OKLAHOMA

Title 748: UNIFORM BUILDING CODE COMMISSION

Chapter 20 - Adopted Codes – Subchapters 5 and 6

International Residential Code®, 2018 Edition (IRC®, 2018)

748:20-5-1 through 748:20-6-53

NOTICES:

1. Section headers within this document marked "Revoked" do not revoke the current chapter in the 2018 Edition of the International Residential Code® (IRC®, 2018), associated with this revocation language. This language simply means the modifications made in a previous adoption of the IRC have been "revoked" and the language reverts to the published content of the currently adopted code without amendment.
2. Section headers within this document marked "Reserved" do not omit the corresponding chapter in the 2018 Edition of the International Residential Code® (IRC® 2018), associated with this reserved language. This language simply means no modifications were made to the Chapter in the current adoption of the IRC® 2018 and the Chapter stands, as published, as part of the statewide minimum code - the section title is merely a space holder for future rulemaking modifications, if needed.
3. Through its rulemaking process, the OUBCC has adopted the 2018 edition of the International Residential Code® (IRC®, 2018), which has been promulgated as a permanent rule pursuant to Oklahoma law at OAC 748:20-5-1.
4. The rules of the Oklahoma Uniform Building Code Commission found on this website are **unofficial.** The official rules are published in The Oklahoma Administrative Code and The Oklahoma Register, as required by 75 O.S. § 250 et seq. To order an official copy of these rules, contact the Office of Administrative Rules at: (405) 521-4911.

CHAPTER 20. ADOPTED CODES

SUBCHAPTER 5. IRC® 2015

748:20-5-1. Adoption of IRC® [AMENDED AND RENUMBERED TO 748:20-6-1]
[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-1 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-2. Effect of Adoption [AMENDED AND RENUMBERED TO 748:20-6-2]
[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-2 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-3. IRC® [AMENDED AND RENUMBERED TO 748:20-6-3]
[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended 34 Ok Reg 2107, eff 9-15-17; Amended and renumbered to 748:20-6-3 at 39 Ok Reg 2364, eff 9-14-22]]

748:20-5-4. IRC® [AMENDED AND RENUMBERED TO 748:20-6-4]
[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-4 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-4.1. Participation in federal programs and/or federally funded or financed projects [AMENDED AND RENUMBERED TO 748:20-6-5]
[**Source:** Added at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-5 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-5. IRC® [AMENDED AND RENUMBERED TO 748:20-6-6]
[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-6 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-5.1. IRC® [AMENDED AND RENUMBERED TO 748:20-6-7]
[**Source:** Added at 33 Ok Reg 1852, eff 11-1-16, Amended 35 Ok Reg 2137 eff 9-17-18; Amended and renumbered to 748:20-60-7 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-6. IRC® [AMENDED AND RENUMBERED TO 748:20-6-8]
[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16, Amended at 35 Ok Reg 2137 eff 9-17-18; Amended and renumbered to 748:20-6-8 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-7. IRC® [AMENDED AND RENUMBERED TO 748:20-6-9]
[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-9 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-8. IRC® [AMENDED AND RENUMBERED TO 748:20-6-10]
[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-10 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-9. IRC® [AMENDED AND RENUMBERED TO 748:20-6-11]
[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16, Amended at 35 Ok Reg. 2137, eff 9-17-18; Amended and renumbered to 748:20-6-11 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-10. IRC® [AMENDED AND RENUMBERED TO 748:20-6-12]
[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-12 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-11. IRC® [AMENDED AND RENUMBERED TO 748:20-6-13]
[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-13 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-11.1. IRC® [AMENDED AND RENUMBERED TO 748:20-6-14]

[**Source:** Added at 33 Ok Reg 1852, eff 11-1-16, Amended at 35 Ok Reg 2137 eff 9-17-18; Amended and renumbered to 748:20-6-14 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-11.2. IRC® [AMENDED AND RENUMBERED TO 748:20-6-15]

[**Source:** Added at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-15 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-12. IRC® [AMENDED AND RENUMBERED TO 748:20-6-16]

[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16, Amended at 35 Ok Reg 2137, eff 9-17-18; Amended and renumbered to 748:20-6-16 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-13. IRC® [AMENDED AND RENUMBERED TO 748:20-6-20]

[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-20 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-13.1. IRC® [AMENDED AND RENUMBERED TO 748:20-6-21]

[**Source:** Added at 33 Ok Reg 1852, eff 11-1-16, Amended at 35 Ok Reg 2137, eff 9-17-18; Amended and renumbered to 748:20-6-21 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-13.2. IRC® [AMENDED AND RENUMBERED TO 748:20-6-24]

[**Source:** Added at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-24 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-14. IRC® [AMENDED AND RENUMBERED TO 748:20-6-29]

[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-29 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-15. IRC® [AMENDED AND RENUMBERED TO 748:20-6-30]

[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16, Amended at 35 Ok Reg 2137 eff 9-17-18; Amended and renumbered to 748:20-6-30 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-16. IRC® [AMENDED AND RENUMBERED TO 748:20-6-31]

[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-31 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-17. IRC® [AMENDED AND RENUMBERED TO 748:20-6-32]

[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-1 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-18. IRC 2009 Chapter 28 Water Heaters [REVOKED]

[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Revoked at 33 Ok Reg 1852, eff 11-1-16]

748:20-5-19. IRC® [AMENDED AND RENUMBERED TO 748:20-6-34]

[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended at 38 Ok Reg 2685, eff 9-14-21; Amended and renumbered to 748:20-6-34 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-20. IRC® [AMENDED AND RENUMBERED TO 748:20-6-35]

[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-35 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-21. IRC 2009 Chapter 31 Vents [REVOKED]

[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Revoked at 33 Ok Reg 1852, eff 11-1-16]

748:20-5-22. IRC® [AMENDED AND RENUMBERED TO 748:20-6-39]

[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Amended at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-39 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-22.1. IRC 2015 Chapter 37 Branch Circuit and Feeder Requirements [REVOKED]
[**Source:** Added at 33 Ok Reg 1852, eff 11-1-16; Revoked at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-23. IRC 2009 Chapter 40 Devices and Luminaries [REVOKED]
[**Source:** Added at 28 Ok Reg 2122, eff 7-15-11; Revoked at 33 Ok Reg 1852, eff 11-1-16]

748:20-5-24. IRC® [AMENDED AND RENUMBERED TO 748:20-6-47]
[**Source:** Added at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-47 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-24.1. IRC® [AMENDED AND RENUMBERED TO 748:20-6-49]
[**Source:** Added at 35 Ok Reg 2137, eff 9-17-18; Amended at 38 Ok Reg 2685, eff 9-14-21; Amended and renumbered to 748:20-6-49 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-25. Appendix V, Automatic Fire Systems [AMENDED AND RENUMBERED TO 748:20-6-50]
[**Source:** Added at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-50 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-26. Appendix W, Energy Efficiency [AMENDED AND RENUMBERED TO 748:20-6-52]
[**Source:** Added at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-52 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-27. Appendix X, Swimming Pools, Spas, and Hot Tubs [AMENDED AND RENUMBERED TO 748:20-6-51]
[**Source:** Added at 33 Ok Reg 1852, eff 11-1-16; Amended and renumbered to 748:20-6-51 at 39 Ok Reg 2364, eff 9-14-22]

748:20-5-28. Appendix Y, Residential Tornado Provisions [AMENDED AND RENUMBERED TO 748:20-6-53]
[**Source:** Added at 33 Ok Reg 1852, eff 11-1-16, Amended at 34 Ok Reg 2107, eff 9-15-17; Amended and renumbered to 748:20-6-53 at 39 Ok Reg 2364, eff 9-14-22]

SUBCHAPTER 6. IRC® 2018

748:20-6-1. Adoption of International Residential Code® 2018 (IRC® 2018)
(a) The Oklahoma Uniform Building Code Commission (the "OUBCC") hereby adopts the International Residential Code®, 2018 Edition (IRC® 2018) as amended and modified in this subchapter to be the statewide minimum code for residential construction within the State of Oklahoma for one- and two-family dwellings and townhouses pursuant to 59 O.S. § 1000.23.
(b) The OUBCC through formal action expressly chose to adopt the IRC® 2018 as amended and modified in this subchapter, as the statewide minimum code for residential construction in the State of Oklahoma. In like manner, the OUBCC through formal action expressly chose to not adopt the International Residential Code®, 2012 Edition (IRC® 2012) for any purpose.
(c) As part of its 2015 code cycle, the International Code Council, Inc.® (ICC®) reorganized the format of certain of its model codes as it was foreseeable to ICC® that additional appendices will need to be added in the future as model regulations for new processes or operations are developed. The format reorganization was designed by ICC® to accommodate such future appendices by providing reserved (unused) appendices in certain of its model codes as part of its 2015 code cycle. That format reorganization continues into the ICC's 2018 code cycle and is adopted by the

OUBCC to the extent provided in this subchapter by the phrase "reserved for future use" inserted in lieu of titles for chapters.
(d) This material contains information which is proprietary to and copyrighted by International Code Council, Inc. The acronym "ICC" and the ICC logo are trademarks and service marks of ICC. ALL RIGHTS RESERVED.
[**Source:** Amended and renumbered from 748:20-5-1 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-2. Effect of Adoption

The IRC® 2018, as amended and revised by these rules, is hereby established and adopted as the statewide minimum code for residential building construction for one- and two-family dwellings and townhouses in Oklahoma pursuant to 59 O.S. § 1000.23 and may only be amended or altered by other jurisdictions pursuant to Oklahoma law.
[**Source:** Amended and renumbered from 748:20-5-1 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-3. IRC® 2018 and Other Appendices

(a) The OUBCC through formal action has chosen not to adopt appendices A through X of the IRC® 2018 for inclusion in the statewide minimum code for residential construction in the State of Oklahoma. Appendices A through X are informative and provide prescriptive requirements which are not mandatory unless specifically referenced in the adopting ordinance or order by other jurisdictions within the State of Oklahoma in accordance with 59 O.S. § 1000.29.
(b) The OUBCC hereby creates a new appendix U, entitled "Appendix U Automatic Fire Systems." Section R313.2 entitled "One- and two-family dwellings automatic fire systems" and Section R313.2.1 entitled "Design and installation" have been removed from Chapter 3 of the IRC® 2018 and relocated to Appendix U, entitled "Appendix U, Automatic Fire Systems."
(c) The OUBCC hereby creates a new appendix V, entitled "Appendix V, Swimming Pools, Spas and Hot Tubs." Section R326.1 entitled "General" has been modified and the original language published in this section has been removed from Chapter 3 of the IRC® 2018 and relocated to Appendix V entitled "Appendix V Swimming Pools, Spas and Hot Tubs.
(d) The OUBCC hereby creates a new appendix W, entitled "Appendix W, Energy Efficiency." Section N1101.14 entitled "Certificate" has been removed from Chapter 11 of the IRC® 2018 and relocated to Appendix W, entitled "Appendix W, Energy Efficiency."
(e) The OUBCC hereby creates a new Appendix X, entitled "Appendix X, Residential Tornado Provisions."
[**Source:** Amended and renumbered from 748:20-5-1 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-4. IRC® 2018 Provisions Adopted and Modified

(a) All chapters and provisions within chapters, including exceptions, of the IRC® 2018 not specifically addressed within these rules as being modified, deleted, moved or removed are hereby adopted without modification as the statewide minimum code for residential construction within the State of Oklahoma for one- and two-family dwellings and townhouses pursuant to 59 O.S. § 1000.23. Chapters and provisions within chapters, including exceptions adopted with modifications are specifically addressed in these rules.

(b) To the extent any references in the IRC® 2018 as amended and modified in this sub-chapter are made to any other code or standard, the particular edition for that reference is defined in the referenced standards found in the IRC® 2018 as amended and modified in this sub-chapter and in the IRC® 2018 Chapter 44 entitled "Referenced Standards."
[**Source:** Amended and renumbered from 748:20-5-1 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-5. Participation in federal programs and/or federally funded or financed projects

In order to maximize federal financial aid, assistance, participation, financing and/or funding in any public project(s) and/or federal financial aid, participation, funding for and participation in any federal program(s) by the State of Oklahoma, its agencies, public trusts and instrumentalities, or by any Oklahoma municipalities and other political subdivisions, that receive financial aid, assistance, participation, financing and/or funding for and participate in any federal program(s), the State of Oklahoma, its agencies and instrumentalities, and any Oklahoma municipalities and other political subdivisions, may cooperate with the United States Government and any agency or instrumentality thereof, in the manner authorized and provided by federal law and regulation and in doing so may perform all necessary functions and take all necessary actions for accomplishing such federal purposes and programs, including but not limited to, following and/or complying with federal laws, regulations and/or requirements arising from or related to federal financial aid, assistance, participation, financing and/or funding, in the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, improvement, expansion, operation, maintenance, removal, and demolition of buildings and structures or any appurtenances attached to such buildings or structures, notwithstanding any provisions of any and all uniform building codes and standards adopted by the OUBCC to the contrary.
[**Source:** Amended and renumbered from 748:20-5-1 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-6. IRC® 2018 Chapter 1 Scope and Administration

Chapter 1 of the Oklahoma adopted IRC® 2018, includes the following Preamble at the very beginning of the chapter:

(1) Pursuant to 59 O.S. § 1000.23, the OUBCC has adopted the IRC® 2018 as amended and revised by the OUBCC, as the statewide minimum code to be used by all entities for residential building construction in jurisdictions throughout and including the State of Oklahoma. However, the OUBCC's adoption of Chapter 1 "Scope and Administration" of the IRC® 2018 is for continuity purposes and the OUBCC's adoption of Chapter 1 recognizes the methods of best practice in fully implementing the statewide minimum code for residential construction.

(2) All provisions of the adopted IRC® 2018, including Chapter 1, as amended and revised by the OUBCC, are hereby established and adopted as the statewide minimum code for residential building construction for one- and two-family dwellings and townhouses in Oklahoma pursuant to 59 O.S. § 1000.23, which may only be amended or altered pursuant to Oklahoma law. However, the provisions of Chapter 1 adopted herein are only intended to be in force and effect to the extent that the respective provisions do not conflict with State law or the lawful exercise of code administration and enforcement jurisdiction by entities empowered to do so pursuant to applicable law.

(3) The OUBCC's adoption of Chapter 1 in this manner is made with the recognition that the legal authority granting state and local code administration and enforcement jurisdictions the power and discretion to administer and enforce codes arises from Oklahoma laws governing those jurisdictions. Furthermore, the OUBCC also recognizes that many state and local code administration and enforcement jurisdictions have already created, or have the lawful authority to create, departments, offices and administrative policies pursuant to various applicable laws and other adopted model codes with "Scope and Administration" provisions similar to Chapter 1 of the adopted IRC® 2018.
(4) This limited adoption of Chapter 1 is made in recognition of the authority and discretion possessed by jurisdictions to administer and enforce building codes. Exercising such authority and jurisdiction in a manner inconsistent with Chapter 1 must be supported by Oklahoma law. Code administration and enforcement jurisdictions shall not use the OUBCC's limited adoption of Chapter 1 to circumvent the remainder of the requirements established by the Oklahoma adopted IRC® 2018 and the OUBCC will strongly oppose any such practice.

[**Source:** Amended and renumbered from 748:20-5-1 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-7. IRC® 2018 Chapter 2 Definitions

Chapter 2 of the IRC® 2018 is adopted with the following modifications:
(1) BUILDING DRAIN. This definition has been modified to align with the industry standard where the site sewer (civil) picks up 5 feet (1524 mm) outside of the building. This definition has been modified to read: BUILDING DRAIN. That part of the lowest piping of a drainage system that receives the discharge from soil, waste, and other drainage pipes inside and that extends 5 feet (1524 mm) in developed length of pipe beyond the exterior walls of the building and conveys the drainage to the building sewer.
(2) NATIONALLY RECOGNIZED TESTING LABORATORY. This definition has been added to define a Nationally Recognized Testing Laboratory. This definition has been added to read: NATIONALLY RECOGNIZED TESTING LABORATORY. A testing facility given this designation from the United States Occupational Safety and Health Administration (OSHA) that provides product safety testing and certification services to manufacturers.
(3) STORM SHELTER. The definition of a "STORM SHELTER" has been added to define a building, structure or portion thereof, built to provide protection from severe wind storm events such as tornados or hurricanes. The definition has been added to read: STORM SHELTER. A building, structure, or portions thereof, constructed in accordance with ICC 500® and designated for use during a severe wind storm event such as a hurricane or tornado.

(A) Community storm shelter. A storm shelter not defined as a "Residential storm shelter."

(B) Residential storm shelter. A storm shelter serving occupants of dwelling units and having an occupant load not exceeding 16 persons.

[**Source:** Amended and renumbered from 748:20-5-1 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-8. IRC® 2018 Chapter 3 Building Planning

Chapter 3 of the IRC® 2018 is adopted with the following modifications:
(1) Table R301.2(1) Climatic and Geographic Design Criteria. This table has been modified to fill in the blank cell in row 2 under the Ice Barrier Underlayment

Required column in the first section of the table. This table has been modified to read: Table R301.2(1) Climatic and Geographic Design Criteria. The table contains two parts the first part has two rows and nine columns with two of columns that contain subcolumns. The second part of the table contains five rows and eight columns with the first row merged into one column that reads "Manual J Design Criteria" with a superscript "n" following the title to indicate footnote "n" is applicable to this portion of the table. The second part of the table and all the footnotes have not been modified. The table and the modification are described below:

(A) Row 1: The first row of part one contains the headers for each column in this portion of the table is described below:

(i) Row 1, column 1 header is entitled "Ground Snow Load" with a superscript "o" to indicate footnote "o" is applicable.

(ii) Row 1, column 2 header is entitled "Wind Design" and contains four subcolumns as listed below:

(I) Row 1, column 2, subrow 1 header is entitled "Speed (mph)" with a superscript "d" after the word "speed" to indicate footnote "d" is applicable.

(II) Row 1, column 2, subrow 2 header is entitled "Topographic Effects" with a superscript "k" to indicate footnote "k" is applicable.

(III) Row 1, column 2, subrow 3 header is entitled "Special Wind Region" with a superscript "l" to indicated footnote "l" is applicable.

(IV) Row 1, column 2, subrow 4 header is entitled "Windborne Debris Zone" with a superscript "m" to indicate footnote "m" is applicable.

(iii) Row 1, column 3 header is entitled "Seismic Design Category" with a superscript "f" to indicate footnote "f" is applicable.

(iv) Row 1, column 4 header is entitled "Subject to Damage From" and contains three sub-columns as listed below:

(I) Row 1, column 4, subcolumn 1 header is entitled "Weathering" with a superscript "a" to indicate footnote "a" is applicable.

(II) Row 1, column 4, subcolumn 2 header is entitled "Frost Depth Line" with a superscript "b" to indicate footnote "b" is applicable.

(III) Row 1, column 4, subcolumn 3 header is entitled "Termite" with a superscript "c" to indicate footnote "c" is applicable.

(v) Row 1 column 5 header is entitled "Winter Design Temp" with a superscript "e" to indicate footnote "e" is applicable.

(vi) Row 1, column 6 header is entitled "Ice Barrier Underlayment Required" with a superscript "h" to indicate footnote "h" is applicable.

(vii) Row 1, column 7 header is entitled "Flood Hazards" with a superscript "g" to indicate footnote "g" is applicable.

(viii) Row 1, column 8 header is entitled "Air Freezing Index" with a superscript "i" to indicate footnote "i" is applicable.

(ix) Row 1, column 9 header is entitled "Mean Annual Temp" with a superscript "j" to indicate footnote "j" is applicable.

(B) The second row of the first part has been modified to fill in the area under column 6 entitled "Ice Barrier and Underlayment Required" and is described below:

(i) Row 2, column 1 has been left blank for the authority having jurisdiction to complete based on local conditions as required in footnote "o."

