

Introduced by _____

First Reading _____

Second Reading _____

Ordinance No. _____

Council Bill No. B 257-19

AN ORDINANCE

repealing Article VI of Chapter 6 of the City Code relating to the 2015 Edition of the International Residential Code for One- and Two-Family Dwellings and enacting in lieu thereof a new Article VI adopting the 2018 Edition of the International Residential Code for One- and Two-Family Dwellings; and fixing the time when this ordinance shall become effective.

BE IT ORDAINED BY THE COUNCIL OF THE CITY OF COLUMBIA, MISSOURI, AS FOLLOWS:

SECTION 1. Article VI of Chapter 6 of the Code of Ordinances, City of Columbia, Missouri, relating to the 2015 Edition of the International Residential Code for One- and Two-Family Dwellings, is hereby repealed and in lieu thereof a new Article VI, relating to the 2018 Edition of the International Residential Code for One- and Two-Family Dwellings, is hereby enacted reading in words and figures as follows:

CHAPTER 6. BUILDINGS AND BUILDING REGULATIONS

...

ARTICLE VI. ONE- AND TWO-FAMILY DWELLING CODE

Sec. 6-65. Adopted.

The 2018 Edition of the International Residential Code for One- and Two-Family Dwellings, published by the International Code Council, Inc., including Appendices A, B, C, E, F, G, H, K, N, Q, R, S and U one copy of which has been on file with the city clerk for a period of ninety (90) days prior to the adoption of this article, is hereby adopted by reference and made a part of the Code of Ordinances, City of Columbia, Missouri as fully as if set forth in its entirety. At least one (1) copy of the 2018 Edition of the International Residential Code for One- and Two-Family Dwellings shall remain on file in the office of the city clerk and shall be kept available for public use, inspection and examination.

Sec. 6-66. Amendments.

The code adopted by this article is hereby amended by substituting the following sections in lieu of those sections with corresponding numbers in the code, or, where there

is no corresponding section in the code, the following sections shall be enacted as additions to the code:

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

R103.1 Director. The administration and enforcement of this code shall be the duty of the director of community development, who shall be referred to as the building official in this code. The building official is hereby authorized to take such action as may be reasonably necessary to enforce the provisions of this code. Such persons may be appointed and authorized as assistants or representatives of the director as may be necessary to carry out the provisions of this code.

R103.2 Appointment. Delete in its entirety.

R103.3 Deputies. Delete in its entirety.

R103.4 Restriction of employees. An employee connected with the Division of Building and Site Development shall not be engaged in or directly or indirectly connected with the furnishing of labor, materials or appliances for the construction, alteration or maintenance of a building, or the preparation of plans or of specifications therefore, unless such employee is the owner of the building; nor shall such employee engage in any work which conflicts with such employee's official duties or with the interest of the department.

R104.7 Department records. An official record shall be kept of all business and activities of the division specified in the provisions of this code, and all such records shall be open to public inspection at all appropriate times and according to reasonable rules to maintain the integrity and security of such records.

R104.8 Liability. Any officer or employee charged with the enforcement of this code, while acting on behalf of the city, shall not thereby render such individual liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of any act performed in the discharge of official duties. Any suit instituted against any 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 defended by the legal representative of the jurisdiction until the final termination of the proceedings. The officer or employee shall not be liable for costs in any action, suit or proceeding that is instituted pursuant to the provisions of this code; and any officer or employee acting within the scope of employment and in good faith and without malice, shall be free from liability for acts performed under any of its provisions or by reason of any act or omission in the performance of official duties in connection therewith. Nothing contained herein shall be deemed a waiver of the immunities and protection afforded to the city or officers and employees pursuant to state and federal law.

R104.8.1 Legal defense. Delete in its entirety.

R104.10.1 Flood Hazard Areas. Delete in its entirety.

R105.1.1 License required. All building, electrical, plumbing, mechanical and fuel gas permits may be issued to the general contractor, on behalf of master electrical, master mechanical, and master plumbing contractors, for new one- and two-family dwellings and building alteration or building additions to one- and two-family dwellings. All electrical, mechanical, plumbing and fuel gas work must be performed by trade contractors licensed by the City of Columbia for the appropriate trade or as allowed by ordinance.

