moderate
8. WINTER DESIGN TEMPERATURE <sup>e</sup> .....	-11 degrees Fahrenheit
9. ICE BARRIER UNDERLAYMENT REQUIREMENT <sup>h</sup> .....	Yes
10. FLOOD HAZARDS <sup>g</sup> Brandon entered the regular phase of the National Flood Insurance Program on September 2, 2009.	
11. AIR FREEZING INDEX <sup>i</sup> .....	3,000

12. MEAN ANNUAL TEMPERATURE<sup>j</sup> .....46 degrees Fahrenheit

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

- a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e., “negligible,” “moderate” or “severe”) for concrete as determined from the Weathering Probability Map [Figure R301.2(3)]. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.
- b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). 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(4)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.
- f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
- g. To establish flood hazard areas, the county has adopted a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in an engineered report entitled “The Flood Insurance Study for Minnehaha County, SD” dated September 2, 2009 and November 16, 2011 as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Floodway Map (FBFM) and related supporting data along with any revisions thereto. The adopted flood hazard map and supporting data are hereby adopted by reference and declared to be part of this section. If there is a conflict between the provisions of this code and the city’s floodplain management ordinance, the provisions of the floodplain management ordinance shall prevail.
- h. In accordance with Sections R905.2.7.1, 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 32°F)” at [www.ncdc.noaa.gov/fpsf.html](http://www.ncdc.noaa.gov/fpsf.html).

- 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 32°F)” at [www.ncdc.noaa.gov/fpsf.html](http://www.ncdc.noaa.gov/fpsf.html).
- 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. On roof systems that are not engineered, conventionally framed roof slopes with a rise of 3 inches (76.2 mm) or less to 12 inches (305 mm) shall be designed for a full or unbalanced snow load of not less than 30 pounds per square foot (1.44 kN/square meter) of horizontal projection. Where a roof system is designed to slope less than 1/4 inch (6.35 mm) per 12 inches (305 mm), a surcharge load of not less than 5 pounds per square foot (0.24 kN/square meter) in addition to the required live load due to snow shall be designed for. Roof slopes with over 3 inches (76.2 mm) of rise per 12 inches (305 mm) shall be designed for a full or unbalanced snow load of not less than 25 pounds per square foot (1.2 kN/square meter) of horizontal projection. Potential unbalanced accumulation of snow at valleys, parapets, roof structures, and offsets in roofs of uneven configuration shall be considered.
- m. In accordance with Section R301.2.1.2.1, the jurisdiction shall indicate the wind-blown debris zone(s). Otherwise the jurisdiction shall indicate “NO” in this part of the table.
- n. On roof systems that are not engineered, conventionally framed roof slopes with a rise of 3 inches (76.2 mm) or less to 12 inches (305 mm) shall be designed for a full or unbalanced snow load of not less than 30 pounds per square foot (1.44 kN/square meter) of horizontal projection. Where a roof system is designed to slope less than 1/4 inch (6.35 mm) per 12 inches (305 mm), a surcharge load of not less than 5 pounds per square foot (0.24 kN/square meter) in addition to the required live load due to snow shall be designed for. Roof slopes with over 3 inches (76.2 mm) of rise per 12 inches (305 mm) shall be designed for a full or unbalanced snow load of not less than 25 pounds per square foot (1.2 kN/square meter) of horizontal projection. Potential unbalanced accumulation of snow at valleys, parapets, roof structures, and offsets in roofs of uneven configuration shall be considered.



**Table R301.5**  
**Minimum Uniformly Distributed Live Loads**  
**(in pounds per square foot)**

USE	LIVE LOAD
Uninhabitable attics without storage <sup>b</sup>	10
Uninhabitable attics with limited storage <sup>b, g</sup>	20
Habitable attics and attics served with fixed stairs	30
Balconies (exterior) and decks <sup>e</sup>	40
Fire escapes	40
Guardrails and handrails <sup>d</sup>	200 <sup>h</sup>
Guardrails in-fill components <sup>f</sup>	50 <sup>h</sup>
Passenger vehicle garages <sup>a</sup>	50 <sup>a</sup>
Rooms	40
Stairs	40 <sup>c</sup>

For SI: 1 pound per square foot = 0.0479 kPa, 1 square inch = 645 mm<sup>2</sup>, 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 maximum clear height between joists and rafters is less than 42 inches, or where there are not two or more adjacent trusses with web configurations capable of accommodating an assumed rectangle 42 inches high 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 300-pound 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 R502.2.2 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 maximum 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 accessible 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 a minimum of 30 inches.
2. The slopes of the joists or truss bottom chords are no 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 lb/ft<sup>2</sup>.

- 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 with exposure from both sides	< 5 feet
	Not fire-resistance rated	0 hours	≥ 5 feet
Projections	Fire-resistance rated	1 hour on the underside	> 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 R317.3	< 5 feet
		None required	5 feet

For SI: 1 foot = 304.8 mm.

N/A = Not Applicable.

**R302.2 Townhouses.** Common walls separating townhouses shall be assigned a fire –resistance rating in accordance with Section R302.2, 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 Electrical Code. Penetrations of the membrane of common walls for electrical outlets 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 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 E 119 or UL 263.
- 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 or equivalent tested in accordance with ASTM E 119 or UL 263.