(ii) Row 2, column 2 subcolumns 1 through 4 are described below:

(I) Row 2, column 2, subcolumn 1 has been left blank for the authority having jurisdiction to complete based on local conditions as described in footnote "d."

(II) Row 2, column 2, subcolumn 2 has been left blank for the authority having jurisdiction to complete based on local conditions as described in footnote "k."

(III) Row 2, column 2, subcolumn 3 has been left blank for the authority having jurisdiction to complete based on local conditions as described in footnote "l."

(IV) Row 2, column 2, subcolumn 4 has been left blank for the authority having jurisdiction to complete based on local conditions as described in footnote "m."

(iii) Row 2, column 3 has been left blank for the authority having jurisdiction to complete based on local conditions as described in footnote "f."

(iv) Row 2, column 4, subcolumns 1 through 3 are described below:

(I) Row 2, column 4, subcolumn 1 has been left blank for the authority having jurisdiction to complete based on local conditions as described in footnote "a."

(II) Row 2, column 4, subcolumn 2 has been left blank for the authority having jurisdiction to complete based on local conditions as described in footnote "b."

(III) Row 2, column 4, subcolumn 3 has been left blank for the authority having jurisdiction to complete based on local conditions as described in footnote "c."

(v) Row 2, column 5 has been left blank for the authority having jurisdiction to complete based on local conditions as described in footnote "e."

(vi) Row 2, column 6 has been filled in with the word "NO" to indicate Ice barrier underlayment is not required in Oklahoma.

(vii) Row 2, column 7 has been left blank for the authority having jurisdiction to complete based on local conditions as described in footnote "g."

(viii) Row 2, column 8 has been left blank for the authority having jurisdiction to complete based on local conditions as described in footnote "i."

(ix) Row 2, column 9 has been left blank for the authority having jurisdiction to complete based on local conditions as described in footnote "j."

(C) Row 3, the second part of the table has been merged into one column with the wording "Manual J Design Criteria" followed by a superscript "n" to indicate footnote "n" is applicable.

(D) Row 4 of the table has eight columns with the following headers:

(i) Row 4, column 1, contains the wording "Elevation."

(ii) Row 4, column 2, contains the wording "Latitude."

(iii) Row 4, column 3, contains the wording "Winter Heating."

(iv) Row 4, column 4, contains the wording "Summer Cooling."
(v) Row 4, column 5, contains the wording "Altitude Correction Factor."
(vi) Row 4, column 6, contains the wording "Indoor Design Temperature."
(vii) Row 4, column 7, contains the wording "Design Temperature Cooling."
(viii) Row 4, column 8, contains the wording "Heating Temperature Difference."

(E) Row 5 of the table has eight columns that have been left blank for the authority having jurisdiction to complete.

(F) Row 6 of the table has eight columns that have the following headers:
(i) Row 6, column 1, contains the wording "Cooling Temperature Difference."
(ii) Row 6, column 2, contains the wording "Wind Velocity Heating."
(iii) Row 6, column 3, contains the wording "Wind Velocity Cooling."
(iv) Row 6, column 4, contains the wording "Coincident Wet Bulb."
(v) Row 6, column 5, contains the wording "Daily Range."
(vi) Row 6, column 6, contains the wording "Winter Humidity."
(vii) Row 6, column 7, contains the wording "Summer Humidity."
(viii) Row 6, column 8, was left blank

(G) Row 7 of the table has eight columns that have been left blank for the authority having jurisdiction to complete.

(H) Under the table the following wording is shown: "For SI: 1 pound per square foot equals 0.0479 kPa, 1 mile per hour equals 0.447 meters per second."

(I) Footnote "a" reads: "Where weathering requires a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code, the frost 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, C73, C90, C129, C145, C216, or C652."

(J) Footnote "b" reads: "Where the frost 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 finished grade."

(K) Footnote "c" reads: "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."

(L) Footnote "d" reads: "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."

(M) Footnote "e" reads: "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).]"

(N) Footnote "f" reads: "The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1."

(O) Footnote "g" reads: "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 FIRMSs and FBFMs or other flood hazard map adopted by the authority having jurisdiction, as amended."

(P) Footnote "h" reads: "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 a "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."

(Q) Footnote "i" reads: "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 table Air Freezing Index-USA Method (Base 32 degrees Fahrenheit)."

(R) Footnote "j" reads: "The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center table 'Air Freezing Index-USA Method (Base 32 degrees Fahrenheit.)"

(S) Footnote "k" reads: "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."

(T) Footnote "l" reads: "In accordance with Figure R301.2(5)A, where there is local historical damage 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 of the table.

(U) Footnote "m" reads: "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."

(V) Footnote "n" reads: "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 criterial determined by the jurisdiction."

(W) Footnote "o" reads: "The jurisdiction shall fill in this section of the table using the Ground Snow Loads in Figure R301.2(6)."

(2) Table R302.1(1) Exterior Walls. This table has been modified to change the requirements for minimum fire separation distance and delete sub-rows. This table has been modified to read: Table R302.1(1) Exterior Walls. The table contains five rows and three columns. Some rows have sub-rows, and some columns have sub-columns. The table has two footnotes at the end of the table and is described below:

(A) Row 1 contains the headers for each column, which are listed below from column 1 through column 3.

(i) Row 1, column 1 header is entitled "EXTERIOR WALL ELEMENT."

(ii) Row 1, column 2 header is entitled "MINIMUM FIRE-RESISTANCE RATING."

(iii) Row 1, column 3 header is entitled "MINIMUM FIRE SEPARATION DISTANCE."

(B) Row 2 contains two sub-columns within column 1. The second sub-column in column 1 has three sub-rows that continue through columns 2 and 3. The row is described below:

(i) Row 2, column 1, sub-column 1 is entitled "Walls."

(ii) Row 2, sub-row 1, column 1, sub-column 2, is entitled "Fire-resistance rated"

(iii) Row 2, subrow 1, column 2, contains the wording "1 hour-tested in accordance with ASTM E119, UL 263 or Section 703.3 of the International Building Code® with exposure from both sides."

(iv) Row 2, sub-row 1, column 3, contains the wording "0 feet."

(v) Row 2, sub-row 2, column 1, sub-column 2 is entitled "Not fire-resistance rated."

(vi) Row 2, sub-row 2, column 2, contains the wording "0 hours."

(vii) Row 2, sub-row 2, column 3, has been modified to change the fire separation distance to "equal to 3 feet."

(C) Row 3 contains two sub-columns within column 1. The second sub-column in column 1 has three sub-rows within that continue through columns 2 and 3. The row is described below:

(i) Row 3, column 1, sub-column 1 is entitled "Projections."

(ii) Row 3, sub-row 1, column 1, sub-column 2, is entitled "Not allowed" and has been deleted from the table along with the remaining content in columns 2 and 3.

(iii) Row 3, sub-row 2, column 1, sub-column 2, is entitled "Fire-resistance rated."

(iv) Row 3, sub-row 1, column 2, contains the wording "1 hour on the underside, or heavy timber, or fire-retardant-treated wood" with a superscript "a, b" at the end to indicate footnotes "a" and "b" are applicable.

(v) Row 3, sub-row 1, column 3, has been modified to change the minimum fire separation distance to "greater than 3 feet."

(vi) Row 3, sub-row 3, column 1, sub-column 3 is entitled "Not fire-resistance rated."

(vii) Row 3, sub-row 3, column 2, contains the wording "0 hours."

(viii) Row 3, sub-row 3, column 3, has been modified to change the minimum fire separation distance to "greater than or equal to 3 feet."

(D) Row 4 contains two sub-columns within column 1. The second sub-column in column 1 has three sub-rows 1 that continue through columns 2 and 3. The row is described below:

(i) Row 4, column 1, subcolumn 1 is entitled "Openings in walls."

(ii) Row 4, sub-row 1, column 1, sub-column 2 is entitled "Not allowed."

(iii) Row 4, sub-row 1, column 2, contains the wording "NA."

(iv) Row 4, sub-row 1, column 3, contains the wording "less than 3 feet."

(v) Row 4, sub-row 2, column 1, sub-column 2 is entitled "25 percent maximum of wall area" and has been deleted from the table along with the remaining content in columns 2 and 3.

(vi) Row 4, sub-row 3, column 1, sub-column 2 is entitled "Unlimited."

(vii) Row 4, sub-row 3, column 2, contains the wording "0 hours."

(viii) Row 4, sub-row 3, column 3, contains has been modified to change the minimum fire separation distance to "greater than or equal to 3 feet."

(E) Row 5 contains two sub-columns within column 1 and two sub-rows within columns 2 and 3. The row is described below:

(i) Row 5, column 1, sub-column 1 is entitled "Penetrations."

(ii) Row 5, column 1, subcolumn 2 is entitled "All."

(iii) Row 5, column 2, sub-row 1, contains the wording "Comply with Section R302.4."

(iv) Row 5, column 3, sub-row 1 contains the wording "less than 3 feet."

(v) Row 5, column 2, sub-row 2 contains the wording "None required."

(vi) Row 5, column 3, sub-row 2 has been modified to change the minimum fire separation distance to "greater than or equal to 3 feet."

(F) Under the table the following wording is listed "For SI: 1 foot equals 304.8 mm" and "NA equals Not Applicable."

(G) Footnote "a" reads: "The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave overhang if fireblocking is provided from the wall top plate to the underside of the roof sheathing."

(H) Footnote "b" reads: "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."

(3) Table R302.1(2) Exterior Walls - Dwellings with Fire Sprinklers. This table has been modified to change the requirements for minimum fire separation distance and delete sub-rows. This table has been modified to read: Table R302.1(2) Exterior Walls - Dwellings with Fire Sprinklers. The table contains five rows and three columns. Some rows have sub-rows and some columns have sub-columns. The table has three footnotes at the end of the table and is described below:

(A) Row 1 contains the headers for each column, which are listed below from column 1 through column 3.

(i) Row 1, column 1 header is entitled "EXTERIOR WALL ELEMENT."

(ii) Row 1, column 2 header is entitled "MINIMUM FIRE-RESISTANCE RATING."

(iii) Row 1, column 3 header is entitled "MINIMUM FIRE SEPARATION DISTANCE."

(B) Row 2 contains two sub-columns within column 1 and two sub-rows within the second sub-column of column 1 that continue through columns 2 and 3. The row is described below:

(i) Row 2 sub-column 1 is entitled "Walls."

(ii) Row 2, sub-row 1, column 1, sub-column 2, is entitled "Fire-resistance rated."

(iii) Row 2, sub-row 1, column 2, contains the wording "1 hour-tested in accordance with ASTM E119, UL 263 or Section 703.3 of the International Building Code® with exposure from outside".

(iv) Row 2, sub-row 1, column 3, contains the wording "0 feet."

(v) Row 2, sub-row 2, column 1, sub-column 2 is entitled "Not fire-resistance rated."

(vi) Row 2, sub-row 2, column 2, contains the wording "0 hours."

(vii) Row 2, sub-row 2, column 3, contains the wording "3 feet" with a superscript "a" to clarify footnote "a" is applicable.

(C) Row 3 contains two sub-columns within column 1and three sub-rows within the second sub-columns of column 1 that continue through columns 2 and 3. The row is described below:

(i) Row 3, column 1, sub-column 1 is entitled "Projections.

(ii) Row 3, sub-row 1, column 1, sub-column 2, is entitled "Not allowed" and has been deleted from the table along with the remaining content in columns 2 and 3.

(iii) Row 3, sub-row 2, column 1, sub-column 2, is entitled "Fire-resistance rated."

(iv) Row 3, sub-row 2, column 2, contains the wording "1 hour on the underside, or heavy timber, or fire-retardant-treated wood" with a superscript "b, c" at the end to indicate footnotes "b" and "c" are applicable.

(v) Row 3, sub-row 2, column 3, contains the wording "2 feet" with a superscript "a" to indicated footnote "a" is applicable.

(vi) Row 3, sub-row 3, column 1, sub-column 3 is entitled "Not fire-resistance rated."

(vii) Row 3, sub-row 3, column 2, contains the wording "0 hours."

(viii) Row 3, sub-row 3, column 3, contains the wording "3 feet."

(D) Row 4 contains two sub-columns within column 1 and two sub-rows within the second sub-column of column 1 that continue through columns 2 and 3. The row is described below:

(i) Row 4, column 1, sub-column 1 is entitled "Openings in walls."

(ii) Row 4, sub-row 1, column 1, sub-column 2 is entitled "Not allowed."

(iii) Row 4, sub-row 1, column 2, contains the wording "NA."

(iv) Row 4, sub-row 1, column 3, contains the wording "less than 3 feet."

(v) Row 4, sub-row 2, column 1, sub-column 2 is entitled "Unlimited."

(vi) Row 4, sub-row 2, column 2, contains the wording "0 hours."

(vii) Row 4, sub-row 2, column 3, contains the wording "3 feet" with a superscript "a" to indicate footnote "a" is applicable.

(E) Row 5 contains two sub-columns within column 1 and two sub-rows within columns 2 and 3. The row is described below:

(i) Row 5, column 1, sub-column 1 is entitled "Penetrations."

(ii) Row 5, column 1, sub-column 2 is entitled "All."

(iii) Row 5, sub-row 1 column 2, contains the wording "Comply with Section R302.4."

(iv) Row 5, sub-row 1 column 3, contains the wording "less than 3 feet."

(v) Row 5, sub-row 2 column 2, contains the wording "None required."

(vi) Row 5, sub-row 2 column 3, contains the wording "3 feet" with a superscript "a" to indicate footnote "a" is applicable.

(F) Under the table the following wording is listed "For SI: 1 foot equals 304.8 mm" and "NA equals Not Applicable."

(G) Footnote "a" reads: "For a residential subdivision where all dwellings are equipped throughout with an automatic sprinkler system installed in accordance with Section P2904, the fire separation distance for exterior walls not fire-resistance rated and for fire-resistance rated projections shall be permitted to be reduced to 0 feet, and unlimited unprotected openings and penetrations shall be permitted, where the adjoining lot provides an open

setback yard that is 6 feet or more in width on the opposite side of the property line."

(H) Footnote "b" reads: "The fire-resistance rating shall be permitted to be reduced to 0 hours on the underside of the eave overhang if fireblocking is provided from the wall top plate to the underside of the roof sheathing."

(I) Footnote "c" reads: "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."

(4) Section R303.4 Mechanical ventilation. This section has been modified to add language to allow for visual confirmation. This section has been modified to read: R303.4 Mechanical ventilation. Where the air infiltration rate of a dwelling is 5 air changes per hour or less where tested with a blower door at a pressure of 0.2 inch w.c. (50 Pa) or confirmed through visual testing in accordance with Section N1102.4.1.2, the dwelling unit shall be provided with whole-house mechanical ventilation in accordance with Section M1505.4.

(5) Section R311.1 Means of egress. This section has been modified to specify the section requirements apply to garages as well as dwellings, while allowing the means of egress from the garage to go through an adjacent dwelling. This section has been modified to read: R311.1 Means of egress. Dwellings or garages (attached or detached from the dwelling) shall be provided with a means of egress in accordance with this section. The means of egress shall provide a continuous and unobstructed path of vertical and horizontal egress travel from all portions of the dwelling to the required egress door without traveling through a garage. The means of egress from the garage may travel through the adjacent dwelling. The required egress door shall open directly into a public way or to a yard or court that opens to a public way.

(6) Section R311.2 Egress door. This section has been modified to specify the section requirements apply to garages, as well as dwellings. This section has been modified to read: R311.2 Egress door. Not less than one egress door shall be provided for each dwelling unit or garage. The egress door shall be side-hinged and shall provide a clear width of not less than 32 inches (813 mm) where measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). The clear height of the door opening shall not be less than 78 inches (1981 mm) in height measured from the top of the threshold to the bottom of the stop. Other doors shall not be required to comply with these minimum dimensions. Egress doors shall be readily openable from the inside of the dwelling or garage without the use of a key or special knowledge or effort.

(7) Section R311.7.5.1 Risers. This section has been modified to add a third exception that allows the top and bottom riser height to vary by 3/4 inch (19 mm). This section has been modified to read: R311.7.5.1 Risers. The riser height shall be not more than 7 3/4 inches (196 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. At open risers, openings located more than 30 inches (762 mm), as measured vertically, to the floor or grade below shall not permit the passage of a 4-inch-diameter (102 mm) sphere. Exceptions:

(A) Exception 1. The openings between adjacent treads is not limited on spiral stairways.
(B) Exception 2. The riser height of spiral stairways shall be in accordance with Section R311.7.10.1.
(C) Exception 3. The top and bottom riser in each flight of stairs may vary by 3/4 inch (19 mm).

(8) Section R313.2 One- and two-family dwellings automatic fire sprinkler systems. This section, including the exception, has been moved to the newly created Appendix U, entitled "Appendix U, Automatic Fire Systems" and is not adopted as a part of the statewide minimum code for residential construction within the State of Oklahoma. This section has been renumbered in Appendix U to become U101.1. The section number R313.2 itself, will stay as part of this code for numbering alignment but will not have any requirements attached to it.

(9) Section R313.2.1 Design and installation. This section has been moved to the newly created Appendix U, entitled "Appendix U, Automatic Fire Systems" and is not adopted as a part of the statewide minimum code for residential construction within the State of Oklahoma. This section has been renumbered in Appendix U to become U101.2. The section number R313.2.1 itself, will stay as part of this code for numbering alignment but will not have any requirements attached to it.

(10) Section R323.1 General. This section has been modified to include above and below ground storm shelters and to limit the use of the term storm shelter. This section has been modified to read: R323.1 General. This section applies to the construction of above or below ground storm shelters constructed as separate detached buildings, rooms within buildings, structures, or portions thereof for the purpose of providing safe refuge from storms that produce high winds, such as tornados and hurricanes. Any room or structure, as may be used as a place of refuge during a severe wind storm event, shall not be defined as a storm shelter unless specifically designed to the requirements listed in Section R323.

(11) Section R323.2 Required. This section has been added to stipulate in addition to other applicable requirements in this code, storm shelters shall be constructed in accordance with ICC 500® except as required by Sections R323.2.1 through R323.2.4 This section has been added to read: R323.2 Required. In addition to other applicable requirements in this code, storm shelters shall be constructed in accordance with ICC 500® except as required by Sections R323.2.1 through R323.2.4.

(12) Section R323.2.1 Design wind speed. This section has been added to modify the requirements of ICC 500® Section 304.2 to clarify the minimum design wind speed for all storm shelters in the State of Oklahoma shall be set at 250 miles per hour. This section has been added to read: R323.2.1 Design wind speed. For storm shelters, the minimum design wind speed for the entire State of Oklahoma shall be 250 miles per hour.