R105.1.2 Vacant lots. Vacant lot areas left from demolition shall be filled, leveled and graded to prevent ponding. The lot shall be left in a natural buildable condition without hazards and mowable. There shall be sufficient vegetative cover to prevent erosion. The complete structure shall be removed and all accessory structures are to be removed at the time of demolition of the primary structure. All trash, vehicles, trailers, etc. must be removed from the lot.

R106.2 Site plan or plat plan. Add paragraph: More than two (2) single family dwellings, multiple duplexes, and/or townhomes on one (1) lot shall require commercial civil/site documents per section 6-17 of the City Code amending IBC 107.2.6, sealed by a professional engineer licensed in the State of Missouri.

R109.1.6.1 Elevation Documentation. Delete in its entirety.

R110.3 Certificate issued. Delete subsection 3. relating to the requirement for owner's address.

R112.1 General. Any aggrieved person shall have the right to appeal a decision of the code official to the building construction codes commission. Applications for appeal shall be filed in accordance with the procedures set out in Section 113 of the Building Code of Columbia, Missouri.

R112.2.1 Determination of substantial improvements in areas prone to flood. Delete in its entirety.

R112.2.2 Criteria for issuance of a variance for areas prone to flooding. Delete in its entirety.

R112.3 Qualifications. Delete in its entirety.

R113.4 Violation penalties. Replace with the following: Any person who shall violate a provision of this code or shall fail to comply with any of the requirements thereof, shall be guilty of a misdemeanor and upon conviction thereof, shall be punished by a fine of not more than one thousand dollars (\$1,000.00) or by imprisonment not exceeding one (1) year, or by both such fine and imprisonment. Each day that a violation continues shall be deemed a separate offense.

R202 Definitions. Accessory Structure. A structure not greater than three thousand (3,000) square feet (279m) in floor area, and not over three (3) stories or exceeding twenty-four (24) feet in height with separate means of egress, and shall not occupy more than thirty percent (30%) of the required rear yard, and shall not exceed the height of the main structure, the use of which is customarily accessory to and incidental to that of the dwelling(s) and which is located on the same lot. (See Unified Development Code Sec. 29-3.3(ii) for additional requirements.)

R202 Structure. Add following exception:

Exception: For existing decks being replaced, the same size will not be considered a structure for zoning purposes.

Table 301.2(1). The following values shall be inserted into Table R301.2(1):

Ground Snow Load - 20; Wind Speed (mph) - 115; Topographic Effects – No; Special Wind Region – No; Windborne Debris Zone – No; Seismic Design Category - B, Weathering - Yes Severe; Frost Line Depth - 30-inches; Termite - Moderate to Heavy; Winter Design Temperature - +4 Degrees Fahrenheit; Ice Barrier Underlayment Required - No; Flood Hazards - As regulated by City of Columbia Ordinance; Air Freezing Index - 0 to 1500; Mean Annual Temperature - 55 degrees Fahrenheit.

Elevation – 778; Latitude – 39 degrees; Winter Heating – 4 Degrees; Summer Cooling – 94 Degrees; Altitude Correction Factor – No; Indoor Design Temperature – 72 Degrees; Design Temperature Cooling – 75 Degrees; Heating Temperature Difference – 68 Degrees; Cooling Temperature Difference – 19 Degrees; Wind Velocity Heating – 25; Wind Velocity Cooling – 7.5; Coincident Wet Bulb – 78; Daily Range – Medium; Winter Humidity – 20; Summer Humidity - 60.

Table R301.5. Add note g.4.: Must also include a vertical egress component.

R302.5.1 Opening protection. Delete from the last sentence: "equipped with a self-closing or automatic-closing device".

R303.6 Outside opening protection. At the end of the paragraph, add the following:

Exception: Bathroom exhaust fans may be exhausted into a soffit vent if composed of approved materials as determined by the building official.