**R302.2.1 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.

**R302.2.4 Structural independence.** Each individual *townhouse* shall be structurally independent.

**Exceptions:**

1. Foundations supporting *exterior walls* or common walls.
2. Structural roof and wall sheathing from each unit fastened to the common wall framing.
3. Nonstructural wall and roof coverings.
4. Flashing at termination of roof covering over common wall.
5. *Townhouses* separated by a common wall as provided in Section R302.2, Item 1.

**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 M1502.3
- 4) Vents and chimneys serving fuel-burning appliances shall be terminated in accordance with the applicable provisions of Chapters 18 and 24.

**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.

**R310.2.1 Ladder and steps.** Window wells with a vertical depth greater than 48" inches (1220 mm) shall be equipped with a permanently affixed ladder or steps usable with the window in the fully open position. Ladders or steps required by this section shall not be required to comply with Sections R311.7 and R311.8. Ladders or rungs shall have an inside width of at least 12 inches (305 mm), shall project at least 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 window well.

**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 provided that the openings located more than 30” inches, as measured vertically, to the floor or grade below, do not permit the passage of a 5-inch diameter sphere.

**R311.7.8.2 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.

**R311.7.8.3 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 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 occurs with a valuation of more than \$1,000, or where one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required by new construction.

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, is exempt from the requirements of this section.
- 2) Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section.

**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.

**R315.2.2 Alterations, repairs and additions.** When alterations, repairs or additions requiring a permit occur with a valuation of more than \$1000, or when one or more sleeping rooms are added or created in existing dwellings, 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, are exempt from the requirements of this section.
2. Installation, alteration or repairs of plumbing, electrical or mechanical systems are exempt from the requirements of this section.

\*\*\*\*\*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.

**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, above-ground 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.

**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.

**Exceptions:**

1. Protection of freestanding accessory structures with an area of 1,500 square feet (139 m<sup>2</sup>) 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 m<sup>2</sup>) 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.

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

**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.

**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**

STORY LEVEL	EAVE-TO-RIDGE HEIGHT (feet)	MINIMUM NUMBER OF BRACING UNITS ON EACH LONG SIDE Length of short side (feet)								MINIMUM NUMBER OF BRACING UNITS ON EACH SHORT SIDE Length of long side (feet)							
		10	20	30	40	50	60	70	80	10	20	30	40	50	60	70	80
	10	1	2	2	2	3	3	4	4	1	2	2	2	3	3	4	5
		2	3	3	4	5	6	6	7	2	3	3	4	5	6	6	7
	20	1	2	3	3	4	4	5	5	1	2	3	3	4	4	5	5
		2	3	4	5	6	7	7	8	2	3	4	5	6	7	7	8

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

- Interpolation shall not be permitted.
- Cripple walls or wood-framed basement walls in a walk-out condition of a one-story structure shall be designed as the first floor of a two-story house.
- Actual lengths of the sides of the circumscribed rectangle shall be rounded to the next highest unit of 10 when using this table.

**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.

- 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).
- 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 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).

**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<sup>a</sup>**

For SI: 1 foot = 304.8 mm.

- a. R-values are minimums. U-factors and SHGC are maximums. When 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. “15/19” means R-15 continuous insulation on the interior or exterior of the home or R-19 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

CLIMATE ZONE	FENESTRATION U-FACTOR <sup>b</sup>	SKYLIGHT <sup>b</sup> U-FACTOR	GLAZED FENESTRATION SHGC <sup>b,e</sup>	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE <sup>i</sup>	FLOOR R-VALUE	BASEMENT <sup>c</sup> WALL R-VALUE	SLAB <sup>d</sup> R-VALUE	CRAWL SPACE <sup>c</sup> WALL VALUE
6	0.32	0.55	NR	49	20 or 13 + 5	15/19	30 <sup>g</sup>	10/13	10, 4 ft	10/13

continuous insulation on the interior or exterior of the home. “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. The perimeter wall of an enclosed mechanical room is

- allowed to not be a component of the thermal envelope.
- d. R-5 shall be added to the required slab edge R-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet, whichever is less in Zones 1 through 3 for heated slabs.
  - 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. Or insulation sufficient to fill the framing cavity, R-19 minimum.
  - h. First value is cavity insulation, second is continuous insulation or insulated siding, so “13 + 5” means R-13 cavity insulation plus R-5 continuous insulation or insulated siding. If structural sheathing covers 40 percent or less of the exterior, continuous insulation R-value shall be permitted to be reduced by no more than R-3 in the locations where structural sheathing is used—to maintain a consistent total sheathing thickness.
  - i. The second R-value applies when more than half 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 N1102.1.1 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 (R402.4.4) 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 2015 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 \_\_\_\_\_.

\_\_\_\_\_  
Larry Beesley  
MAYOR

(Seal)

ATTEST:

\_\_\_\_\_  
Dennis E. Olson  
Municipal Finance Officer

FIRST READING AND HEARING – \_\_\_\_\_  
SECOND READING AND ADOPTION – \_\_\_\_\_  
PUBLICATION – \_\_\_\_\_  
EFFECTIVE DATE – \_\_\_\_\_