(13) Section R323.2.2 In-ground storm shelters. This section has been added to clarify for all in-ground storm shelters installed in garages, the rim of the shelter shall be raised a minimum of 1 inch (25 mm) above the highest point of the adjacent garage floor to resist surface drainage and to require the floor around the shelter to slope at a maximum slope of 1:8. This section has been added to read: R323.2.2 In-ground storm shelters. When installed in the floor of a garage,

the rim of the storm shelter shall be raised a minimum of 1 inch (25 mm) above the highest point of the adjacent garage floor to resist surface drainage into the shelter. The floor around the shelter shall slope at a maximum slope of 1:8.
(14) Section R323.2.3 Height of storm shelter. This section has been added to clarify how to determine the location of the natural ventilation openings in storm shelters in accordance with ICC 500® Section 702.1.1.1, by providing a definition for the height of a storm shelter to be calculated by taking the average of the vertical dimensions from the floor elevation to the bottom of the storm shelter deck or to the underside of a hard ceiling within the storm shelter. This section has been added to read: R323.2.3 Height of storm shelter. When determining the location of natural ventilation in accordance with ICC 500® Section 702.1.1.1, the height of the storm shelter shall be defined as an average of the vertical dimensions from the floor elevation to the bottom of the storm shelter deck or to the underside of a hard ceiling within the storm shelter.
(15) Section R323.2.4 Occupant density. This section has been added to modify the requirements of ICC 500® Section 501.1.1 to clarify residential storm shelters may exceed the occupant density requirements in ICC 500® Table 502.4 and not be required to conform to the requirements of a community shelter. This section has been added to read: R323.2.4 Occupant density. Residential storm shelters located in or adjacent to one- and two-family dwellings may exceed the occupant density in ICC 500® Table 502.4 and shall not be required to conform to the requirements of a community shelter.
(16) Section R326.1 General. This section has been modified to remove the requirement for the construction of swimming pools, spas, and hot tubs to comply with the International Swimming Pool and Spa Code™ to the newly created Appendix V, entitled "Appendix V, Swimming Pools, Spas and Hot Tubs," and has been renumbered in Appendix V to become V101.1. This section number R326.1 itself, has the same title with new language added to require new swimming pools, spas and hot tubs requiring a permit to comply with Sections R326.2 through R326.4. This section has been modified to read: R326.1 General. Residential swimming pools, spas, and hot tubs requiring a permit shall comply with Sections R326.2 through R326.4.
(17) Section R326.2 Enclosure. This section has been added to provide enclosure requirements for residential swimming pools, spas, and hot tubs. This section has been added to read: R326.2 Enclosure. Swimming pools shall be completely enclosed by a fence or barrier not less than 4 feet (1219 mm) in height or a screen enclosure. Openings in the fence or barrier shall not permit the passage of a 4-inch-diameter (102 mm) sphere. Exceptions:

(A) Exception 1. Swimming pools, spas and hot tubs on lots in excess of 2 acres are exempt from the requirements.

(B) Exception 2. A swimming pool with a power safety cover or a spa with a safety cover complying with ASTM F 1346 need not comply with this section.

(18) Section R326.3 Gates. This section has been added to provide gate requirements for residential swimming pools, spas and hot tubs. This section has been added to read: R326.3 Gates. Exterior pedestrian access doors or gates shall be self-closing and have a self-latching device. Doors or gates other than pedestrian access doors or gates shall have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches (1372

mm) from the bottom of the door or gate, the release mechanism shall be located on the pool side of the door or gate, 3 inches (76 mm) or more below the top of the door or gate, and the door or gate and barrier shall be without openings greater than 1/2 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism. Exception: Gates equipped with a locking device.
(19) Section R326.4 Suction outlet fitting assemblies. This section has been added to clarify all suction outlet fitting assemblies shall be listed and labeled in compliance with ANSI/APSP/ICC 16. This section has been added to read: R326.4 Suction outlet fitting assemblies. Suction outlet fitting assemblies shall be listed and labeled in compliance with ANSI/APSP/ICC 16.
(20) R326.5 Entrapment avoidance. This section has been modified to require suction entrapment avoidance for pools and spas to comply with ANSI/APSP/ICC 7 and provide an exception for portable spas and portable exercise pools listed in accordance with UL 1563 or CSA C22.2 No 218.1. This section has been modified to read: R326.5 Entrapment avoidance. Suction entrapment avoidance for pools and spas shall be provided in accordance with ANSI/APSP/ICC 7. Exception: Portable spas and portable exercise pools listed in accordance with UL 1563 or CSA C22.2 No 281.1.
(21) Section R327.3 Installation. This section has been modified to change the wording "stationary storage battery systems" to "ESS (Energy Storage Systems) and delete the requirement prohibiting them from being installed within the habitable space. This section has been modified to read: R327.3 Installation. ESS (Energy Storage Systems) shall be installed in accordance with the manufacturer's instructions and their listing, if applicable.
(22) Section R327.3.1 Locations. This section has been added to specify the locations where an ESS (Energy Storage Systems) may be installed. This section has been added to read: R327.3.1 Locations.

(A) ESS (Energy Storage Systems) shall be installed only in the following locations:

(i) Item 1. Detached garages and detached accessory structures.

(ii) Item 2. Attached garages separated from the dwelling unit living space in accordance with Section R302.6

(iii) Item. 3. Outdoors or on the exterior side of exterior walls located not less than 3 feet (914 mm) from doors and windows directly entering the dwelling unit.

(iv) Item 4. Enclosed utility closets, basements, storage or utility spaces within dwelling units with finished or noncombustible walls and ceilings. Walls and ceilings of unfinished wood-framed construction shall be provided with not less than 5/8-inch (15.9 mm) Type X gypsum wallboard.

(B) ESS shall not be installed in sleeping rooms, or closets or spaces opening directly into sleeping rooms.

[**Source:** Amended and renumbered from 748:20-5-6 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-9. IRC® 2018 Chapter 4 Foundations

Chapter 4 of the IRC® 2018 is adopted with the following modifications:
(1) Section R402.2 Concrete. This section has been modified to include an exception for interior concrete slabs on grade and enclosed garage slabs to the requirement the concrete be air entrained. This section has been modified to

read: R402.2 Concrete. Concrete shall have a minimum specified compressive strength of f 'c, as shown in Table R402.2. Concrete subject to moderate or severe weathering as indicated in Table R301.2(1) shall be air entrained as specified in Table R402.2. The maximum weight of fly ash, other pozzolans, silica fume, slag or blended cements that is included in concrete mixtures for garage floor slabs and for exterior porches, carport slabs, and steps that will be exposed to deicing chemicals shall not exceed the percentages of the total weight of the cementitious materials specified in Section 19.3.3.4 of ACI 318. Materials used to produce concrete testing thereof shall comply with the applicable standards listed in Chapters 19 and 20 of ACI 318 or ACI 332. Exception: Interior concrete slabs on grade and enclosed garage slabs are not required to be air-entrained.
(2) Table R403.1(1) Minimum width and thickness for concrete footings for light-frame construction (inches) with a superscript "a" and "b" to indicate footnotes "a" and "b" are applicable. This table has been modified to strike footnote "b" from the table title and from underneath the table. No other modifications were made to the table. The table title has been modified to read: Table R403.1(1) Minimum width and thickness for concrete footings for light-frame construction (inches) with a superscript "a" to indicate footnote "a" applies. The footnote at the bottom of the table has been amended to read: "a. Interpolation allowed. Extrapolation is not allowed."
(3) Table R403.1(2) Minimum width and thickness for concrete footings for light-frame construction with brick veneer (inches) with a superscript "a" and "b" to indicate footnotes "a" and "b" are applicable. This table has been modified to strike footnote "b" from the title and from underneath the table. No other modifications were made to the table. The table title has been modified to read: Table R403.1(2) Minimum width and thickness for No other modifications were made to the table. concert footings for light-frame construction with brick veneer (inches) with a super script "a" to indicate footnote "a" applies. The footnote at the bottom of the table has been amended to read: "a. Interpolation allowed. Extrapolation is not allowed."
(4) Table R403.1(3) Minimum width and thickness for concrete footings with cast-in-place concrete or fully grouted masonry wall construction (inches) with a superscript "a" and "b" to indicate footnotes "a" and "b" are applicable. This table has been modified to strike footnote "b" from the title and from underneath the table. No other modifications to the table were made. The table title has been modified to read: Table R403.1(3) Minimum width and thickness for concrete footings with cast-in-place concrete or fully grouted masonry wall construction (inches) with a superscript "a" to indicate footnote "a" applies. The footnote at the bottom of the table has been amended to read: "a. Interpolation allowed. Extrapolation is not allowed."
(5) Section R403.1. General. This section has been modified to provide language specifying rebar reinforcement requirements in concrete footings. This section has been modified to read: R403.1 General. All exterior walls shall be supported on continuous solid or fully grouted masonry or concrete footings, crushed stone footings, wood foundations, or other approved structural system that shall be of sufficient design to accommodate all loads according to Section R301 and to transmit the resulting loads to the soil within the limitations as determined by the character of the soil. Footings shall be supported on undisturbed natural soils

or engineered fill. Concrete footings shall be designed and constructed in accordance with the provisions of Section R403 or in accordance with ACI 332. Concrete footings shall meet the following requirements:

(A) Item 1. Add 2 number four (4) rebar to all footings.

(B) Item 2. All cold joints between footings and foundation walls (stem walls) shall be tied together by a number four (4) rebar at every corner not to exceed 6 feet (1828 mm) o.c. with embedment of 12 inches (304 mm) into each footing and wall.

(6) Section R403.1.6 Foundation anchorage. This section has been modified to specify hand driven cut and concrete nails are not an approved fastener and include an exception for wood sole plates of braced wall panels anchorage under specific criteria. This section has been modified to read:

(A) R403.1.6 Foundation anchorage: Wood sill plates and wood walls supported directly on continuous foundations shall be anchored to the foundation in accordance with this section.

(B) Cold-formed steel framing shall be anchored directly to the foundation or fastened to wood sill plates anchored to the foundation. Anchorage of cold-formed steel framing shall be in accordance with Section R505.3.1 or R603.3.1, as applicable. Wood sill plates supporting cold-formed steel framing shall be anchored to the foundation in accordance with this section.

(C) Wood sole plates at the exterior walls on monolithic slabs, wood sole plates of braced wall panels at building interiors on monolithic slabs and all wood sill plates shall be anchored to the foundation with minimum 1/2-inch-diameter (12.7 mm) anchor bolts spaced not greater than 6 feet (1829 mm) on center or approved anchors or anchor straps spaced as required to provide equivalent anchorage to 1/2-inch-diameter (12.7 mm) anchor bolts. Bolts shall extend not less than 7 inches (178 mm) into concrete or grouted cells of concrete masonry units. The bolts shall be located in the middle third of the width of the plate. A nut and washer shall be tightened on each anchor bolt. There shall not be fewer than two bolts per plate section with one bolt located not more than 12 inches (305 mm) or less than seven bolt diameters from each end of the plate section. Interior load bearing wall sole plates that are not part of a braced wall panel shall be positively anchored with approved fasteners. Hand driven cut or concrete nails are not approved fasteners. Sill plates and sole plates shall be protected against decay and termites where required by Section R317 and R318. Exceptions:

(i) Exception 1. Walls 24 inches (610 mm) total length or shorter connecting offset braced wall panels shall be anchored to the foundation with not less than one anchor bolt located in the center third of the plate section and shall be attached to adjacent braced wall panels at corners as shown in Item 9 of Table R602.3(1).

(ii) Exception 2. Connection of walls 12 inches (305 mm) total length or shorter connecting offset braced wall panels to the foundation without anchor bolts shall be permitted. The wall shall be attached at corners as shown in Item 9 of Table R602.3(1).

(iii) Exception 3. Wood sole plates of braced wall panels at building interiors on monolithic slabs may be anchored using connector(s) with a shear

capacity of 2300 pounds and a tensile capacity of 800 pounds over a maximum span of 6 feet.

(7) Section R403.1.7.3 Foundation Elevation. This section has been stricken from the code.

(8) Section R403.1.9. Protection of footings. This section has been added to provide protection to footings when trenching work is needed. This section has been added to read: R403.1.9. Protection of footings. Trenching for work including but not limited to plumbing, electrical, storm shelters, and pools shall comply with this section. Trenching installed parallel to footings and walls shall not extend into the bearing plane of a footing wall. The upper boundary of the bearing plane is a line that extends downward, at an angle of 45 degrees from horizontal, from the outside bottom edge of the footing wall.

[**Source:** Amended and renumbered from 748:20-5-7 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-10. IRC® 2018 Chapter 5 Floors

Chapter 5 of the IRC® 2018 is adopted with the following modifications:

(1) Section R506.2.1 Fill. This section has been modified to provide fill lift measurements. This section has been modified to read: R506.2.1 Fill. Fill material shall be free of vegetation and foreign material. The fill shall be compacted in 8 to 12 inch (203 mm to 305 mm) lifts to ensure uniform support of the slab, and except where approved, the fill depths shall not exceed 48 inches (1220 mm) for clean sand or gravel and 8 inches (203 mm) for earth.

(2) Section R506.2.3 Vapor retarder. This section has been modified to allow for other industry accepted vapor retarders installed according to the manufacturer's specifications. This section has been modified to read: R506.2.3 Vapor retarder. A 6 mil (0.006 inch; 152 micrometers) polyethylene sheeting, other industry accepted vapor retarder products installed per manufacturer specifications or approved vapor retarder with joints lapped not less than 6 inches (152 mm) shall be placed between the concrete floor slab and the base course or the prepared subgrade where no base course exists. Exception: The vapor retarder is not required for the following:

(A) Item 1. Garages, utility buildings and other unheated accessory structures.

(B) Item 2. For unheated storage rooms having an area less than 70 square feet (6.5 square meters) and carports.

(C) Item 3. Driveways, walks, patios and other flatwork not likely to be enclosed and heated at a later date.

(D) Item 4. Where approved by the building official, based on local site conditions.

[**Source:** Amended and renumbered from 748:20-5-8 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-11. IRC® 2018 Chapter 6 Wall Construction

Chapter 6 of the IRC® 2018 is adopted with the following modifications:

(1) Table R602.3(1) Fastening schedule. This table has been amended to add a new footnote "k" to the table that is applicable to row 16 of the table. The table has 46 rows, 39 of the rows have four columns per row and seven (7) rows have one merged column that break the table out into categories between certain rows as described below:

(A) Row 1 contains the column headers for the table and are listed below:

(i) Row 1, column 1 is entitled "ITEM."

(ii) Row 1, column 2 is entitled "DESCRIPTION OF BUILDING ELEMENTS."

(iii) Row 1, column 3 is entitled "NUMBER AND TYPE OF FASTENER" with the superscript letters "a," "b," and "c" following the word "FASTENER" to indicate footnotes "a," "b," and "c" are applicable.

(iv) Row 1, column 4 is entitled "SPACING AND LOCATION."

(B) Row 2 only has one column and is entitled "Roof."

(C) Row 3, column 1 lists a "1." No changes have been made to this row.

(D) Row 4, column 1 lists a "2." No changes have been made to this row.

(E) Row 5, column 1 lists a "3." No changes have been made to this row.

(F) Row 6, column 1 lists a "4." No changes have been made to this row.

(G) Row 7, column 1 lists a "5." No changes have been made to this row.

(H) Row 8, column 1 lists a "6." No changes have been made to this row.

(I) Row 9, column 1 lists a "7." No changes have been made to this row.

(J) Row 10 only has one column and is entitled "Wall."

(K) Row 11, column 1 lists an "8." No changes have been made to this row.

(L) Row 12, column 1 lists a "9." No changes have been made to this row.

(M) Row 13, column 1 lists a "10." No changes have been made to this row.

(N) Row 14, column 1 lists an "11." No changes have been made to this row.

(O) Row 15, column 1 lists a "12." No changes have been made to this row.

(P) Row 16, column 1 lists a "13." No changes have been made to this row.

(Q) Row 17, column 1 lists a "14." No changes have been made to this row.

(R) Row 18, column 1 lists a "15." No changes have been made to this row.

(S) Row 19, column 1 lists a "16." A new footnote "k" has been added to the table and is specific to this row. The row has two sub-rows and is described below.

(i) Row 19, column 2 lists "Top or bottom plate to stud" and has a superscript "k" after the word "stud" to indicate the newly added footnote "k" is applicable.

(ii) Row 19, column 3 has two sub-rows. No changes have been made to either sub-row in the column

(iii) Row 19, column 4 has two sub-rows. No changes have been made to either sub-row in the column.

(T) Row 20, column 1 lists a "17." No changes have been made to this row.

(U) Row 21, column 1 lists a "18." No changes have been made to this row.

(V) Row 22, column 1 lists a "19." No changes have been made to this row.

(W) Row 23, column 1 lists a "20." No changes have been made to this row.

(X) Row 24 has only one column and is entitled "Floor."

(Y) Row 25, column 1 lists a "21." No changes have been made to this row.

(Z) Row 26, column 1 lists a "22." No changes have been made to this row.

(AA) Row 27, column 1 lists a "23." No changes have been made to this row.

(BB) Row 28, column 1 lists a "24." No changes have been made to this row.

(CC) Row 29, column 1 lists a "25." No changes have been made to this row.

(DD) Row 30, column 1 lists a "26." No changes have been made to this row.

(EE) Row 31, column 1 lists a "27." No changes have been made to this row.

(FF) Row 32, column 1 lists a "28." No changes have been made to this row.

(GG) Row 33, column 1 lists a "29." No changes have been made to this row.

(HH) Row 34 has only one column and is entitled "Wood structural panels, subfloor, roof and interior wall sheathing to framing and particleboard wall

sheathing to framing (see Table R602.3(3) for wood structural panel exterior wall sheathing to wall framing)."
(II) Row 35, column 1 lists a "30." No changes have been made to this row.
(JJ) Row 36, column 1 lists a "31." No changes have been made to this row.
(KK) Row 37, column 1 lists a "32." No changes have been made to this row.
(LL) Row 38 has only one column and is entitled "Other wall sheathing" with a superscript "g" to show that footnote "g" is applicable.
(MM) Row 39, column 1 lists a "33." No changes have been made to this row.
(NN) Row 40, column 1 lists a "34." No changes have been made to this row.
(OO) Row 41, column 1 lists a "35." No changes have been made to this row.
(PP) Row 42, column 1 lists a "36." No changes have been made to this row.
(QQ) Row 43 has only one column and is entitled "Wood structural panels, combination subfloor underlayment to framing."
(RR) Row 44, column 1 lists a "37." No changes have been made to this row.
(SS) Row 45, column 1 lists a "38." No changes have been made to this row.
(TT) Row 46, column lists a "39." No changes have been made to this row.
(UU) Under the table, the following wording is listed "For SI: 1 inch equals 25.4 mm, 1 foot equals 304.8 mm, 1 mile per hour equals 0.447 m divided by s, 1 ksi equals 6.895 MPa."
(VV) There are eleven (11) footnotes, including the newly added footnote "k," that follow the table and are listed below:

(i) Footnote "a" reads: "Nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less."

(ii) Footnote "b" reads: "Staples are 16 gage wire and have a minimum 7/16 - inch on diameter crown width."

(iii) Footnote "c" reads: "Nails shall be spaced not more than 6 inches on center at all supports where spans are 48 inches or greater."

(iv) Footnote "d" reads: "Four-foot by 8-foot or 4-foot by 9-foot panels shall be applied vertically."

(v) Footnote "e" reads: "Spacing of fasteners not included in this table shall be based on Table R602.3(2)."

(vi) Footnote "f" reads: "For wood structural panel roof sheathing attached to gable end roof framing and to intermediate supports within 48 inches of roof edges and ridges, nails shall be spaced at 6 inches on center where the ultimate design wind speed is less than 130 mph and shall be spaced 4 inches on center where the ultimate design wind speed is 130 mph or greater but less than 140 mph."

(vii) Footnote "g" reads: "Gypsum sheathing shall conform to ASTM C1396 and shall be installed in accordance with GA 253. Fiberboard sheathing shall conform to ASTM C208."

(viii) Footnote "h" reads: "Spacing of fasteners on floor sheathing panel edges applies to panel edges supported by framing members and required blocking and at floor perimeters only. Spacing of fasteners on roof sheathing panel edges applies to panel edges supported by framing

members and required blocking. Blocking of roof or floor sheathing panel edges perpendicular to the framing members need not be provided except as required by other provisions of this code. Floor perimeter shall be supported by framing members or solid blocking."

(ix) Footnote "i" reads: "Where a rafter is fastened to an adjacent parallel ceiling joist in accordance with this schedule, provide two toe nails on one side of the rafter and toe nails from the ceiling joists to top plate in accordance with this schedule. The toe nail on the opposite side of the rafter shall not be required."

(x) Footnote "j" reads: "RSRS-01 is a Roof Sheathing Shank nail meting the specifications in ASTM F1667."

(xi) The newly added footnote "k" reads: "When 7/16 inch structural sheathing is used with a minimum nailing spacing of 6 inches (152 mm) on the edge and 12 inches (305 mm) in the field, two- 3 inch x 0.131 inch nails are acceptable for end nail conditions for the top and bottom plate to stud connection."