Figure 307.1 Water closet: All water closets shall be spaced at least fifteen (15) inches from the centerline of the fixture to any wall or plumbing fixture, except the centerline of the water closet may be spaced twelve (12) inches if located next to a bathtub/shower.

R311.7.5.1 Risers. Change the first sentence to read: The riser height shall be not more than seven and seven-eighth (7-7/8) inches (200mm). The remainder of the paragraph shall remain as written.

R311.7.5.1 Risers. At the end of the section, add the following exception 3.:

- 3. Closed risers are not required on exterior stairs where the riser is less than 10' above grade.

R312.1.1 Where Required. Guards shall be provided for those portions of open-sided walking surfaces, including stairs, ramps and landings, that are located more than 30 inches (762 mm) measured vertically to the floor or grade below. Insect screening shall not be considered as a guard. Grassed or landscaped areas a minimum of three feet wide behind a retaining wall shall not be deemed a walking surface.

R312.2 Window fall protection. Delete in its entirety.

R313.1 Townhouse automatic fire sprinkler systems. Delete in its entirety.

R313.2 One- and two-family dwelling automatic fire sprinkler systems. Delete in its entirety.

R313.3 Automatic fire sprinkler systems. A builder of a single-family dwelling or residences or multi-unit dwellings of four (4) or fewer units shall offer to any purchaser, on or before the time of entering into the purchase contract, the option at the purchaser's cost to install or equip an automatic fire sprinkler system in the dwelling, residence or unit. Notwithstanding any other provision of law to the contrary, no purchaser of such a single-family dwelling, residence, or multi-unit dwelling shall be denied the right to choose or decline to install an automatic fire sprinkler system in such dwelling or residence being purchased by any code, ordinance, rule, regulation, order or resolution by any county or other political subdivision. Pursuant to RSMo. § 67.281, the mandatory option for purchasers to have the right to choose and the requirement that the builders offer to purchasers the option to purchase an automatic fire sprinkler system in connection with the purchase of any single-family dwelling, residence, or multi-unit dwelling of four (4) or fewer units is hereby incorporated into the code.

R314.4 Interconnection. At the end of the section add:

Exception: In alterations, smoke alarms shall not be required to be interconnected if the dwelling is no more than two (2) stories.

R314.6 Power source. At the end of the section, add the following exception 3.:

- 3. Smoke alarms in alterations shall be permitted to be battery operated if the dwelling is no more than two (2) stories.

R315.5. Interconnectivity. Add the following to the exception: Carbon monoxide alarms shall not be required to be interconnected if the dwelling is no more than two (2) stories.

R315.6 Power source. At the end of the section, add the following exception: 3. Carbon monoxide alarms in alterations shall be permitted to be battery operated if the dwelling is no more than two (2) stories.

R322 Flood Resistant Construction. Buildings and structures constructed in whole or in part in a floodplain overlay district shall meet the requirements of section 29-2.3(d) of the Code of Ordinances.

R326.1. General. The design and construction of pools shall comply with section 11-277 of the Code of Ordinances adopting the 2015 “Swimming Pool Ordinance and Guide for Swimming Pool Design and Operation.” The Swimming Pool Ordinance and guide for Swimming Pool Design and Operation is attached to ordinance number 002439.

R326.2 Barrier requirements. Barrier requirements must meet the standards of the 2018 International Swimming Pool and Spa Code (ISPSC) Section 305.

ISPSC 305. The provisions of this section shall apply to the design of barriers for restricting entry into areas having pools and spas. Where spas or hot tubs are equipped with a lockable safety cover complying with ASTM F1346 and swimming pools are equipped with a powered safety cover that complies with ASTM F1346, the areas where those spas, hot tubs or pools are located shall not be required to comply with Sections ISPSC 305.2 through 305.7.

ISPSC 305.2 Outdoor swimming pools and spas. Outdoor pools and spas and indoor swimming pools shall be surrounded by a barrier that complies with Sections ISPSC 305.2.1 through 305.7.