(2) Table R602.3(3) Requirements for wood structural panel wall sheathing used to resist wind pressures with a superscript letters "a, b, and c" to indicate associated footnotes. This table has been modified to add footnote "d" to the table heading to allow for alternative fasteners when certain criteria is met. No changes to the table itself have been made. The table title has been modified to read: Table 602.3(3) Requirements for wood structural panel wall sheathing used to resist wind pressures, with the superscript letters "a," "b," "c," and "d" after the word "pressures." The footnotes have been modified to read:

(A) Footnote "a" reads: "Panel strength axis parallel or perpendicular to supports. Three-plywood sheathing with studs spaced more than 16 inches on center shall be applied with panel strength axis perpendicular to supports."

(B) Footnote "b" reads: "Table is based on wind pressures acting toward and away from building surfaces in accordance with Section R301.2. Lateral bracing requirements shall be in accordance with Section R602.10."

(C) Footnote "c" reads: "Wood structural panels with span ratings of Wall-16 or Wall-24 shall be permitted as an alternate to panels with a 24/0 span rating. Plywood siding rated at 16 o.c. or 24 o.c. shall be permitted as an alternate to panels with a 24/16 span rating. Wall-16 and Plywood siding 16 o.c. shall be used with studs spaced not more than 16 inches on center."

(D) Footnote "d" reads: "The following alternative fasteners will be acceptable with a wind exposure category of C or D, 0.099-inch x 2-1/4 inches at 3 inches o.c. along the edge and 6 inches o.c. in the field. Or 0.113-inch x 2-3/8 inches at 6 inches o.c. along the edge and12 inches o.c. in the field."

(3) Section R602.10.5 Minimum length of a braced wall panel. This section has been modified to allow for the portal frame to begin at 12 1/2 feet (3810 mm) from the wall line end for CS-PF method. This section has been modified to read: R602.10.5 Minimum length of a braced wall panel. The minimum length of a braced wall panel shall comply with Table R602.10.5. For methods CS-WSP and CS-SFB, the minimum panel length shall be based on the adjacent clear opening height in accordance with Table R602.10.5 and Figure R602.10.5. Where a panel has an opening on either side of differing heights, the taller opening height shall

be used to determine the panel length. For method CS-PF, it is permissible to begin the portal frame at 12 1/2 feet (3810 mm) from the wall line end.

(4) Section R602.10.8 Braced wall panel connections. This section has been modified to include a fourth requirement to the section for anchoring wood sole plates to the building interiors on monolithic slabs using connectors with specific requirements. This section has been modified to read: R602.10. 8 Braced wall panel connections. Braced wall panels shall be connected to the floor framing or foundations as follows:

(A) Item 1. Where joists are perpendicular to a braced wall panel above or below, a rim joist, band joist or blocking shall be provided along the entire length of the braced wall panel in accordance with Figure R602.10.8(1). Fastening of top and bottom wall plates to framing, rim joist, band joist and/or blocking shall be in accordance with Table R602.3(1).

(B) Item 2. Where joists are parallel to a braced wall panel above or below, a rim joist, end joist or other parallel framing member shall be provided directly above and below the braced wall panel in accordance with Figure R602.10.8(2). Where a parallel framing member cannot be located directly above and below the panel, full-depth blocking at 16-inches (406 mm) spacing shall be provided between parallel framing members to each side of the braced wall panel in accordance with figure R602.10.8(2). Fastening of blocking and wall plates shall be in accordance with Table R602.3(1) and Figure R602.10.8(2).

(C) Item. 3. Connections of braced wall panels to concrete or masonry shall be in accordance with Section R403.1.6.

(D) Item 4. Wood sole plates of braced wall panels at building interiors on monolithic slabs maybe anchored using connector(s) with a shear capacity of 2300 pounds and a tensile capacity of 800 pounds over a maximum span of 6 feet (1829 mm).

(5) Section R602.12 Simplified wall bracing. This section has been modified to change wall height, roof eave height, and wind speed conditions. This section has been modified to read: R602.12 Simplified wall bracing. Buildings meeting all of the conditions listed below shall be permitted to be braced in accordance with this section as an alternate 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 Section R602.10, except as specified herein, shall not be permitted.

(A) Item. 1. There shall be not more than three stories above the top of a concrete or masonry foundation or basement wall. Permanent wood foundations shall not be permitted.

(B) Item 2. Floors shall not cantilever more than 24 inches (610 mm) beyond the foundation or bearing wall below.

(C) Item 3. Wall height shall not be greater than 12 feet (3658 mm)

(D) Item 4. The building shall have a roof eave-to-ridge height of 20 feet (6096 mm) or less.

(E) Item 5. Exterior walls shall have gypsum board with a minimum thickness of 1/2 inch (12.7mm) installed on the interior side fastened in accordance with Table R702.3.5.

(F) Item. 6. The structure shall be located where the ultimate design wind speed is less than or equal to 115 mph (51.4 m/s), and the exposure category is B or C.

(G) Item. 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 townhouses.

(H) Item 8. Cripple walls shall not be permitted in three-story buildings.

(6) Section R602.12.2 Sheathing materials. This section has been modified to change the minimum thickness of wood structural panels. This section has been modified to read: R602.12.2 Sheathing materials. The following sheathing materials installed on the exterior side of exterior walls shall be used to construct a bracing unit as defined in Section R602.12.3. Mixing materials is prohibited.

(A) Item 1. Wood structural panels with a minimum thickness of 7/16 inch (11.11 mm) fastened in accordance with Table R602.3(3).

(B) Item 2. Structural fiberboard sheathing with a minimum thickness of 1/2 inch (12.7 mm) fastened in accordance with Table R602.3(1).

[**Source:** Amended and renumbered from 748:20-5-9 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-12. IRC® 2018 Chapter 7 Wall Covering

Chapter 7 of the IRC® 2018 is adopted with the following modifications:

(1) Section 703.1 General. This section has been modified to clarify and add requirements for direct applied exterior finish with water-resistive barrier installations. This section has been modified to read: 703.1 General. Exterior walls shall provide the building with a weather-resistive exterior wall envelope. The exterior wall envelope shall include flashing as described in Section R703.4. Direct Applied Exterior Finish Systems Cement Board based stucco finish and direct applied masonry or stone shall comply with the following:

(A) Item 1. Direct applied masonry or stone shall comply with Section R703.7.3 Water-resistive barriers and product manufacture's installation specifications.

(B) Item 2. Cement Board Stucco Exterior Finish Systems shall be installed per manufacturer installation instructions and meet the minimum wall assembly details below. Products that make up the finished wall system that consists of base coat, secondary coat, reinforcing mesh and finish coat shall be of same manufacturer to ensure product/material compatibility and performance.

(i) Item 2.1. Approved Sheathing.

(ii) Item 2.2. Base flashing at bottom of walls and roofs.

(iii) Item 2.3. Water resistant barrier equal to or greater than 60-minute Grade D paper or ASTM D226.

(iv) Item 2.4. Approved Cement Board for wall application base for exterior wall ASTM C1326.

(v) Item 2.5. Approved Cement Board Joint Reinforcement Coat and Mesh.

(vi) Item 2.6. Base Coat.

(vii) Item 2.7. Reinforcing Mesh ASTM E2098(Alkaline Resistant).

(viii) Item 2.8. Second Base Coat.

(ix) Item 2.9. Finish Coat.

(x) Item 2.10. Other Design Considerations: Separation distance from finish exterior grade must be 6 inches or greater. Separation from roofs must be 1 inch or greater. Through wall flashing must be provided at horizontal

locations at dissimilar materials. Expansion joints, if needed, shall comply with finish system manufacturer recommendations. Expansion gaps are required around all windows, doors, or other dissimilar material integrated in the wall and joints are required to be sealed.

(C) Exception: Log walls designed and constructed in accordance with the provisions of ICC 400®.

(2) Section R703.4 Flashing. This section has been modified to clarify that 6-mil polyethylene sheeting is an approved corrosion-resistant flashing in certain circumstances and to clarify flashing above doors is not required when the door is covered by a minimum of 3 feet. This section has been modified to read: R703.4 Flashing. Approved corrosion-resistant flashing shall be applied shingle-fashion in a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. 6-mil polyethylene sheeting is an approved corrosion-resistant flashing when not exposed to UV rays. Self-adhered membranes used as flashing shall comply with AAMA 711. Fluid-applied membranes used as flashings in exterior walls shall comply with AAMA 714. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashings shall be installed at the following locations:

(A) Item 1. Exterior window and door openings. Flashing at exterior window and door openings shall extend to the surface of the exterior wall finish or to the water-resistive barrier complying with Section R703.2 for subsequent drainage. Mechanically attached flexible flashings shall comply with AAMA 712. Flashing at exterior window and door openings shall be installed in accordance with one or more of the following:

(i) Item 1.1. The fenestration manufacturer's installation instructions and flashing instructions, or for applications not addressed in the fenestration manufacturer's instructions in accordance with the flashing manufacturer's instructions. Where flashing instructions or details are not provided, flashing to be installed per 1.2, 1.3, 1.4 or, pan flashing shall be installed at the sill of exterior window and door openings. Pan flashing shall be sealed or sloped in a such a manner as to direct water to the surface of the exterior wall finish or to the water-resistive barrier for subsequent drainage. Openings using pan flashing shall incorporate flashing or protection at the head and sides.

(ii) Item 1.2. In accordance with the flashing design or method of a registered design professional.

(iii) Item 1.3. In accordance with other approved methods.

(iv) Item 1.4. Flashing above doors are not required where the door is covered by a minimum of 3 feet.

(B) Item 2. At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings.

(C) Item 3. Under and at the ends of masonry, wood or metal copings and sills.

(D) Item 4. Continuously above all projecting wood trim.

(E) Item 5. Where exterior porches, decks, or stairs attach to a wall or floor assembly of wood-frame construction.

(F) Item 6. At wall and roof intersections.

(G) Item 7. At built-in gutters.

(3) Section 703.7.3 Water-resistive barriers. This section has been modified to clarify the requirements for the water-resistive barrier, where applied over approved sheathing to drain to the outer water-resistive barrier. This section has been modified to read: 703.7.3 Water-resistive barriers. Water-resistive barriers shall be installed as required in Section R703.2 and, where applied over approved sheathing, shall include a water-resistive vapor-permeable barrier with a performance at least equivalent to two layers of Grade D paper. The individual layers shall be installed independently such that each layer provides a separate continuous plane and any flashing, installed in accordance with Section R703.4 and intended to drain to the outer water-resistive barrier. Exception: Where the water-resistive barrier that is applied over wood-based sheathing has a water resistance equal to or greater than that of 60 -minute Grade D paper and is separated from the stucco by an intervening, sustainably nonwater-absorbing layer or designed drainage space.

(4) Section R703.8 Anchored stone and masonry veneer, general. This section has been modified to specify anchored stone walls shall have an additional layer of No. 15 asphalt felt complying with ASTM D226 for Type I felt or other water-resistive barrier to provide a bond break between the primary water-resistive barrier and the back side of the stone and mortar. This section has been modified to read: R703.8 Anchored stone and masonry veneer, general. Anchored stone and masonry veneer shall be installed in accordance with this chapter, Table R703.3(1) and Figure R703.8. These veneers installed over a backing of wood or cold-formed steel shall be limited to the first story above grade plane and shall not exceed 5 inches (127 mm) in thickness. See Section R602.10 for wall bracing requirements for masonry veneer for wood-framed construction and Section R603.9.5 for wall bracing requirements for masonry veneer for cold-formed steel and connections. Anchored stone walls shall have an additional layer of No. 15 asphalt felt complying with ASTM D226 for Type I felt or other approved water-resistance barrier to provide a bond break between the primary water-resistive barrier and the back side of stone or mortar. Exceptions:

(A) Exception 1. For buildings in Seismic Design Categories A, B, and C, exterior stone or masonry veneer, as specified in Table R703.8(1) with a backing of wood or steel framing shall be permitted to the height specified in Table R703.8(1) above a noncombustible foundation.

(B) Exception 2. For detached one- and two-family dwellings in Seismic Design Categories D (subscript 0), D (subscript 1), and D (subscript 2), exterior stone or masonry veneer, as specified in Table 703.8(2) with a backing of wood framing shall be permitted to the height specified in Table 703.8(2) above a noncombustible foundation.

(5) Figure R703.8 Typical Masonry Veneer Wall Details. This figure has been modified to add footnotes "f" and "g" to the footnote section and amend the figure heading to include a superscript "f" and "g" to indicate the associated footnotes. This figure's footnotes have been modified to read:

(A) Footnote "a" reads: "See Sections R703.4, R703.8.5, and R703.8.6."

(B) Footnote "b" reads: "See Section R703.2 and R703.8.4."

(C) Footnote "c" reads: "See Section R703.8.4. and Table R703.8.4.2."

(D) Footnote "d" reads: "See Section R703.8.3."

(E) Footnote "e" reads: "Figure R703.8 illustrates typical construction details for a masonry veneer wall. For the actual mandatory requirements of this code, see the indicated sections of text. Other details of masonry veneer wall construction shall be permitted provided the requirements of the indicated sections of text are met.

(F) Footnote "f" reads: "Flashing to be done per Section R703.4, in accordance with a design from a registered design professional or in accordance with other approved methods or standard industry practices."

(G) Footnote "g" reads: "Flashing depicted under sill and above windows are not required with windows that have flanges for their primary attachment. Flange type windows shall be counter flashed into the weather-resistant barrier or installed per Section R703.4 and per window manufacturer's installation instructions."

(6) Figure R703.8.2.1 Exterior Masonry Veneer Support by Steel Angles. This figure has been modified by adding a footnote to the figure. The figure heading has been modified to have a superscript letter "a" to indicate a new footnote is applicable. Footnote "a" has been added to read: a. Flashing to be done per Section R703.4, in accordance with a design from a registered design professional or other approved methods as defined by the code for wall flashing.

(7) Figure R703.8.2.2 Exterior Masonry Veneer Support by Roof Members. This figure has been modified by adding a footnote "a" to the figure. The figure heading has been modified to have a superscript letter "a" to indicate a new footnote is applicable. Footnote "a" has been added to read: a. Flashing to be done per Section R703.4, in accordance with a design from a registered design professional or other approved methods as defined by the code for wall flashing.

(8) Section R703.8.3.1 Allowable span. This section has been modified to provide guidance to builders using, a typical for Oklahoma, lintel. This section has been modified to read: R703.8.3.1 Allowable span. The allowable span shall not exceed the values set forth in Table R703.8.3.1. Additionally, a 3 inches x 3 inches x 3/16 inch (76 mm x 76 mm x 4.8 mm) steel angle 6 feet (1829 mm) long may be used to support 3 vertical feet (914 mm) of masonry veneer and a 3 inches x 3 inches x 3/16 inch (76 mm x 76 mm 4.8 mm) steel angle 5 feet (1524 mm) long may be used to support 4 1/4 vertical feet (1295 mm) of masonry veneer.

(9) Section R703.9.1 Exterior insulation and finish systems (EIFS). This section has been modified to clarify EFIS shall be installed in accordance with the same product manufacturer's instructions to ensure product/material compatibility and performance. This section has been modified to read: R703.91. Exterior insulation and finish systems (EIFS). EIFS shall comply with the following:

(A) Item 1. ASTM E2568.

(B) Item 2. EIFS shall be limited to applications over substrates of concrete or masonry wall assemblies.

(C) Item 3. Flashing of EIFS shall be provided in accordance with the requirements of Section R703.4.

(D) Item 4. EIFS shall be installed in accordance with same manufacturer's instruction as to ensure product/material compatibility and performance.

(E) Item 5. EIFS shall terminate not less than 6 inches (152 mm) above the finished ground level.

(F) Item 6. Decorative trim shall not be face-nailed through the EIFS.

(10) Section R703.9.2 Exterior insulation and finish systems (EIFS) with drainage. This section has been modified to clarify EFIS shall be installed in accordance with the same product manufacturer's instructions to ensure product/material compatibility and performance. This section has been modified to read: R703.9.2 Exterior insulation and finish systems (EIFS) with drainage. EIFS with drainage shall comply with the following:

(A) Item 1. ASTM E2568.

(B) Item 2. EIFS with drainage shall be required over all wall assemblies with the exception of substrates of concrete or masonry wall assemblies.

(C) Item 3. EIFS with drainage shall have an average minimum drainage efficiency of 90 percent when tested in accordance with ASTM E2273.

(D) Item 4. The water-resistive barrier shall comply with Section R703.2 or ASTM 2570.

(E) Item. 5. The water-resistive barrier shall be applied between the EIFS and the wall sheathing.

(F) Item 6. Flashing of EIFS with drainage shall be provided in accordance with the requirements of Section R703.4.

(G) Item 7. EIFS with drainage shall be installed in accordance with the same manufacturer's instructions to ensure product/material compatibility and performance.

(H) Item 8. EIFS with drainage shall terminate not less than 6 inches (152 mm) above the finished ground level.

(I) Item 9. Decorative trim shall not be face-nailed through the EIFS.

[**Source:** Amended and renumbered from 748:20-5-10 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-13. IRC® 2018 Chapter 8 Roof-Ceiling Construction

Chapter 8 of the IRC® 2018 is adopted with the following modifications:

(1) Section R801.3 Roof drainage. This section has been stricken from the code.

(2) Section 802.3 Ridge. This section has been modified to clarify a ridge beam shall be designed in accordance with acceptable engineer practices when the roof load exceeds specific criteria to carry one-half of the tributary load. This section has been modified to read: R802.3 Ridge. A ridge board used to connect opposing rafters shall be not less than 1 inch (25 mm) nominal thickness and not less in depth than the cut end of the rafter. Where ceiling joists or rafter ties do not provide continuous ties across the structure, a ridge beam shall be designed, in accordance with acceptable engineer practices, and supported on each end of the wall or girder, when roof loads exceed 10 per square foot pound dead loads and 20 per square foot pound live loads. In the case where rafters are used to support roof and finished ceiling (also known as a cathedral ceiling) with no connection of opposing rafters, ridge beam shall be designed, in accordance with acceptable engineer practices to carry one half of tributary load of the roof.

(3) Section R802.4.1 Rafter size. This section has been modified to provide guidance for builders framing rafters above the top sill of the wall system and provide an exception to require collar ties to be sized not less than the required size of the rafters they are connected to. This section has been modified to read: 802.4.1 Rafter size. Rafters shall be sized based on the rafter spans in Tables R802.4.1(1) through R802.4.1(8). Rafter spans shall be measured along the horizontal projection of the rafter. For other grades and species and for other

loading conditions, refer to the AWC STJR. The tabulated rafter spans in Tables R802.4.1(1) through R802.4.1(8) assume ceiling joists are located at the bottom of the attic space or some other method of resisting the outward push of the rafter on the bearing walls, such as rafter ties is provided at that location. Where ceiling joists or rafter ties are located higher in the attic space, the rafter span in these tables shall be multiplied by the following rafter reduction factors: Where ceiling joists or rafter ties are located at one third the span of the rafter the adjustment factor is 0.67, at one quarter of the span of the rafter the rafter adjustment factor is 0.76, at one fifth the span of the rafter the adjustment factor is 0.83, at one sixth of the span of the rafter, the adjustment factor is 0.90, and at two fifteenths of the rafter or less, there is no need for adjusting the rafter capacity. Exception: Collar Ties. Installation of the collar ties to reduce the span of the rafters is permitted as shown in Figure R802.4.5. Collar ties shall be installed at every rafter and sized not less than the required size of the rafters they are connected.

(4) Section R802.4.2 Framing details. This section has been modified to change the rafter framing details. This section has been modified to read: R802.3 Framing details.

(A) Rafters shall be framed to a ridge board or to each other with a collar tie, gusset plate or ridge strap in accordance with Table R602.3(1). Rafters shall be nailed to the top wall plates in accordance with Table R602.3 (1) unless the roof assembly is required to comply with the uplift requirements of Section R802.11. Ridge board shall not be less than 1-inch (25 mm) nominal thickness and not less in depth and one size greater than the rafters attached to it.

(B) Where a 1-inch (25 mm) nominal thickness ridge is used, all rafters shall be framed not more than 1.5 inches (38 mm) offset from each other at the ridge board or if no ridge is used they should be framed directly opposite from each other with a gusset plate as a tie. When a nominal 2-inch rafter is used they may be offset with no limitations.

(5) Section 802.4.3 Hips and valleys. This section has been modified to provide an exception for the use of a "Blind Valley," and provide a definition of a brace. This section has been modified to read: R802.4.3 Hips and Valleys. Hip and valley rafters shall be not less than 2 inches (51 mm) nominal in thickness and not less in depth than the cut end of the rafter. Hip and valley rafters shall be supported at the ridge by a brace to a bearing partition, or beam, or be designated to carry and distribute the specific load at that point. Exception: The use of a "Blind Valley" also known as a "Farmers Valley" or "California Valley" will be allowed. In this type of valley, the main roof is framed as usual, it may or may not be sheathed and the intersecting roof is framed on top of the main roof. The two valley plates or sleeps lie on the top of the main roof rafters or sheathing and provide a nailing base for the jack rafters and the ridge board of the intersecting roof. A definition of a brace includes:

(A) Item 1. A triangular configuration of framing members with a horizontal tie and rafter members.

(B) Item 2. King post or similar.

(6) Section R802.5.1 Purlins. This section has been modified to include an exception for spacing the braces at not more than 6 feet (1829 mm) when certain conditions are met. The section has been modified to read: R802.5.1 Purlins. Installation of purlins to reduce the span of rafters is permitted as shown in

Figure R802.5.1. Purlins shall be sized not less than the required size of the rafters that they support. Purlins shall be continuous and shall be supported by 2-inch by 4-inch (51 mm by 102 mm) braces installed to bearing walls at a slope not less than 45 degrees (0.79 rad) from the horizontal. The braces shall be spaced not more than 4 feet (1219 mm) on center and the unbraced length of the braces shall not exceed 8 feet (2438 mm). Exception: Braces may be spaced not more than 6 feet (1829 mm) on center if:

(A) Item 1. The purlin brace is 2-inch by 6-inch (51 mm by 153 mm),

(B) Item 2. Purlins shall be sized one nominal size larger than the rafter they support, and;

(C) Item 3. Unbraced length of braces shall not exceed 8 feet (2438 mm).

(7) Section R802.5.2 Ceiling joist and rafter connections. This section has been modified to reflect current framing practices. This section has been modified to read: R802.3.1 Ceiling joists and rafter connections. Where ceiling joists run parallel to rafters, they shall be connected to rafters at the top wall plate in accordance with Table R802.5.2. Where ceiling joists are not connected to the rafters at the top of the wall plate, they shall be installed in the bottom third of the rafter height in accordance with Figure R802.4.5 and Table R802.5.2 Where ceiling joists do not run parallel to the rafters, the ceiling joists shall be connected to top plates in accordance with Table R602.3(1). Each rafter shall be tied across the structure with a rafter tie spaced 4 ft (1219 mm) on center. Where ceiling joists or rafter ties are not provided, the ridge formed by these rafters shall be supported by a wall or girder designed in accordance with accepted engineer practices.

(8) Section R802.7.1.2 Ceiling joist taper cut. This section has been modified to include an exception to the section requirements for ceiling joists not carrying more than a 25-pound live load for limited attic storage. This section has been modified to read: R802.7.1.2 Ceiling joists taper cut. Taper cuts at the ends of the ceiling joists shall not exceed one-fourth the depth of the member in accordance with Figure R802.7.1.2. Exception: For ceiling joists not carrying more than 25 pounds of live load (limited attic storage) then taper cut at end of joist may be able to be increased to D/2.

(9) Section R806.5 Unvented attic and unvented enclosed rafter assemblies. This section has been modified to provide guidance on where the air permeable and impermeable insulation should be installed and provide exceptions to the section related to when air supply to the attic is not required. This section has been modified to read: R806.5 Unvented attic and unvented enclosed rafter assemblies. Unvented attics and unvented enclosed roof framing assemblies created by ceilings that are applied directly to the underside of the roof framing members and structural roof sheathing applied directly to the top of the roof framing members/rafters, shall be permitted where all of the following conditions are met:

(A) Item 1. The unvented attic space is completely within the building thermal envelope.

(B) Item. 2. Interior Class I vapor retarders are not installed on the ceiling side (attic floor) of the unvented attic assembly or on the ceiling side of the unvented enclosed roof assembly.

(C) Item 3. Where wood shingles or shakes are used, a minimum 1/4 –inch (6.4 mm) vented airspace separates the shingles or shakes and the roofing underlayment above the structural sheathing.
(D) Item 4. In climate Zones 5, 6, 7, and 8, any air-impermeable insulation shall be a Class II vapor retarder or shall have a Class II vaper retarder coating or covering in direct contact with the underside of the insulation.
(E) Item 5. Insulation shall comply with Item 5.3 and either Item 5.1 or 5.2:
(i) Item 5.1. Item 5.1.1, 5.1.2, 5.1.3, or 5.1.4 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing.
(I) Item 5.1.1 Where only air-impermeable insulation is provided it shall be applied in direct contact with the underside of the structural roof sheathing.
(II) Item 5.1.2 Where air-permeable insulation is installed directly below the structural sheathing, ridge board or sheet insulation shall be installed directly above the structural roof sheathing in accordance with the R-values in Table R806.5 for condensation control.
(III) Item 5.1.3. Where both air-impermeable and air-permeable insulation are provided, the air-impermeable insulation shall be applied in direct contact with the underside of the structural roof sheathing in accordance with Item 5.1.1 and shall be in accordance with the R-values in Table R806.5 for condensation control. The air-permeable insulation shall be installed directly under the air-impermeable insulation.
(IV) Item 5.1.4 Alternatively, sufficient ridge board or sheet insulation shall be installed directly above the structural roof sheathing to maintain the monthly average temperature of the underside of the structural roof sheathing above 45 degrees Fahrenheit (7 degrees Celsius). For calculation purposes, an interior air temperature of 68 degrees Fahrenheit (20 degrees Celsius) is assumed and the exterior air temperature is assumed to be the monthly average outside air temperature of the three coldest months.
(ii) Item 5.2. In Climate Zones 1, 2, and 3, air-permeable insulation installed in unvented attics shall meet the following requirements:
(I) Item 5.2.1. An approved vapor diffusion port shall be installed not more than 12 inches (305 mm) from the highest point of the roof, measured vertically from the highest point of the roof to the lower edge of the port.
(II) Item 5.2.2 The port area shall be greater than or equal to 1:600 of the ceiling area. Where there are multiple ports in the attic, the sum of the port areas shall be greater than or equal to the area requirement.
(III) Item 5.2.3 The vapor-permeable membrane in the vapor diffusion port shall have a vapor permeance rating of greater than or equal to 20 perms when tested in accordance with Procedure A of ASTM E96.
(IV) Item 5.2.4. The vapor diffusion port shall serve as an air barrier between the attic and the exterior of the house.
(V) Item 5.2.5. The vapor diffusion port shall protect the attic against the entrance of rain and snow.
(VI) Item 5.2.6. Framing members and blocking shall not block the free flow of water vapor to the port. Not less than a 2-inch (51 mm) space

shall be provided between any blocking and the roof sheathing. Air-permeable insulation shall be permitted within that space.
(VII) Item 5.2.7. The roof slope shall be greater than or equal to 3:12 (vertical/horizontal)
(VIII) Item 5.2.8. Where only air-permeable insulation is used, it shall be installed directly below the structural roof sheathing, on top of the attic floor, or on top of the ceiling.
(IX) Item 5.2.9. Air-impermeable insulation, where used in conjunction with air-permeable insulation, shall be directly above or below the structural roof sheathing and is not required to meet the R-value in Table 806.5. Where directly below the structural roof sheathing, there shall be no space between the air-impermeable insulation and the air-permeable insulation.
(X) Item 5.2.10. Where air-permeable insulation is used and is installed directly below the roof structural sheathing, air shall be supplied at a flow rate greater than or equal to 50 CFM (23.6 L/s) per 1,000 square feet (93 square meters) of ceiling. The air shall be supplied from ductwork providing supply air to the occupiable space when the condition system is operating. Alternatively, the air shall be supplied by a supply fan when the conditioning system is operating. Exceptions: 1. Where both air-impermeable and air-permeable insulation are used, and the R-value in Table R806.5 is met, air supply to the attic is not required. 2. Where only air-permeable insulation is used and is installed in top of the attic floor, or on top of the ceiling, air supply to the attic is not required.

(iii) Item 5.3. Where preformed insulation board is used as the air-impermeable insulation layer, it shall be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.

[**Source:** Amended and renumbered from 748:20-5-11 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-14. IRC® 2018 Chapter 9 Roof Assemblies

Chapter 9 of the IRC® 2018 is adopted with the following modifications:
(1) Section 905.1.2 Ice barriers. This section has been modified to add two more paragraphs to the section to require 36-inch wide ice barriers to be installed on the roof under specific conditions and in specific locations. This section has been modified to read:

(A) 905.1.2 Ice barriers. In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier shall be installed for asphalt shingles, metal roof shingles, mineral-surfaced roll roofing, slate and slate-type shingles, wood shingles and wood shakes. The ice barrier shall consist of not fewer than two layers of underlayment cemented together, or a self-adhering polymer-modified bitumen sheet shall be used in place of normal underlayment and extend from the lowest edges of all roof surfaces to a point not less than 24 inches (610 mm) inside the exterior wall line of the building. On roofs with a slope equal to or greater than eight units vertical in 12 units horizontal (67 percent slope), ice barrier shall also be applied not less than 36 inches (914 mm) measured along the roof slope from the eave edge of the building.

(B) A 36-inch wide (914 mm) ice barrier shall be installed in all valleys, run the length of the valley, and centered on the valley.

(C) A 36-inch wide (914 mm) ice barrier shall be installed at all change in roof pitch in which the lower roof has a lower pitch than the upper roof. The ice barrier is run the length of the change in pitch and cemented on the change in pitch.

(2) Section R905.2.1 Sheathing requirements. This section has been modified to add a definition for the term "solidly sheathed." This section has been modified to read: R905.2.1 Sheathing requirements. Asphalt shingles shall be fastened to solidly sheathed decks. Solidly sheathed decks shall be defined as sawn lumber boards or structural panels that provide a solid holding power for fasteners that do not have deficit conditions (gaps greater than those allowed by the roof covering manufacturer's installation instructions, warped, split, cracked, deteriorated or rotten boards).

(3) Section R905.2.8.5 Drip edge. This section has been modified to add an exception to the section when certain criteria is met. This section has been modified to read: R905.2.8.5 Drip edge. A drip edge shall be provided at eaves and rake edges of shingle roofs. Adjacent segments of drip edge shall be overlapped not less than 2 inches (51 mm). Drip edges shall extend not less than 1/4 inch (6.4 mm) below the roof sheathing and extend up back onto the roof deck not less than 2 inches (51 mm). Drip edges shall be mechanically fastened to the roof deck at not less than 12 inches (305 mm) o.c. with fasteners as specified in Section R905.2.5. Drip edges shall be installed over the underlayment along rake edges. Exception: If a nominal 1 inch by 2 inch (25 mm by 51 mm) shingle mold is used, attached to the fascia and the starter course of shingles is extended a minimum of 1/4 inch (6.35 mm) and not more than 1 inch (25 mm) then a metal drip edge is not required.

(4) R905.3.1. Deck requirements. This section has been modified to provide a definition for the term "solidly sheathed." This section has been modified to read: R905.3.1. Deck requirements. Concrete and clay tile shall be installed only over solid sheathing or spaced structural sheathing boards. Solidly sheathed decks shall be defined as sawn lumber boards or structural panels that provide a solid holding power for fasteners that do not have deficit conditions (gaps greater than those allowed by the roof covering manufacture's installation instructions, warped, split, cracked deteriorated or rotten boards).

(5) 905.4.1 Deck requirements. This section has been modified to provide a definition for the term "solidly sheathed." This section has been modified to read: R905.4.1 Deck requirements. Metal roof shingles shall be applied to a solid or closely fitted deck, except where the roof covering is specifically designed to be applied to spaced sheathing. Solidly sheathed decks shall be defined as sawn lumber boards or structural panels that provide a solid holding power for fasteners that do not have deficit conditions (gaps greater than those allowed by the roof covering manufacture's installation instructions, warped, split, cracked deteriorated or rotten boards).

(6) Section 905.5.1 Deck requirements. This section has been modified to provide a definition for the term "solidly sheathed." This section has been modified to read: R905.5.1 Deck requirements. Mineral-surfaced roll roofing shall be fastened to solidly sheathed roofs. Solidly sheathed decks shall be defined as sawn lumber

boards or structural panels that provide a solid holding power for fasteners that do not have deficit conditions (gaps greater than those allowed by the roof covering manufacture's installation instructions, warped, split, cracked deteriorated or rotten boards).
(7) Section R905.6.2 Deck requirements. This section has been modified to provide a definition for the term "solidly sheathed." This section has been modified to read: R905.6.2 Deck requirements. Slate shingles shall be fastened to solidly sheathed roofs. Solidly sheathed decks shall be defined as sawn lumber boards or structural panels that provide a solid holding power for fasteners that do not have deficit conditions (gaps greater than those allowed by the roof covering manufacture's installation instructions, warped, split, cracked deteriorated or rotten boards).
(8) Section R905.7.1 Deck requirements. This section has been modified to provide a definition for the term "solidly sheathed." This section has been modified to read: R905.7.1 Deck requirements. Wood shingles shall be installed on solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall be not less than 1-inch by 4-inch (25 mm by 102 mm) nominal dimensions and shall be spaced on centers equal to the weather exposure to coincide with the placement of fasteners. Solidly sheathed decks shall be defined as sawn lumber boards or structural panels that provide a solid holding power for fasteners that do not have deficit conditions (gaps greater than those allowed by the roof covering manufacture's installation instructions, warped, split, cracked deteriorated or rotten boards).
(9) Section R905.8.1 Deck requirements. This section has been modified to provide a definition for the term "solidly sheathed." This section has been modified to read: R905.8.1 Deck requirements. Wood shakes shall be used only on solid or spaced sheathing. Where spaced sheathing is used, sheathing boards shall be not less than 1-inch by 4-inch (25 mm by 102 mm) nominal dimensions and shall be spaced on centers equal to the weather exposure to coincide with the placement of fasteners. Where 1-inch by 4-inch (25 mm by 102 mm) spaced sheathing is installed at 10 inches (254 mm) on center, additional 1-inch by 4-inch (25 mm by 102 mm) boards shall be installed between the sheathing boards. Solidly sheathed decks shall be defined as sawn lumber boards or structural panels that provide a solid holding power for fasteners that do not have deficit conditions (gaps greater than those allowed by the roof covering manufacture's installation instructions, warped, split, cracked deteriorated or rotten boards).
(10) Section R905.10.1 Deck requirements. This section has been modified to provide a definition for the term "solidly sheathed." This section has been modified to read: R905.10.1 Deck requirements. Metal roof panel roof coverings shall be applied to solid or spaced sheathing, except where the roof covering is specifically designed to be applied to spaced supports. Solidly sheathed decks shall be defined as sawn lumber boards or structural panels that provide a solid holding power for fasteners that do not have deficit conditions (gaps greater than those allowed by the roof covering manufacture's installation instructions, warped, split, cracked deteriorated or rotten boards).
(11) Section R905.16.1 Deck requirements. This section has been modified to provide a definition for the term "solidly sheathed." This section has been modified to read: R905.16.1 Deck requirements. Photovoltaic shingles shall be

applied to a solid or closely fitted deck, except where the roof covering is specifically designed to be applied over spaced sheathing. Solidly sheathed decks shall be defined as sawn lumber boards or structural panels that provide a solid holding power for fasteners that do not have deficit conditions (gaps greater than those allowed by the roof covering manufacture's installation instructions, warped, split, cracked deteriorated or rotten boards).

(12) Section R905.17.1 Deck requirements. This section has been modified to provide a definition for the term "solidly sheathed." This section has been modified to read: R905.17.1 Deck requirements. BIPV roof panels shall be applied to a solid or closely-fitted deck, except where the roof covering is specifically designed to be applied over spaced sheathing. Solidly sheathed decks shall be defined as sawn lumber boards or structural panels that provide a solid holding power for fasteners that do not have deficit conditions (gaps greater than those allowed by the roof covering manufacture's installation instructions, warped, split, cracked deteriorated or rotten boards).

(13) Section R908.3.1.1 Roof re-cover. This section has been modified to list a fourth condition for when a roof re-cover shall not be permitted. This section has been modified to read: R908.3.1.1. Roof re-cover. A roof re-cover shall not be permitted where any of the following conditions occur:

(A) Item 1. Where the existing roof or roof covering is water soaked or has deteriorated to the point that the existing roof or roof covering is not adequate as a base for additional roofing.

(B) Item 2. Where the existing roof covering is slate, clay, cement or asbestos-cement tile.

(C) Item 3. Where the existing roof has two or more applications of any type of roof covering.

(D) Item 4. Where the existing roof has one or more application of asphalt shingles additional applications of asphalt shingles shall not be permitted.

[**Source:** Amended and renumbered from 748:20-5-11.1 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-15. IRC® 2018 Chapter 10 Chimneys and Fireplaces

Chapter 10 of the IRC® 2018 is adopted with the following modification: Section R1005.7 Factory-built chimney offsets. This section has been modified to provide an exception for listed and labeled factory-built chimneys that are part of a fireplace and chimney assembly to be installed according to the manufacturer's installation instructions. This section has been modified to read: R1005.7 Factory-built chimney offsets. Where a factory-built chimney assembly incorporates offsets, no part of the chimney shall be at an angle of more than 30 degrees (0.52 rad) from vertical at any point in the assembly and the chimney assembly shall not include more than four elbows. Exception: Where chimneys are part of a listed and labeled factory-built fireplace they may be installed in accordance with the fireplace and chimney manufacturer's installation instructions.

[**Source:** Amended and renumbered from 748:20-5-11.2 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-16. IRC® 2018 Chapter 11 Energy Efficiency

Chapter 11 of the IRC® 2018 is adopted with the following modifications:

(1) Section N1101.6 Defined terms. This section has been modified to delete the definition of a "ROOF RECOVER" from the list of defined terms in the chapter.

Definitions for all other terms remain in the section and are applicable to the chapter.
(2) Section N1101.14 (R401.3) Certificate (Mandatory). This section has been moved to the newly created Appendix W, entitled "Appendix W, Energy Efficiency" and is not adopted as a part of the statewide minimum code for residential construction within the State of Oklahoma. The section has been renumbered in Appendix W to become W101.1. The section number N1101.14 itself, will stay as part of the code for numbering alignment but will not have any requirements attached to it.
(3) Table R1102.1.2 (R402.1.2) Insulation and Fenestration Requirements by Component. This table has been modified to change in Climate Zone 3, the Fenestration U-Factor from "0.32" to "0.38, the Glazed Fenestration SHGC from "0.25" to "0.30", the Ceiling R-value from "38" to "30" and the Wood Frame Wall R-Value from "R20 or 13 +5" to "R13." This table has been modified to read: Table R1102.1.2 (R402.1.2) Insulation and Fenestration Requirements by Component, with a superscript "a" at the end to indicate footnote "a" is applicable. The table contains 8 rows and 11 columns, with 9 footnotes at the end and is described below:

(A) Row 1 contains the headers for each of the columns as listed below:
(i) Row 1, column 1 heading is entitled "CLIMATE ZONE."
(ii) Row1, column 2 heading is entitled "FENSTRATION U-FACTOR" and contains a superscript "b" to indicate footnote "b" is applicable.
(iii) Row 1, column 3 heading is entitled "SKYLIGHT U-FACTOR" with a superscript "b" after the word "SKYLIGHT" to indicate footnote "b" is applicable.
(iv) Row 1, column 4 heading is entitled "GLAZED FENSTRATION SHGC" with a superscript "b" and "e" to indicate footnotes "b" and "e" are applicable.
(v) Row 1, column 5 heading is entitled "CEILING R-VALUE."
(vi) Row 1, column 6 heading is entitled "WOOD FRAME WALL R-VALUE."
(vii) Row 1, column 7 heading is entitled "MASS WALL R-VALUE" with a superscript "i" to indicate footnote "i" is applicable.
(viii) Row 1, column 8 heading is entitled "FLOOR R-VALUE."
(ix) Row 1, column 9 heading is entitled "BASEMENT WALL R-VALUE" with a superscript "c" after the word "BASEMENT" to indicate footnote "c" is applicable.
(x) Row 1, column 10 heading is entitled "SLAB R-VALUE AND DEPTH" with a superscript 'd" after the word "SLAB" to indicate footnote "d" is applicable.
(xi) Row 1, column 11 heading is entitled "CRAWL SPACE WALL R-VALUE" with a superscript "c" after the word "SPACE" to indicate footnote "c" is applicable.