ISPSC 305.2.1 Barrier height and clearances. Barrier heights and clearances shall be in accordance with all of the following:

1. The top of the barrier shall be not less than 48 inches (1219 mm) above grade where measured on the side of the barrier that faces away from the pool or spa. Such height shall exist around the entire perimeter of the barrier and for a distance of 3 feet (914 mm) measured horizontally from the outside of the required barrier.
2. The vertical clearance between grade and the bottom of the barrier shall not exceed 2 inches (51 mm) for grade surfaces that are not solid, such as grass or gravel, where measured on the side of the barrier that faces away from the pool or spa.
3. The vertical clearance between a surface below the barrier to a solid surface, such as concrete, and the bottom of the required barrier shall not exceed 4 inches (102 mm) where measured on the side of the required barrier that faces away from the pool or spa.
4. Where the top of the pool or spa structure is above grade, the barrier shall be installed on grade or shall be mounted on top of the pool or spa structure. Where the barrier is mounted on the top of the pool or spa, the vertical

clearance between the top of the pool or spa and the bottom of the barrier shall not exceed 4 inches (102 mm).

ISPSC 305.2.2 Openings. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

ISPSC 305.2.3 Solid barrier surfaces. Solid barriers that do not have openings shall not contain indentations or protrusions that form handholds and footholds, except for normal construction tolerances and tooled masonry joints.

ISPSC 305.2.4 Mesh fence as a barrier. Mesh fences, other than chain link fences in accordance with Section ISPSC 305.2.7, shall be installed in accordance with the manufacturer's instructions and shall comply with the following:

1. The bottom of the mesh fence shall be not more than 1 inch (25 mm) above the deck or installed surface or grade.
2. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall not permit the fence to be lifted more than 4 inches (102 mm) from grade or decking.
3. The fence shall be designed and constructed so that it does not allow passage of a 4-inch (102 mm) sphere under any mesh panel. The maximum vertical clearance from the bottom of the mesh fence and the solid surface shall be not greater than 4 inches (102 mm) from grade or decking.
4. An attachment device shall attach each barrier section at a height not lower than 45 inches (1143 mm) above grade. Common attachment devices include, but are not limited to, devices that provide the security equal to or greater than that of a hook-and-eye-type latch incorporating a spring-actuated retaining lever such as a safety gate hook.
5. Where a hinged gate is used with a mesh fence, the gate shall comply with Section ISPSC 305.3.
6. Patio deck sleeves such as vertical post receptacles that are placed inside the patio surface shall be of a nonconductive material.
7. Mesh fences shall not be installed on top of onground residential pools.

ISPSC 305.2.5 Closely spaced horizontal members. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the pool or spa side of the fence. Spacing between vertical members shall not exceed 1¾ inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1¾ inches (44 mm) in width.

ISPSC 305.2.6 Widely spaced horizontal members. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm). Where there are decorative cutouts within vertical members, the interior width of the cutouts shall not exceed 1¾ inches (44 mm).

ISPSC 305.2.7 Chain link dimensions. The maximum opening formed by a chain link fence shall be not more than 1¾ inches (44 mm). Where the fence is provided with slats fastened at the top and bottom that reduce the openings, such openings shall be not greater than 1¾ inches (44 mm).

ISPSC 305.2.8 Diagonal members. Where the barrier is composed of diagonal members, the maximum opening formed by the diagonal members shall be not greater than 1¾ inches (44 mm). The angle of diagonal members shall be not greater than 45 degrees (0.79 rad) from vertical.

ISPSC 305.2.9 Clear zone. There shall be a clear zone of not less than 36 inches (914 mm) between the exterior of the barrier and any permanent structures or equipment such as pumps, filters and heaters that can be used to climb the barrier.

ISPSC 305.2.10 Poolside barrier setbacks. The pool or spa side of the required barrier shall be not less than 20 inches (508 mm) from the water's edge.

ISPSC 305.3 Gates. Access gates shall comply with the requirements of Sections ISPSC 305.3.1 through 305.3.3 and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool or spa, shall be self-closing and shall have a self-latching device.

ISPSC 305.3.1 Utility or service gates. Gates not intended for pedestrian use, such as utility or service gates, shall remain locked when not in use.