(B) Row 2, column 1 contains the number "1." No changes have been made to this row.
(C) Row 3, column 1 contains the number "2." No changes have been made to this row.
(D) Row 4 contains the following information:
(i) Row 4, column 1 contains the number "3."

(ii) Row 4, column 2 has been modified to change the Fenestration U-Factor requirement to "0.38."
(iii) Row 4, column 3 contains the number "0.55."
(iv) Row 4, column 4 has been modified to change the Glazed Fenestration SHGC requirement to "0.30."
(v) Row 4, column 5 has been modified to change the Ceiling R-value requirement to "30."
(vi) Row 4, column 6 has been modified to change the Wood frame Wall R-value requirement to "R13" followed by a superscript "h" after the "13" to indicate footnote "h" is applicable."
(vii) Row 4, column 7 contains the number "8/13."
(viii) Row 4, column 8 contains the number "19."
(ix) Row 4, column 9 contains the number "5/13" followed by a superscript "f" to indicate footnote "f" is applicable.
(x) Row 4, column 10 contains the number "0."
(xi) Row 4, column 11 contains the number "5/13."

(E) Row 5, column 1 contains the number and words "4 except Marine." No changes have been made to this row.

(F) Row 6, column 1 contains the number and words "5 and Marine 4." No changes have been made to this row.

(G) Row 7, column 1 contains the number "6." No changes have been made to this row.

(H) Row 8, column 1 contains the numbers and word "7 and 8." No changes have been made to this row.

(I) After the table the following information is listed:
(i) For SI" 1 foot – 304.8 mm
(ii) NR equals Not Required.

(J) The footnotes at the end of the table state the following:
(i) Footnote "a" reads: "R-values are minimums. U-factors and SHGC are maximums. Where insulation is installed in a cavity that 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."
(ii) Footnote "b" reads: "The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration. Exception: In Climate Zones 1 through 3, skylights shall be permitted to be excluded from glazed fenestration SHGC requirements provided that the SHGC for such skylights does not exceed 0.30."
(iii) Footnote "c" reads: " '10/13' means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation on the interior of the basement wall. '15/19' means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation on the interior of the basement wall. Alternatively, compliance with '15/19' shall be R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home."
(iv) Footnote "d" reads: "R-5 insulation shall be provided under the full slab area of a heated slab in addition to the required slab edge insulation R-value for slabs, as indicated in the table. The slab edge insulation for heated slabs shall not be required to extend below the slab."

(v) Footnote "e" reads: "There are no SHGC requirements in the Marine Zone."

(vi) Footnote "f" reads: "Basement wall insulation shall not be required in warm-humid locations as defined by Figure N1101.7 and Table 1101.7."

(vii) Footnote "g" reads: "Alternatively, insulation sufficient to fill the framing cavity providing not less than an R-value of R-19."

(viii) Footnote "h" reads: "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."

(ix) Footnote "i" reads: "Mass walls shall be in accordance with Section N1102.2.5. The second R-value applies where more than half of the insulation is on the interior of the mass wall."

(4) Table N1102.1.4 (R402.1.4) Equivalent U-Factors has been modified to change in Climate Zone 3, the requirements for Fenestration U-factor from "0.32" to "0.36," the Ceiling U-Factor from "0.030" to "0.035" and the Frame Wall U-Factor from "0.060" to "0.082." This table has been modified to read: Table R1102.1.4 (R402.1.4) Equivalent U-Factors with a superscript "a" at the end to indicate footnote "a" is applicable. The table contains 7 rows and 9 columns with 3 footnotes at the end and is described below:

(A) Row 1 contains the headers for each of the columns as listed below:

(i) Row 1, column 1 heading is entitled "CLIMATE ZONE."

(ii) Row1, column 2 heading is entitled "FENSTRATION U-FACTOR."

(iii) Row 1, column 3 heading is entitled "SKYLIGHT U-FACTOR."

(iv) Row 1, column 4 heading is entitled "CEILING U-FACTOR."

(v) Row 1, column 5 heading is entitled "FRAME WALL U-FACTOR."

(vi) Row 1, column 6 heading is entitled "MASS WALL U-FACTOR" with a superscript "b" to indicated footnote "b" is applicable.

(vii) Row 1, column 7 heading is entitled "FLOOR U-FACTOR."

(viii) Row 1, column 8 heading is entitled "BASEMENT WALL U-FACTOR."

(ix) Row 1, column 9 heading is entitled "CRAWL-SPACE WALL U-FACTOR."

(B) Row 2, column 1 contains the number "1." No changes have been made to this row.

(C) Row 3, column 1 contains the number "2." No changes have been made to this row.

(D) Row 4 contains the following information:

(i) Row 4, column 1 contains the number "3."

(ii) Row 4, column 2 has been modified to change the Fenestration U-Factor requirement to "0.36."

(iii) Row 4, column 3 contains the number "0.55."

(iv) Row 4, column 4 has been modified to change the Ceiling U-Factor requirement to "0.035."

(v) Row 4, column 5 has been modified to change the Frame Wall U-Factor requirement to "0.082."

(vi) Row 4, column 6 contains the number "0.098."

(vii) Row 4, column 7 contains the number "0.047."

(viii) Row 4, column 8 contains the number "0.091" with a superscript "c" to indicate footnote "c" is applicable.

(ix) Row 4, column 9 contains the number "0.136."

(E) Row 5, column 1 contains the number and wording "4 except Marine." No changes have been made to this row.
(F) Row 6, column 1 contains the number and wording"5 and Marine 4." No changes have been made to this row.
(G) Row 7, column 1 contains the number "6." No changes have been made to this row.
(H) Row 8, column 1 contains the number and wording"7 and 8." No changes have been made to this row.
(I) The footnotes at the end of the table state the following:
(i) Footnote "a" reads: "Nonfenestration U-factors shall be obtained from measurement, calculation or an approved source."
(ii) Footnote "b" reads: "Mass walls shall be in accordance with Section N1102.2.25. Where more than half the insulation is on the interior, the mass wall U-factors shall not exceed 0.17 in Climate Zone 1, 0.14 in Climate Zone 2, 0.12 in Climate Zone 3, 0.087 in Climate Zone 4 except Marine, 0.065 in Climate Zone 5 and Marine 4 and 0.0857 in Climate Zone 6 through 8."
(iii) Footnote "c" reads: "In warm-humid locations as defined by Figure N1101.7 and Table N1101.7, the basement wall U-factor shall not exceed 0.360."

(5) Section N1102.2.1 Ceilings with attic spaces. This section has been modified to add two exceptions to the section under specific circumstances. This section has been modified to read: N1102.2.1. Ceilings with attic spaces. Where Section R1102.1.2 requires R-38 insulation in the ceiling, installing R-30 insulation over 100 percent of the ceiling area requiring insulation shall satisfy the requirement for R-38 insulation wherever the full height of uncompressed R-30 insulation extends over the wall top plate at the eaves. Where Section N1102.1.2 requires R-49 insulation in the ceiling, installing R-38 insulation over 100 percent of the ceiling area requiring insulation shall satisfy the requirement for R-49 insulation wherever the full height of uncompressed R-38 insulation extends over the wall top plate at the eaves. This reduction shall not apply to the U-factor alternative approach in Section N1102.1.4 and the Total UA alternative in Section N1102.1.5.
Exceptions:
(A) Where Table 1102.2.1 Requires R-30 insulation in the ceiling and roof/ceiling assembly does not allow sufficient space for the required insulation, compressed batts shall be allowed at the perimeter of the building where insulation extends over top plates.
(B) Where the ceiling is formed by the rafter in a slope or vaulted ceiling from plate height to ceiling level of 2 feet, that slope shall be considered an extension of the wall up to 4 feet and be insulated with R-19.

(6) Section N1102.2.10 Slab-on-grade floors. This section has been modified to add an exception to the section under certain circumstances. This section has been modified to read: N1102.2.10 Slab-on-grade floors. Slab-on-grade floors with a floor surface less than 12 inches (305 mm) below grade shall be insulated in accordance with Table N1102.1.2. The insulation shall extend downward from the top of the slab on the outside or inside of the foundation wall. Insulation located below grade shall be extended the distance provided in Table N1102.1.2 by any combination of vertical insulating, insulation extending under the slab or insulation extending out from the building. Insulation extending away from the

building shall be protected by pavement or by not less than 10 inches (254 mm) of soil. The top edge of the insulation installed between the exterior wall and the edge of the interior slab shall be permitted to be cut a 45-degree (0.79 rad) angle away from the exterior wall. Slab-edge insulation is not required in jurisdiction designated by the building official as having a very heavy termite infestation. Exception: If foundation/slab insulation is used in vertical application on inside of stem wall and a slab ledge exists, 1/2-inch insulation in vertical position is allowed as a thermal break between slab edge and foundation wall so that slab can still bear on the horizontal ledge.

(7) Table N1102.4.1.1 (R402.4.1.1) Air Barrier and Insulation Installation. This table has been modified to change the insulation installation criteria for walls under certain circumstances and the air barrier criteria and insulation installation criteria for electrical and communication boxes. This table has been modified to read: Table N1102.4.1.1 (R402.4.1.1) Air Barrier and Insulation Installation with a superscript "a" to indicate footnote "a" is applicable. The table has three columns and 17 rows and is described below:

(A) Row 1 contains the headers for each of the columns as listed below:

(i) Row 1, column 1 heading is entitled "COMPONENT."

(ii) Row 1, column 2 heading is entitled "AIR BARRIER CRITERIA."

(iii) Row 1, column 3 heading is entitled "INSULATION INSTALLATION CRITERIA."

(B) Row 2, column 1 contains the wording "General requirements." No changes were made to any of the columns in this row.

(C) Row 3, column 1 contains the wording "Ceiling/attic." No changes were made to any of the columns in this row.

(D) Row 4 has been modified and contains the following information:

(i) Row 4, column 1 has not been modified and contains the wording "Walls."

(ii) Row 4, column 2 has not been modified and contains the wording " The junction of the foundation and sill plate shall be sealed. The junction of the top plate and the top exterior walls shall be sealed. Knee walls shall be sealed."

(iii) Row 4, column 3 has been modified to read: "Cavities within corners and headers (in a 2 x 6 wall system or greater) of frame walls shall be insulated by completely filling the cavity with a material having a thermal resistance of not less than R-3 per inch. If used on wall systems, exterior thermal envelope insulation for framed walls shall be installed in substantial contact and in continuous alignment with the air barrier."

(E) Row 5, column 1 contains the wording "Windows, skylights, and doors." No changes were made to any of the columns in this row.

(F) Row 6, column 1 contains the wording "Rim joists." No changes were made to any of the columns in this row.

(G) Row 7, column 1 contains the wording "Floors including cantilevered floors and floors above grades." No changes were made to any of the columns in this row.

(H) Row 8, column 1 contains the wording "Crawl space walls." No changes were made to any of the columns in this row.

(I) Row 9, column 1 contains the wording "Shafts, penetrations." No changes were made to any of the columns in this row.
(J) Row 10, column 1 contains the wording "Narrow cavities." No changes were made to any of the columns in this row.
(K) Row 11, column 1 contains the wording "Garage separation." No changes were made to any of the columns in this row.
(L) Row 12, column 1 contains the wording "Recessed lighting." No changes were made to any of the columns in this row.
(M) Row 13, column 1 contains the wording "Plumbing and wiring." No changes were made to any of the columns in this row.
(N) Row 14, column 1 contains the wording "Shower/tub on exterior wall." No changes were made to any of the columns in this row.
(O) Row 15 has been modified and contains the following information:
(i) Row 15, column 1 has been modified to change the heading from "Electrical/phone box on exterior walls" to "Electrical and communication outlet boxes."
(ii) Row 15, column 2 has been modified to read: "The air barrier extends behind the building thermal envelope. Boxes that penetrate the building thermal envelope shall be air sealed to the subfloor, wall covering, or ceiling penetrated by the box or air-sealed boxes shall be installed."
(iii) Row 15, column 3 has been modified to read "Spaces behind boxes penetrating the thermal envelope shall have insulation cut or blow to fit or that readily conforms to the space around the box."
(P) Row 16, column 1 contains the wording "HVAC register boots." No changes have been made to any of the columns in this row.
(Q) Row 17, column 1 contains the wording "Concealed sprinklers." No changes have been made to any of the columns in this row.
(R) Footnote "a" reads: "Inspection of log walls shall be in accordance with the provisions of ICC 400."
(8) Section N1102.4.1.2 Testing. This section has been modified to provide an exception to the section for visual testing, modify the air changes per hour in Climate Zone 3 and clarify when the section is required. This section has been modified to read: N1102.4.1.2 (R402.4.1.2) Testing.
(A) The building or dwelling unit may be tested and verified as having an air leakage rate of not exceeding five air changes per hour in Climate Zones 1, 2, and 3, and three air changes per hour in Climate Zones 4 through 8. Testing, if preformed shall be in accordance with RESNET/ICC 380, ASTM E779 or ASTM E1827 and reported at a pressure of 0.2 inch w.g. (50 Pascals). Where required by the building official, testing shall be conducted by an approved third party. A written report of the test shall be signed by the party conducting the test and provided to the building official, if requested. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope. During testing:
(i) Item 1. Exterior windows and doors, fireplace, and stove doors shall be closed, but not sealed beyond the intended weatherstripping or other infiltration measures.

(ii) Item 2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.

(iii) Item 3. Interior doors, where installed at the time of the test shall be open.

(iv) Item 4. Exterior or interior terminations for continuous ventilation systems shall be sealed.

(v) Item 5. Heating and cooling systems, where installed at the time of the test, shall be turned off.

(vi) Item 6. Supply and return registers, where installed at the time of the test, shall be fully open.

(B) Exception: Visual testing of air barrier shall be allowed to assure leakage rate above or the Air Barrier and Insulation Checklist Table N1102.4.1.1 (R402.4.1.1) by a local jurisdictional inspection services or by approved third party.

(9) Section N1102.4.6 (R402.4.6) Air-sealed electrical and communication outlet boxes. This section has been added to require air-sealed electrical and communication outlet boxes as permitted by Table N1102.4.1.1, that penetrate the building thermal envelope to be sealed, and require boxes that are air-sealed to be tested in accordance with NEMA OS 4 and have an air leakage rate not greater than 2.0 cfm at a pressure differential of 1.57 psf and requires those boxes meeting NEMA OS 4 to marked with "NEMA OS 4" or "OS 4" and requires them to be installed in accordance with the manufacturer's instructions and with any supplied components required to achieve compliance with NEMA OS 4. This section has been added to read: N1102.4.6 (R406.2.4.6) Air-sealed electrical and communication outlet boxes. Where selected for installation as permitted by Table N1102.4.1.1, air-sealed electrical and communication outlet boxes that penetrate the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. Air-sealed electrical and communication outlet boxes shall be tested in accordance with NEMA OS 4. Requirement for Air-sealed Boxes for Electrical and Communication Applications and shall have an air leakage rate of not greater than 2.0 cfm (0.944 L/s) at a pressure differential of 1.57 psf (75 Pa). Electrical and communication outlet boxes shall be installed per the manufacturer's instructions and with any supplied components required to achieve compliance with NEMA OS 4.

(10) Section N1103.3.2 (R403.3.2) Sealing (Mandatory). This section has been modified to add plenums and start collar connections to plenum to the items that shall be sealed and require duct systems with sheet metal plenums, Y's, and supply boots to be sealed by liquid applied sealants only that comply with 181 BM (Mastic or similar) to be used to seal inner liners and start collars to plenum and for any other seams in the system. This section has been modified to read: N1103.3.2 (R403.3.2) Sealing (Mandatory). Ducts, air handler, plenums, start collar connections to plenum and filter boxes shall be sealed. Joints and seams shall comply with Section M1601.4.1. For duct systems with sheet metal Plenums, Y's and supply boots, only liquid applied sealants complying with 181 BM (Mastic or similar) shall be used to seal inner liners and start collars to plenum and any other seams in system.

(11) Section N1103.3.3 (R403.3.3) Duct testing. This section has been modified to specify the section is not mandatory and add a third exception for visual testing. This section has been modified to read: N1103.3.3 (R043.3.3) Duct testing.

(A) Ducts shall be pressure tested to determine air leakage by one of the following methods:

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

(ii) Item 2: Post construction test: Total leakage shall be measured with a pressure differential of 0.1 inch w.g. (25 Pa) across the entire system, including manufacturer's air handler enclosure. Registers shall be taped or otherwise sealed during the test.

(B) Exceptions:

(i) Exception 1: A duct air-leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.

(ii) Exception 2: A duct air-leakage test shall not be required for ducts serving heat or energy recovery ventilators that are not integrated with ducts serving heating or cooling systems.

(iii) Exception 3: Visual verification by Authority having Jurisdiction, approved agency or licensed inspector.

(C) A written report of the results of the test shall be signed by the party conducting the test and provided to the building official.

(12) Section N1103.4 Mechanical system piping insulation (Mandatory). This section has been modified to change the temperature the mechanical piping systems are required to carry fluids at and to add language specifying that the piping shall be insulated to a specific R-value or to the manufacture's installation instructions, whichever is more stringent. This section has been modified to read: N1103.4 Mechanical system piping insulation (Mandatory). Mechanical system piping capable of carrying fluids greater than 120 degrees Fahrenheit (49 degrees Celsius) or less than 55 degrees Fahrenheit (13 degrees Celsius) shall be insulated to an R-value of not less than R-3 or to the manufacturer's installation instructions, whichever is more stringent.

(13) Section N1103.5.3 (R403.5.3) Hot water pipe insulation (Prescriptive). This section has been modified to delete two of the items where insulation of the hot water pipe is required. This section has been modified to read: N1103.5.3 (R403.5.3) Hot water pipe insulation (Prescriptive). Insulation for hot water piping with a thermal resistance R-value of not less than R-3 shall be applied to the following:

(A) Item 1. Piping 1 inch (25 mm) and larger in nominal diameter.

(B) Item 2. Piping serving more than one dwelling unit.

(C) Item 3. Piping located outside the conditioned space.

(D) Item 4. This item has been stricken from the code.

(E) Item 5. This item has been stricken from the code.

(F) Item 6. Buried piping

(G) Item 7. Supply and return piping in recirculation systems other than demand recirculation systems.

(14) N1103.7 (R403.7) Equipment sizing and efficiency rating (Mandatory) This section has been modified to add a requirement for all new residential one- and two-family dwellings and townhouses to provide documentation showing compliance with this section to the authority having jurisdiction at the time a mechanical permit is required. This section has been modified to read: N1103.7 (R403.7) Equipment sizing and efficiency rating (Mandatory). Heating and cooling equipment shall be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. New or replacement heating and cooling equipment shall have an efficiency rating equal to or greater than the minimum required by federal law for geographic location where the equipment is installed. Documentation demonstrating compliance with this section is to be provided to the authority having jurisdiction at the time a Mechanical Permit is requested on new one- and two-family dwellings and townhouses.