ISPSC 305.3.2 Double or multiple gates. Double gates or multiple gates shall have not fewer than one leaf secured in place and the adjacent leaf shall be secured with a self-latching device. The gate and barrier shall not have openings larger than ½ inch (12.7 mm) within 18 inches (457 mm) of the latch release mechanism. The self-latching device shall comply with the requirements of Section 305.3.3.

ISPSC 305.3.3 Latches. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from grade, the release mechanism shall be located on the pool or spa side of the gate not less than 3 inches (76 mm) below the top of the gate, and the gate and barrier shall not have openings greater than ½ inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

ISPSC 305.4 Structure wall as a barrier. Where a wall of a dwelling or structure serves as part of the barrier and where doors or windows provide direct access to the pool or spa through that wall, one of the following shall be required:

1. Operable windows having a sill height of less than 48 inches (1219 mm) above the indoor finished floor and doors shall have an alarm that produces an audible warning when the window, door or their screens are opened. The alarm shall be listed and labeled as a water hazard entrance alarm in accordance with UL 2017. In dwellings or structures not required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located 54 inches (1372 mm) or more above the finished floor. In dwellings or structures required to be Accessible units, Type A units or Type B units, the operable parts of the alarm deactivation switches shall be located not greater than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the finished floor.
2. A safety cover that is listed and labeled in accordance with ASTM F1346 is installed for the pools and spas.
3. An approved means of protection, such as self-closing doors with self-latching devices, is provided. Such means of protection shall provide a degree of protection that is not less than the protection afforded by Item 1 or 2.

ISPSC 305.5 Onground residential pool structure as a barrier. An onground residential pool wall structure or a barrier mounted on top of an onground residential pool wall structure shall serve as a barrier where all of the following conditions are present:

1. Where only the pool wall serves as the barrier, the bottom of the wall is on grade, the top of the wall is not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, the wall complies with the requirements of Section ISPSC 305.2 and the pool manufacturer allows the wall to serve as a barrier.
2. Where a barrier is mounted on top of the pool wall, the top of the barrier is not less than 48 inches (1219 mm) above grade for the entire perimeter of the pool, and the wall and the barrier on top of the wall comply with the requirements of Section ISPSC 305.2.
3. Ladders or steps used as means of access to the pool are capable of being secured, locked or removed to prevent access except where the ladder or steps are surrounded by a barrier that meets the requirements of Section ISPSC 305.
4. Openings created by the securing, locking or removal of ladders and steps do not allow the passage of a 4-inch (102 mm) diameter sphere.

5. Barriers that are mounted on top of onground residential pool walls are installed in accordance with the pool manufacturer's instructions.

ISPSC 305.6 Natural barriers. In the case where the pool or spa area abuts the edge of a lake or other natural body of water, public access is not permitted or allowed along the shoreline, and required barriers extend to and beyond the water's edge not less than 18 inches (457 mm), a barrier is not required between the natural body of water shoreline and the pool or spa.

ISPSC 305.7 Natural topography. Natural topography that prevents direct access to the pool or spa area shall include but not be limited to mountains and natural rock formations. A natural barrier approved by the governing body shall be acceptable provided that the degree of protection is not less than the protection afforded by the requirements of Sections ISPSC 305.2 through 305.5.

R401.1 Application. Add Exception: Foundation repairs for one- and two-family dwellings shall not require geotechnical evaluation or structural calculations.

Table R401.4.1 PRESUMPTIVE LOAD-BEARING VALUES OF FOUNDATION MATERIALS: Load-Bearing pressure (pounds per square foot) column, change value for clay, sandy clay, silty clay, clayey silt, silt and sandy silt (CL, ML, MH, and CH) from 1,500 to 2,000 leaving footnote b.

Figure R403.1(1) Concrete and Masonry foundation details. A slab on ground with turned down footings shall have the following: a #4 reinforcement bar spaced a minimum of forty-eight (48) inches on centers to provide connection of footing to slab. The vertical rods shall extend to within four (4) inches of the bottom of the footing and be turned to provide a horizontal leg that extends a minimum of twelve (12) inches into the slab.