(15) Section N1105.4.2 Compliance report. This section has been modified to specify compliance is required only when the proposed design of a building will be built on different sites where the cardinal origination of the building on each site is different. This section has been modified to read: Section N1105.4.2 (R405.4.2) Compliance report.

(A) Compliance software tools shall generate a report that documents that the proposed design complies with Section N1105.3. A compliance report on the proposed design shall be submitted with the application for the building permit. Upon completion of the building, a compliance report based on the as-built condition of the building shall be submitted to the building official before a certificate of occupancy is issued. Batch sampling of buildings to determine energy code compliance shall only be allowed for stacked multiple-family units.

(B) Compliance shall include information in accordance with Sections N1105.4.2.1 and N1105.4.2.2 When the proposed design of a building will be built on different sites where the cardinal orientation of the building on each site is different, compliance of the proposed design for the purposes of the application for the building permit shall be based on the worst-case orientation, worst-case configuration, worst-case building air leakage and worst-case duct leakage. Such worst-case parameters shall be used as inputs to the compliance software energy analysis.

(16) Table N1106.4 (R406.4) Maximum Energy Rating Index. This table has been modified to change the Energy Rating Index in Climate Zone 3 from "57" to "64." The table has two columns and 9 rows with one footnote and is described below:

(A) Row 1: Is the header row and is described below:

(i) Row 1, column 1 header is entitled "Climate Zone."

(ii) Row 1, column 2 header is entitled "Energy Rating Index" with a superscript "a" to indicate footnote "a" is applicable.

(B) Row 2, column 1, contains the number "1." No changes have been made to this row.

(C) Row 3, column 1, contains the number "2." No changes have been made to this row.

(D) Row 4 has been modified and is described below:

(i) Row 4, column 1, contains the number "3."

(ii) Row 4, column 2, contains the number "64."
(E) Row 5, column 1, contains the number "4." No changes have been made to this row.
(F) Row 6, column 1, contains the number "5." No changes have been made to this row.
(G) Row 7, column 1, contains the number "6." No changes have been made to this row.
(H) Row 8, column 1, contains the number "7." No changes have been made to this row.
(I) Row 9, column 1, contains the number "8." No changes have been made to this row.
(J) Footnote "a" reads: "Where on-site renewable energy is included for compliance using the ERI analysis of section N1106.4, the building shall meet the mandatory requirements of Section N1106.2, and the building thermal envelope shall be greater than or equal to the levels of efficiency and SHGC in Table N1102.1.2 or Table N1102.1.4 of the 2015 International Residential Code®."
[**Source:** Amended and renumbered from 748:20-5-12 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-17. IRC® [RESERVED]
[**Source:** Reserved at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-18. IRC® [RESERVED]
[**Source:** Reserved at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-19. IRC® 2018 Chapter 14 Heating and Cooling Equipment and Appliances
Chapter 14 of the 2018 IRC® is adopted with the following modifications:
(1) Section M1401.3 Equipment and appliance sizing. This section has been modified to add a requirement for all new residential one- and two-family dwellings and townhouses to provide documentation showing compliance with this section to the authority having jurisdiction at the time a mechanical permit is required. This section has been modified to read: M1401.3 Equipment and appliance sizing. Heating and cooling equipment and appliances shall be sized in accordance with ACCA Manual S or other approved sizing methodologies based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. Documentation demonstrating compliance with this section is to be provided to the authority having jurisdiction at the time a mechanical permit is required on new one- and two-family dwellings and townhouses. Exception: Heating and cooling equipment and appliance sizing shall not be limited to the capacities determined in accordance with Manual S where either of the following conditions applies:
(A) Item 1: The specified equipment or appliance utilizes multistage technology or variable refrigerant flow technology and the loads calculated in accordance with the approved heating and cooling calculation methodology are within the range of the manufacturer's published capacities for that equipment or appliance.
(B) Item 2: The specified equipment or appliance manufacturer's published capacities cannot satisfy both the total and sensible heat gains calculated in

accordance with the approved heating and cooling calculation methodology and the next larger standards size unit is specified.

(2) Section M1402.1 General. This section has been modified to add another referenced standard "UL/CSA 60335-2-40" as an option for conformity for electrical furnaces This section has been modified to read: M1402.1 General. Oil-fired central furnaces shall conform to ANSI/UL 727. Electric furnaces shall conform to UL 1995 or UL/CSA 60335-2-40.

(3) Section 1403.1 Heat pumps. This section has been modified to update a referenced standard by removing the ANCE sponsorship of the standard. This section has been modified to read: M1403.1 Heat pumps. Electric heat pumps shall be listed and labeled in accordance with UL 1995 or UL/CSA 60335-2-40.

(4) Section M1411.8 Locking access port caps. This section has been modified to specify the section will apply to new and retrofit outdoor condensers only. This section has been modified to read: M1411.8 Locking access port caps. Refrigerant circuit access ports located outdoors shall be fitted with locking-type tamper-resistant caps or shall be otherwise secured to prevent unauthorized access. Shall apply to new and retrofit outdoor condensers only.

(5) Section M1412.1 Approval of equipment. This section has been modified to update a referenced standard by removing the ANCE sponsorship of the standard. This section has been modified to read: M1412.1 Approval of equipment. Absorption systems shall be installed in accordance with the manufacturer's instructions. Absorption equipment shall comply with UL 1995 or UL/CSA 60335-2-40.

(6) Section M1413.1 General. This section has been modified to update a referenced standard by removing the ANCE sponsorship of the standard. This section has been modified to read: M14013.1 General. Evaporative cooling equipment and appliances shall comply with UL 1995 or UL/CSA 60335-2-40 and shall be installed:

(A) Item 1: In accordance with the manufacturer's instructions.

(B) Item 2: On level platforms in accordance with Section M1305.1.3.1.

(C) Item 3: So that openings in exterior walls are flashed in accordance with Section R703.4.

(D) Item 4: So as to protect the potable water supply in accordance with Section P2902.

(E) Item 5: So that the air intake opening locations are in accordance with Section R303.5.1.

[**Source:** Added at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-20. IRC® Chapter 15 Exhaust Systems

Chapter 15 of the 2018 IRC® is adopted with the following modifications:

(1) Section M1502.3 Duct termination. This section has been modified to add requirements for the exhaust duct terminate a minimum of 12 inches (305 mm) above the ground or any obstructions; terminate at least 3 feet (914 mm) from any condensing unit; and exempts existing dryer terminations. This section has been modified to read: M1502.3 Duct termination. Exhaust ducts shall terminate on the outside of the building. Exhaust duct terminations shall be in accordance with the dryer manufacturer's installation instructions. If the manufacturer's instructions do not specify a termination location, the exhaust duct shall

terminate not less than 3 feet (914 mm) in any direction from the openings into buildings nor less than 12 inches from finished ground level or other obstacles. Exhaust duct terminations shall be equipped with a backdraft damper. Additionally, exhaust shall not terminate within 3 feet (914 mm) of condensing units and a minimum 12 inches (305 mm) from the ground or any obstruction. Screens shall not be installed at the duct termination. Existing dryer terminations shall be exempt.

(2) Section M1502.4.2 Duct installation. This section has been modified to prohibit ducts from being joined with any screws or similar fasteners that protrude into the inside of the duct and to change the length of support intervals from 12 feet to 4 feet. This section has been modified to read: M1502.4.2 Duct installation. Exhaust ducts shall be supported at 4 feet (1219 mm) intervals and secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Ducts shall not be joined with screws or similar fasteners that protruded into the inside of the duct. Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.

[**Source:** Amended and renumbered from 748:20-5-13 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-21. IRC® 2018 Chapter 16 Duct Systems

Chapter 16 of the 2018 IRC® is adopted with the following modifications:

(1) Table M1601.1.1 Duct construction minimum sheet metal thickness for single dwelling units has been stricken from the code and replaced with a newly created table with the same table heading. The newly created table contains three rows and three columns and a footnote. The newly created table is described below:

(A) Row 1 is the header row and contains three columns, one of which is divided into two sub-rows as described below:

(i) Row 1, column 1 header is entitled "Duct Size"

(ii) Row 1, column 2 header is entitled "Galvanized" and contains two sub-rows:

(I) Row 1, column 2, sub-column 1 header is entitled "Minimum thickness (inches)."

(II) Row 1, column 2, sub-column 2 header is entitled "Equivalent Galvanized Gage No."

(iii) Row 1, column 3 is entitled "Approximate Aluminum B and S Gage."

(B) Row 2 contains 2 sub-rows with the following information listed:

(i) Row 2, sub-row 1, column 1 contains the wording "Round ducts and enclosed rectangular ducts 14 inches or less."

(ii) Row 2, sub-row 1, column 2 contains the following numbers in each sub-column:

(I) Row 2, sub-row 1, column 2, sub-column 1 contains the number "0.013."

(II) Row 2, sub-row 1, column 2, sub-column 2 contains the number "30."

(iii) Row 2, sub-row 1, column 3, contains the number "26."

(iv) Row 2, sub-row 2, column 1 contains the wording "Round ducts and enclosed rectangular ducts over 14 inches."

(v) Row 2, sub-row 2, column 2 contains the following numbers in each sub-column:

(I) Row 2, sub-row 2, column 2, sub-column 1 contains the number"0.016."

(II) Row 2, sub-row 2, column 2, sub-column 2 contains the number "28."

(vi) Row 2, sub-row 2, column 3 contains the number "24."

(C) Row 3 contains two sub-rows with the following information listed:

(i) Row 3, sub-row 1, column 1 contains the wording "Exposed rectangular ducts 14 inches or less."

(ii) Row 3, sub-row 1, column 2 contains the following numbers in each sub-column:

(I) Row 3, sub-row 1, column 2, sub-column 1 contains the number "0.016."

(II) Row 3, sub-row 1, column 2, sub-column 2 contains the number "28."

(iii) Row 3, sub-row 1, column 3, contains the number "24."

(iv) Row 3, sub-row 2, column 1 contains the wording "Exposed rectangular ducts over 14 inches."

(v) Row 3, sub-row 2, column 2 contains the following numbers in each sub-column:

(I) Row 3, sub-row 2, column 2, sub-column 1 contains the number"0.019."

(II) Row 3, sub-row 2, column 2, sub-column 2 contains the number "26."

(vi) Row 3, sub-row 2, column 3 contains the number "22."

(D) Between the end of the table and Footnote "a" is the wording "For SI: 1 inch is equal to 25.4 mm."

(E) Footnote "a" has been added to read: "a. Ductwork that exceeds 20 inches by dimension or exceeds a pressure of 1-inch water gage (250 pa) shall be constructed in accordance with SMACNA HVAC Duct Construction Standards Metal and Flexible."

(2) Section M1601.4.1 Joints, seams, and connections. This section has been modified to add a fourth exception for duct systems with sheet metal plenums, Y's and supply boots with liquid applied sealants. This section has been modified to read: M1601.4.1 Joints, seams and connections.

(A) Longitudinal and transverse joints, seams and connections in metallic and nonmetallic ducts shall be constructed as specified in SMACNA HVAC Duct Construction Standards-Metal and Flexible and NAIMA Fibrous Glass Duct Construction Standards. Joints, longitudinal and transverse seams, and connection in ductwork shall be securely fastened and sealed with welds, gaskets, mastics (adhesive), mastic-plus-embedded-fabric systems, liquid sealants or tapes. Tapes and mastics used to seal fibrous glass ductwork shall be listed and labeled in accordance with UL 181A and shall be marked "181A-P" for pressure-sensitive tape, "181 A-M" for mastic or "181 A-H" for heat sensitive tape.

(B) Tapes and mastics used to seal metallic and flexible air ducts and flexible air connectors shall comply with UL 181B and shall be marked "181 B-FX" for pressure-sensitive tape or "181 BM" for mastic. Duct connections to flanges of air distribution system equipment shall be sealed and mechanically fastened. Mechanical fasteners for use with flexible nonmetallic air ducts shall comply

with UL 181B and shall be marked 181B-C. Crimps joints for round metallic ducts shall have a contact lap of not less than 1 inch (25 mm) and shall be mechanically fastened by means of not less than three sheet-metal screws or rivets equally spaced around the joint.
(C) Closure systems used to seal all ductwork shall be installed in accordance with the manufacturers' instructions.
(D) Exceptions:
(i) Exception 1: Spray polyurethane foam shall be permitted to be applied without additional joint seals.
(ii) Exception 2: Where a duct connection is made that is partially inaccessible, three screws or rivets shall be equally spaced on the exposed portion of the joint so as to prevent a hinge effect.
(iii) Exception 3: For ducts having a static pressure classification of less than 2 inches of water column (500 Pa), additional closure systems shall not be required for continuously welded joints and seams and locking-type joints and seams. This exception shall not apply to snap-lock and button-lock type joints and seams that are located outside of conditioned space.
(iv) Exception 4: For duct systems with sheet metal plenums, Y's and supply boots, only liquid applied sealants complying with UL 181 BM (Mastic or similar) or equivalent method, shall be used to seal inner liners and start collars to plenum and any other seams in system.
[**Source:** Amended and renumbered from 748:20-5-13.1 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-22. IRC® [RESERVED]
[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

740:20-6-23. IRC® [RESERVED]
[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-6-24. IRC® 2018 Chapter 19 Special Appliances, Equipment and Systems
Chapter 19 of the IRC® 2018 is adopted with the following modification: Section M1903.1.1 Electrical requirements has been added to the code. This section has been added to read: M1903.1.1 Electrical requirements. In addition to the requirements of M1903.1, interconnection and all associated wiring shall be installed in accordance with NFPA 70, NEC®, 2017, Article 692 Fuel Cell Systems.
[**Source:** Amended and renumbered from 748:20-5-13.2 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-25. IRC® [RESERVED]
[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-6-26. IRC® [RESERVED]
[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-6-27. IRC® [RESERVED]
[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-6-28. IRC® 2018 Chapter 23 Solar Thermal Energy Systems
Chapter 23 of the IRC® 2018 is adopted with the following modification: Section M2301.2.2.1 Roof-mounted collectors. This section has been modified to add a requirement for a mechanical means of disconnect to be installed on piping to allow

for the disconnecting and removal of collectors to service or replace the roof. This section has been modified to read: M2301.2.21 Roof-mounted collectors. The roof shall be constructed to support the loads imposed by roof-mounted solar collectors. Roof-mounted solar collectors that serve as a roof covering shall conform to the requirements for roof coverings in Chapter 9 of this code. Where mounted on or above the roof coverings, the collectors and supporting structure shall be constructed on noncombustible materials or fire-retardant-treated wood equivalent to that required for roof construction. A mechanical means of disconnect shall be installed on piping to allow the disconnecting and removal of collectors for service or replacement of the roof.
[**Source:** Added at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-29. IRC® 2018 Chapter 24 Fuel Gas

Chapter 24 is of the IRC® 2018 adopted with the following modification: Section G2415.12 Minimum burial depth. This section has been modified to require all underground piping systems to be installed a minimum of 18 inches below grade. This section has been revised to read: G2415.12 Minimum burial depth. Underground piping systems shall be installed a minimum depth of 18 inches (457.5 mm) below grade, except as provided for in Section G2415.12.1.
[**Source:** Amended and renumbered from 748:20-5-14 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-30. IRC® 2018 Chapter 25 Plumbing Administration

Chapter 25 of the IRC® 2018 is adopted with the following modifications:

(1) P2503.4 Building sewer testing. This section has been modified to clarify that the building sewer test is only necessary when the local authority having jurisdiction requires the testing to be done and to change the building sewer test height requirement from a 10-foot high test to a 5-foot high test. This section has been modified to read: P2503.4 Building sewer testing.

(A) Item 1: Where required by local authority having jurisdiction, the building sewer shall be tested by insertion of a test plug at the point of connection with the public sewer, filling the building sewer with water and pressurizing the sewer to not less than 5-foot (1524 mm) head of water. The test pressure shall not decrease during a period of not less than 15 minutes. The building sewer shall be watertight at all points.

(B) Item 2: A forced sewer test shall consist of pressuring the piping to a pressure of not less than 5 psi (34.5 kPa) greater than the pump rating and maintaining such pressure for not less than 15 minutes. The forced sewer shall be watertight at all points.

(2) P2503.7 Water-supply system testing. This section has been modified to delete the word "plastic" and replace it with the terms "PVC" and "CPVC." This section has been modified to read: P2503.7 Water-supply system testing. Upon completion of the water-supply system or a section of it, the system or portion completed shall be tested and proved tight under a water pressure of not less than the working pressure of the system or, for piping systems other than PVC or CPVC, by an air test of not less than 50 psi (345 kPa). This pressure shall be held for not less than 15 minutes. The water used for tests shall be obtained from a potable water source.
[**Source:** Amended and renumbered from 748:20-5-15 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-31. IRC® 2018 Chapter 26 General Plumbing Requirements

Chapter 26 of the IRC® 2018 is adopted with the following modifications:

(1) Section P2603.2.1 Protection against physical damage. This section has been modified to change the installation sizing requirement of the holes or notches in studs, joists, rafters or similar members for piping other than cast-iron or galvanized steel from "1 1/4 inches (32 mm)" to "1 1/2 inches (38 mm)." This section has been modified to read: P2603.2.1 Protection against physical damage. In concealed locations, where piping, other than cast-iron or galvanized steel, is installed through holes or notches in studs, joists, rafters or similar members less than 1 1/2 inches (38 mm) from the nearest edge of the member, the pipe shall be protected by steel shield plates. Such shield plates shall have a thickness of not less than 0.0575 inch (1.463mm) (No. 16 Gage). Such plates shall cover the area of the pipe where the member is notched or bored and shall extend not less than 2inches (51 mm) above sole plates and below top plates.

(2) Section P2603.4 Pipes through foundation walls. This section has been modified to add a requirement for the relieving arch or pipe sleeve to comply with the materials and standards listed in Table 3002.1(2). This section has been modified to read: P2603.4 Pipes through foundation walls. A pipe that passes through a foundation wall shall be provided with a relieving arch, or a pipe sleeve shall be built into the foundation wall. The relieving arch or pipe sleeve shall conform to one of the materials and standards listed in Table P3002.1(2). The sleeve shall be two pipe sizes greater than the pipe passing through the wall.

(3) Section P2603.5.1 Sewer depth. This section has been modified to include a depth for the septic tank connection unless otherwise approved by the authority having Jurisdiction. This section has been modified to read: P2603.5.1 Sewer depth. Building sewers that connect to private sewage disposal systems shall be not less than 12 inches (305 mm) or as approved by the authority having jurisdiction below finished grade at the point of septic tank connection. Building sewers shall be not less than 12 inches (305 mm) below grade.

[**Source:** Amended and renumbered from 748:20-5-16 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-32. IRC® 2018 Chapter 27 Plumbing Fixtures

Chapter 27 of the IRC® 2018 is adopted with the following modifications:

(1) Section P2705.1 General. This section has been modified to add a ninth requirement for fixtures to conform to that specifies vanity countertops are permitted to extend a specific length into the water closet floor space. This section has been modified to read: P2705.1 General. The installation of fixtures shall conform to the following:

(A) Item 1: Floor-outlet or floor-mounted fixtures shall be secured to the drainage connection and to the floor, where so designed, by screws, bolts, washers, nuts and similar fasteners of copper, copper alloy, or other corrosion-resistant material.

(B) Item 2: Wall-hung fixtures shall be rigidly supported so that the strain is not transmitted to the plumbing system.

(C) Item 3: Where fixtures come into contact with walls and floors, the contact area shall be watertight.

(D) Item 4: Plumbing fixtures shall be usable.

(E) Item 5: Water closets, lavatories, and bidets. A water closet lavatory or bidet shall not be set closer than 15 inches (381 mm) from its center to any side wall, partition or vanity or closer than 30 inches (762 mm) center-to-center between adjacent fixtures. There shall be a clearance of not less than 21 inches (533 mm) in front of a water closet, lavatory or bidet to any wall, fixture, or door.

(F) Item 6: The location of piping, fixtures or equipment shall not interfere with the operation of windows or doors.