R403.1.6 Foundation anchorage. Add the following to the end of the section, prior to the Exceptions: The connection of the foundation walls to floors shall be per the alternatives labeled 1.1, 1.2, 1.3, 1.4, 2.1, 2.1, 3.1, 3.2 or 4.

NOTE: Drawings as stated above are on file in the office of the building official.

R404.4 Retaining walls. Add the following to the end of the section: As an alternative, retaining walls may be built per Alternative 4 listed in the amendment of Section R403.1.6 with a six (6) foot dead man placed for lateral support at each end of the unsupported wall and at the spacing shown. The retaining wall must be drained per Figure 405.1 or equivalent.

R405.1 Concrete or masonry foundations. Drains shall be provided around all concrete or masonry foundations that retain earth and enclose habitable or usable spaces located below grade. Drainage tiles, gravel or crushed stone drains, shall be installed at or below the area to be protected and shall discharge by gravity or mechanical means into an

approved drainage system. Gravel or crushed stone drains shall extend at least one (1) foot (305 mm) beyond the outside edge of the footing and six (6) inches (152 mm) above the top of the footing and be covered with an approved filter membrane material and shall include a drain tile pipe surrounded with an approved filter membrane or the filter membrane shall cover the washed gravel or crushed rock covering the drain as shown in figure R405.1. The drain pipe can be placed directly on top of the footing. The top of open joints of the drainage tiles or perforated pipe shall be protected with strips of building paper, and the drainage tiles or perforated pipe shall be placed directly on the top of the footing or placed on a minimum of two (2) inches (51 mm) of washed gravel or crushed rock at least one size larger than the tile joint opening or perforation and covered with not less than six (6) inches (152 mm) of the same material. Foundation Drainage Figure R405.1 as adopted, shall be considered to satisfy the provisions of this subsection.

NOTE: Foundation Figure R405.1 as stated above, is on file in the office of the building official

R602.3.1 Stud size, height and spacing. Amend Exception 2. as follows:

2. Where snow loads are less than or equal to twenty-five (25) pounds per square foot, and the ultimate design wind speed is less than or equal to 130 mph, two (2) inch by six (6) inch studs supporting a roof load with not more than six (6) feet of tributary length shall have a maximum height of eighteen (18) feet where spaced at sixteen (16) inches on center, or twenty (20) feet where spaced at twelve (12) inches on center. Studs shall be a minimum No. 2 grade lumber. Alternatively two (2) inch by six (6) inch No. 2 grade studs supporting a roof and floor load with not more than ten (10) foot of tributary length shall have a maximum stud height of fourteen (14) feet.

R802.5.2.2 Rafter ties. At the end of the section, add the following sentence: Rafter ties shall be spaced not more than four (4) feet (1219 mm) on center.

R802.11.1.3 Uplift connection strap. Where energy bands are used and the sheathing does not extend to the nailer above the energy band, an uplift connection strap shall be placed every four (4) feet.

M1411.8 Locking access port caps. Delete in its entirety.

M1501.1 Outdoor discharge. At the end of the section, add a second exception:

Exception: Bathroom fan air may be exhausted into a soffit vent if composed of approved materials as determined by the building official.

M1502.4.2 Duct installation. Delete the following words from the next to the last sentence: "...that protrude more than 1/8 inch (3.2 mm) into the inside of the duct".

M1505.2 Recirculation of air. At the end of the section, add the following:

Exception: Bathroom fan air may be exhausted into a soffit vent if composed of approved materials as determined by the building official.

G2414.5.3 Copper tubing. Replace the second paragraph with the following: Copper pipe and copper tubing shall not be allowed for fuel gas piping systems.

G2415.14 Piping underground beneath buildings. At the end of the section, add the following: Any underground gas piping allowed by this section shall only be approved for gas that is less dense than the atmospheric pressure and shall be installed in accordance with G2415.12.1.

G2415.14.2 Conduit with both ends terminating indoors. Delete in its entirety.

G2417.4.1 Test pressure. Replace the first sentence of the section with the following: The test pressure to be used shall be not less than one and one-half (1.5) times the proposed maximum working pressure, but not less than thirty (30) psig, irrespective of design pressure.

G2419.4 Sediment trap. Replace "any length" with "3½" minimum length" in the second sentence.

P2602.1.2 Availability. A potable public water supply system shall be considered available to a building when any portion of the property is located within two hundred twenty-five (225) feet of the public water main.

P2603.5 Freezing. A water, soil or waste pipe shall not be installed outside of a building, or concealed in outside walls, or in any place subjected to freezing temperature, unless adequate provision is made to protect such pipe from freezing by insulation, heat or both. Water pipes shall not be installed in an exterior wall cavity in one and two family dwellings. For purposes of this section exterior wall cavities shall mean all walls that rain can fall upon. Water service piping shall be installed below recorded frost penetration but not less than thirty (30) inches below grade.

P2603.5.1 Sewer depth. Building sewers, including the portion of the building drain beyond the exterior wall, shall be a minimum of thirty (30) inches below finished grade at the point of septic tank connection. Building sewers shall be a minimum of thirty (30) inches below grade. The building official may approve a lesser depth of the building drain portion if there are extraordinary circumstances (e.g., bedrock).

P2604.3 Backfilling. Replace the second sentence of the section with the following: Backfill shall be free from rocks, broken concrete and frozen chunks until the pipe is covered by not less than twelve (12) inches of tamped earth or granular material.

TABLE P2605.1 Piping support. Footnote B to be used for water distribution piping only.

P2705.1 General., 5. Water closets, lavatories and bidets. Amend first sentence to read: "All water closets shall be spaced fifteen (15) inches from the centerline of the fixture to any wall or plumbing fixture except the centerline of the water closet may be spaced twelve (12) inches is located next to the bathtub/shower." Remainder of the paragraph is unchanged.

P2903.5 Water hammer. Add: *Exception:* A water-hammer arrestor is not needed in water distribution systems using PEX piping or systems using a combination of PEX and copper.

P2906.9.1.3 CPVC/AL/CPVC pipe. Amend first sentence as follows: "Joint surfaces shall be clean and free of moisture, and purple primer shall be applied."

P2906.9.1.4 PVC plastic pipe. A primer that conforms to ASTM F 656 shall be applied to PVC solvent-cemented joints. Purple primer shall be used below grade. Solvent cement for PVC plastic pipe conforming to ASTM D 2564 shall be applied to all joint surfaces. If purple primer is used, Section P2503 Inspections and Tests shall not be required.

P3003.9.2 Solvent cementing. Delete exceptions. Add: If upon inspection the aboveground joints do not have purple primer, a water test shall be performed and inspected.

P3103.1 Roof extension. Replace first sentence with the following: Open vent pipes that extend through a roof shall terminate not less than twelve (12) inches above the roof.

P3113.1 Size of vents. Add sentence to paragraph: At least one (1) vent shall be three (3) inch unreduced in size extending from the main building drain through the roof.

Chapters 34 through 43 of the 2018 International Residential Code are superseded by the requirements as stated in the 2017 National Electrical Code (NFPA 70-2017).

Appendix F, Radon Control Methods, Section AF101 Scope, AF101.1 General: Is amended to read: This appendix contains requirements for new construction and shall apply without regard to zone designation in Figure AF101 and Table AF101(1).

Appendix F, Radon Control Methods, is amended by deleting section *AF103.4.2 Concrete joints* in its entirety.

Appendix F, Radon Control Methods, is amended by deleting section *AF103.12 Power Source* in its entirety.

SECTION 2. The repeal of Article VI of Chapter 6 of the Code of Ordinances, City of Columbia, Missouri, relating to the 2015 Edition of the International Residential Code for One- and Two-Family Dwellings shall not affect any offense or act committed or done or any penalty or forfeiture incurred before the effective date of this ordinance.

SECTION 3. This ordinance shall be in full force and effect from and after October 1, 2019.

PASSED this _____ day of _____, 2019.

ATTEST:

City Clerk

Mayor and Presiding Officer

APPROVED AS TO FORM:

City Counselor