(G) Item 7: In flood hazard areas as established by Table R301.2(1), plumbing fixtures shall be located or installed in accordance with Section R322.1.6.

(H) Item 8: Integral fixture-fitting mounting surfaces on manufactured plumbing fixtures or plumbing fixtures constructed on site, shall meet the design requirements of ASME A112.19.1/CSA B41.1 or ASME A112.19.3/CSA B45.4.

(I) Item 9: Vanity countertops shall be permitted to extend a maximum of 1.5 inches (38.1 mm) into the water closet floor space.

(2) Section P2709.2 Lining required. This section has been modified to clarify it is only effective where required and to change the distance the lining material must extend from 2 inches to 3 inches (51 mm to 76 mm). This section has been modified to read: P2709.2 Lining required.

(A) Where required, the adjoining walls and floor framing enclosed on-site built-up shower receptors shall be lined with one of the following materials:

(i) Item 1: Sheet lead.

(ii) Item 2: Sheet copper.

(iii) Item 3: Plastic liner material complies with ASTM D 4068 or ASTM D 4551.

(iv) Item 4: Hot mopping in accordance with Section P2709.2.3.

(v) Item 5: Sheet-applied load bearing, bonded waterproof membranes that comply with ANSI A118.10.

(B) The lining material shall extend not less than 3 inches (76 mm) beyond or around the rough jambs and not less than 3 inches (76 mm) above finished thresholds. Sheet-applied load bearing, bonded waterproof membranes shall be applied in accordance with the manufacturer's installation instructions.

(3) Section P2715.1 Laundry tray waste outlet. This section has been modified to replace the word "tub" with the word "tray" in the section heading and section language. This section has been modified to read: P2715.1 Laundry tray waste outlet. Each compartment of a laundry tray shall be provided with a waste outlet not less than 1 1/2 inches (38 mm) in diameter and a strainer or crossbar to restrict the clear opening of the waste outlet.

[**Source:** Amended and renumbered from 748:20-5-17 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-33. IRC® 2018 Chapter 28 Water Heaters

Chapter 28 of the IRC® 2018 is adopted with the following modification: Section P2802.3 Solar water heater panels means of disconnect, has been added to specify when solar water heater panels are installed on a roof, a union will be installed on all piping entering and exiting the solar panel to allow for a mechanical means of disconnect for service or replacement of the roof. This section has been added to read: P2802.3 Solar Water heater panels means of disconnect. When solar water heater panels are installed on the roof, a union shall be installed on all piping

entering and exiting the solar panel to allow a mechanical means of disconnect for service or replacement of the roof.
[**Source:** Added at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-34. IRC® 2018 Chapter 29 Water Supply and Distribution

Chapter 29 of the IRC® 2018 is adopted with the following modifications:
(1) Section P2902.5.3 Lawn irrigation systems. This section has been modified to add a spill resistant backflow preventer as an option for protection. This section has been modified to read: P2902.5.3 Lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric vacuum breaker, a pressure vacuum breaker assembly, a spill resistance vacuum breaker or a reduced pressure principal backflow prevention assembly. Valves shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principal backflow prevention assembly.
(2) Section P2904.1.1 Required sprinkler locations. This section has been modified to clarify sprinklers shall only be installed to protect all areas of a townhouse dwelling unit. This section has been modified to read: Section P2904.1.1 Required sprinkler locations. Sprinklers shall be installed to protect all areas of a townhouse dwelling unit.
(A) Item 1: Attics, crawl spaces and normally unoccupied concealed spaces that do not contain fuel-fired appliances do not require sprinklers. In attics, crawl spaces and normally unoccupied concealed spaces that contain fuel-fired equipment, a sprinkler shall be installed above the equipment; however, sprinklers shall not be required in the remainder of the space.
(B) Item 2: Clothes closets, linen closets, and pantries not exceeding 24 square feet (2.2 meters squared) in area with the smallest dimension not greater than 3 feet (915 mm) and having wall and ceiling surfaces of gypsum board.
(C) Item 3: Bathrooms not more than 55 square feet (5.1 square meters) in area.
(D) Item 4: Garages; carports; exterior porches; unheated entry areas, such as mud rooms, that are adjacent to an exterior door and similar spaces.
(3) Section P2906.4 Water service pipe. This section has been modified to require piping materials not third-party certified for water distribution, to terminate at least 30 inches outside of the exterior wall. It has also been modified to strike the requirement of the termination to be before the full open valve located at the entrance to the structure. This section has been modified to read: P2906.4 Water service pipe. Water service pipe shall conform to NSF 61 and shall conform to one of the standards indicated in Table P2906.4. Water service pipe or tubing, installed underground and outside of the structure, shall have a minimum working pressure rating of not less than 160 pounds per square inch at 73 degrees Fahrenheit (1103 kPa at 23 degrees Celsius). Where the water pressure exceeds 160 pounds per square inch, (1103 kPa), piping material shall have a rated working pressure equal to or greater than the highest available pressure. Water service piping materials not third-party certified for water distribution shall terminate at least 30 inches outside the exterior wall. Ductile iron water service piping shall be cement mortar lined in accordance with AWWA C104/A21.4.

(4) Section P2906.9.1.4 PVC plastic pipe. This section has been modified to add a clear primer as another option to be applied to PVC solvent-cemented joints. This section has been modified to read: P2906.9.1.4 PVC plastic pipe. A clear or purple primer, or other approved primer that conforms to ASTM F 656 shall be applied to PVC solvent-cemented joints. Solvent cement for PVC plastic pipe conforming to ASTM D 2564 shall be applied to all joint surfaces.

[**Source:** Amended and renumbered from 748:20-5-19 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-35. IRC® 2018 Chapter 30 Sanitary Drainage

Chapter 30 of the IRC® 2018 is adopted with the following modifications:

(1) Section P3003.2 Prohibited joints. This section has been modified to include an exception for "Saddle-type" fittings. This section has been modified to read: P3003.2 Prohibited joints. Running threads and bands shall not be used in the drainage system. Drainage and vent piping shall not be drilled, tapped, burned, or welded. The following types of joints and connections shall be prohibited:

(A) Item 1: Cement or concrete.

(B) Item 2: Mastic or hot-pour bituminous joints.

(C) Item 3: Joints made with fittings not approved for the specific installation.

(D) Item 4: Joints between different diameter pipes made with elastomeric rolling O-rings.

(E) Item 5: Solvent-cement joints between different types of plastic pipe except where provided for in section P3003.13.4.

(F) Item 6: Saddle-type fittings. Exception: Where approved by the jurisdiction, saddle-type fittings shall be permitted to connect the building sewer to a public sewer.

(2) Section P3003.9.2 Solvent cementing. This section has been modified to delete the exception that allows for primer to not be used under certain conditions. This section has been modified to read: P3003.9.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming to ASTM D 2564, CSA B 137.3 or CSA B181.2 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D 2855. Solvent-cement joints shall be installed above or below ground.

[**Source:** Amended and renumbered from 748:20-5-20 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-36. IRC® [RESERVED]

[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-6-37. IRC® [RESERVED]

[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-6-38. IRC® [RESERVED]

[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-6-39. IRC® 2018 Chapter 34 General Requirements (Electrical)

Chapter 34 of the IRC® 2018 is adopted with the following modifications:

(1) Section E3403.3 Listing and labeling. This section has been modified to add a requirement to comply with the National Electrical Code® (NEC®), NFPA 70®. The section has been modified to read: E3403.3 Listing and labeling. Electrical materials, components, devices, fixtures and equipment shall be listed for the

application, in accordance with NFPA 70®, shall bear the label of an approved agency and shall be installed, and used, or both, in accordance with the manufacturer's installation instructions [110.3(B)].
(2) Section 3404.7 Integrity of Electrical Equipment. This section has been modified to allow for the reuse of existing electrical equipment, rather than requiring new replacements when certain conditions are met. This section has been modified to read: E3404.7 Integrity of electrical equipment. Internal parts of electrical equipment, including busbars, wiring terminals, insulators and other surfaces, shall not be damaged or contaminated by foreign materials such as paint, plaster, cleaners or abrasives, and corrosive residues. There shall not be any damaged parts that might adversely affect safe operation or mechanical strength of the equipment such as parts that are broken; bent; cut; deteriorated by corrosion, chemical action, or overheating. Foreign debris shall be removed from equipment. Damaged materials, equipment, appliances, and devices shall not be reused unless such elements have been reconditioned, tested, and placed in good and proper working condition and approved by a Nationally Recognized Testing Laboratory (NRTL), or by the manufacturer of the equipment. Electrical equipment damaged by natural or man-made events shall be reused only as recommended by the manufacturer of such equipment. [110.12(B)]
[**Source:** Amended and renumbered from 748:20-5-22 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-40. IRC® [RESERVED]
[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-6-41 IRC® [RESERVED]
[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-6-42. IRC® [RESERVED]
[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-6-43. IRC® [RESERVED]
[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-6-44. IRC® [RESERVED]
[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-4-45. IRC® [RESERVED]
[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-4-46. IRC® [RESERVED]
[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-6-47. IRC 2018® Chapter 42 Swimming Pools
Chapter 42 of the IRC® 2018 is adopted with the following modification: Section 4206.4.1 Maximum voltage has been modified to limit the operation of luminaries in swimming pools to the low-voltage contact limits defined in Section E4202.1. This section has been modified to read: E4206.4.1 Luminaries shall not operate above the low-voltage contact limit as defined in E4202.1. [680.23(A)(4)].
[**Source:** Amended and renumbered from 748:20-5-24 at 39 Ok Reg 2364, eff 9-14-22]

748:20-4-48. IRC® [RESERVED]

[**Source:** Reserved 39 Ok Reg 2364, eff 9-14-22]

748:20-6-49. IRC® 2018 Chapter 44 Referenced Standards

Chapter 44 of the IRC® 2018 has been adopted with the following modifications:
(1) The reference for the standard ANCE NMX-J-521/2-40-ANCE-2014/CAN/CSA-22.2 No. 60335-2-40–12/UL 60335-2-40: Safety of Household and Similar Electric Appliances, Part 2-40: Particular Requirements for Heat Pumps, Air Conditioners and Dehumidifiers along with the associated referenced sections has been stricken from the code.
(2) A reference for the standard ANSI/APSP/ICC 7-20 has been added to the chapter. This section has been added to read: ANSI/APSP/ICC 7-20 American National Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs, and Catch Basins®. Referenced in code section number R326.5.
(3) A reference for the standard ANSI/APSP/ICC 16-17 has been added to the chapter. This section has been added to read: ANSI/APSP/1CC 16-17 American National Standard for Suction Fittings for Use in Swimming Pools, Wading Pools, Spas and Hot Tubs®. Referenced in code section number R326.4.
(4) The reference to the ASHRAE Standard 34-2016: Design and Safety Classification of Refrigerants has been modified to update the publication year from 2016 to 2019. The reference has been modified to read: 34-2019: Design and Safety Classification of Refrigerants.
(5) A reference for the standard CSA C22.2 No. 218.1-17 has been added to the chapter. This section has been added to read: CSA C22.2 No. 218.1-17. Spas, Hot Tubs and Associated Equipment®. Referenced in code section number R326.5.
(6) The reference to the CSA standard CAN/CSA/C22.2 No. 60335-2-40-2012 has been modified to change the title and update the edition year of the reference from 2016 to 2019. This section has been modified to read: CSA C22.2 No. 60335-20-40 – 2019 Safety of Household and Similar Electrical Appliances, Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers.
(7) The reference to the ICC 500® has been modified to update the code section references. This section has been modified to read: ICC 500-14 ICC/NSSA Standard on the Design and Construction of Storm Shelters®. Referenced in code section number R323.1, R323.2, R323.2.1, R323.2.2, R323.2.3 and R323.2.4.
(8) The reference to the International Building Code® has been modified to update the edition year to 2018 and include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IBC®-18 International Building Code® as adopted and modified by the State of Oklahoma through the OUBCC.
(9) The reference to the International Fire Code® has been modified to update the edition year to 2018 and include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IFC®-18 International Fire Code® as adopted and modified by the State of Oklahoma through the OUBCC.
(10) The reference to the International Fuel Gas Code® has been modified to update the edition year to 2018 and include after the title the words "as adopted

and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IFGC®-18 International Fuel Gas Code® as adopted and modified by the State of Oklahoma through the OUBCC.
(11) The reference to the International Mechanical Code® has been modified to update the edition year to 2018 and include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IMC®-18 International Mechanical Code® as adopted and modified by the State of Oklahoma through the OUBCC.
(12) The reference to the International Plumbing Code® has been modified to update the edition year to 2018 include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: IPC®-18 International Plumbing Code® as adopted and modified by the State of Oklahoma through the OUBCC.
(13) The referenced standard for NFPA® 70 National Electrical Code® has been modified to update the edition year to 2020 and include after the title the words "as adopted and modified by the State of Oklahoma through the OUBCC." This section has been modified to read: NFPA® 70-20 National Electrical Code® as adopted and modified by the State of Oklahoma through the OUBCC.
(14) A reference for the standard UL 1563 has been added to the chapter. This section has been added to read: UL 1563-2009: Standard for Electric Hot Tubs, Spas and Associated Equipment®, with revisions through September 2020. Referenced in code section number R326.5.
(15) The referenced standard UL 1995-2011 Heating and Cooling Equipment – with revisions through July 2015 has been modified to update the edition year and remove the reference to revisions. The standard has bene modified to read: 1995-2015 Heating and Cooling Equipment.
(16) The reference standard UL/CSA/ANCE 60335-2-40-2012: Standard for Household and Similar Electrical Appliances, Part 2: Particular Requirements for Motor-compressors has been modified to update the edition year and the title and add a section reference. This reference has been modified to read: UL/CSA 60335-2-40-2019: Standard for Household and Similar Electrical Appliances, Part 2: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers. Referenced Sections M1402.1, M1403.1, M1412.1 and M1413.1.

[**Source:** Amended and renumbered from 748:20-5-24.1 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-50. Appendix U, Automatic Fire Systems

This appendix has been newly created and entitled "Automatic Fire Sprinkler Systems." The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance or order.

(1) Section U101 General. This section heading has been added to clarify the sections of text applicable to installing residential fire sprinkler systems in one- and two-family dwellings. This section heading has been added to read: U101 General.
(2) Section U101.1 One- and two-family dwellings automatic fire sprinkler systems. This section formerly numbered Section R313.2 has been moved into appendix U, entitled "Automatic Fire Sprinkler Systems" and specifies the provisions of this appendix shall apply to one- and two-family dwellings. It has been added to read: U101.1 One- and two-family dwellings automatic fire sprinkler systems. An

automatic residential fire sprinkler system shall be installed in one- and two-family dwellings. Exception: An automatic residential fire sprinkler system shall not be required for additions or alterations to existing buildings that are not already provided with an automatic residential sprinkler system.

(3) Section U101.2 Design and installation. This section, formerly numbered Section R313.2.1 has been moved into Appendix U, entitled "Automatic Fire Sprinkler Systems" and specifies the design and installation of automatic residential fire sprinkler systems shall comply with the provisions of this appendix and NFPA 13D. This section has been added to read: U101.2 Design and installation. Automatic residential fire sprinkler systems shall be designed and installed in accordance with the provisions of this appendix and NFPA 13D.

[**Source:** Amended and renumbered from 748:20-5-25 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-51. Appendix V, Swimming Pools, Spas, and Hot Tubs

This appendix has been newly created and entitled "Swimming Pools, Spas, and Hot Tubs." The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance or order.

(1) V101 Swimming Pools, Spas, and Hot Tubs. This section header has been added to clarify the sections of text that apply to the general requirements for swimming pools, spas and hot tubs. This section has been added to read: V101 Swimming Pools, Spas, and Hot Tubs.

(2) V101.1 General. This section formerly numbered R326.1 General has been moved into an appendix and has been added to read: V101.1 General. The design and construction of pools and spas shall comply with the International Swimming Pool and Spa Code.

[**Source:** Amended and renumbered from 748:20-5-27 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-52. Appendix W, Energy Efficiency

This appendix has been newly created and entitled "Energy Efficiency." The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance or order.

(1) W101 General. This section has been added to clarify the scope for this appendix. This section has been added to read: W101 General. This section has been added to specify the provisions of this appendix shall apply exclusively to the requirements for a Certificate listing energy efficiency components included in a residential dwelling unit.

(2) W101.1 Certificate. This section, formerly numbered N1101.14 has been moved into appendix W, entitled "Energy Efficiency." This section has been added to read: W101.1 Certificate. A permanent certificate shall be completed by the builder or registered design professional and posted on a wall in the space where the furnace is located, a utility room or an approved location inside the building. Where located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label, or other required labels. The certificate shall list the predominate R-values of insulation installed in or on the ceiling/roof, walls, foundation (slab, basement wall, crawl space wall/or floor) and ducts outside conditioned spaces; U-factors for fenestration and the solar heat gain coefficient (SHGC) of fenestration, and the results from any required duct system and building envelope air leakage testing done on the building. Where there is more than one value for each component,

the certificate shall list the value covering the largest area. The certificate shall list the types and efficiencies of heating, cooling and service water heating equipment. Where a gas-fired unvented room heater, electric furnace, or baseboard electric heater is installed in the residence, the certificate shall list "gas-fired unvented room heater," "electric furnace" or "baseboard electric heater," as appropriate. An efficiency shall not be listed for gas-fired unvented room heaters, electric furnaces or electric baseboard heaters.

[**Source:** Amended and renumbered from 748:20-5-26 at 39 Ok Reg 2364, eff 9-14-22]

748:20-6-53. Appendix X, Residential Tornado Provisions

(a) This appendix has been newly created and entitled "Residential Tornado Provisions." The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance or order.

(b) X101 Scope. This section heading has been added to specify the sections of this appendix that deal with the Scope of the appendix. This section header has been added to read: X101. Scope.

(1) Section X101.1 General. This section has been added to clarify the provisions shall be applicable for new construction. This section has been added to read: X101.1 General. These provisions shall be applicable for new construction where residential tornado provisions are required. This appendix provides prescriptive based requirements for construction of a residential structure meeting or exceeding a 135-mph wind event corresponding to an EF-2 tornado rating. The single most important objective in protecting a structure against high wind is achieving a continuous load path from the roof to the foundation. Based on the findings of studies and failures associated with various construction types, a group of 11 building practices (each associated with a different aspect of the structure) are summarized in this section.

(2) Section X101.2 Application. This section has been added to clarify the administrative provisions of this appendix are applicable in the administrative and building planning and construction requirements in Chapters 1 through 10 of this code. The section has been added to read: X101.2 Application. In addition to the general administration requirements of Chapter 1, the administrative provisions of this appendix shall also apply to the building planning and construction requirements of Chapters 1 through 10.

(3) Section X101.3 Wind design criteria. This section has been added to clarify that if Section R301.2.1 is modified, the buildings and portions thereof shall be constructed in accordance with the code and the ultimate wind speed design of 135 mph. This section has been added to read: X101.3 Wind design criteria. Modifying section R301.2.1 buildings and portions thereof shall be constructed in accordance with the wind provisions of this code using the ultimate design wind speed 135 mph.

(4) Section X101.4 Lumber sheathing. This section has been added to address the permitted forms of lumber sheathing. This section has been added to read: X101.4 Lumber sheathing. Only OSB or plywood sheathing is permitted. Dimensional lumber sheathing may not be used. Allowable spans and attachment for lumber used as roof or exterior wall sheathing shall conform to the following:

(A) X101.4.1 Sixteen Inch Framing. For rafter, stud, or beam spacing of 16 inches, the minimum nominal sheathing panel thickness will be 7/16 inch, the

minimum wood structural panel span rating 24/16, to be nailed with 8d ring shank (0.131 inch x 2.5 inch) or 10d (0.148 inch x 3 inch) nails on 4 inches on center along the edges and 6 inches on center in the field.

(B) X101.4.2 Twenty-four Inch Framing. For rafter, stud or beam spacing of 24 inches, the minimum nominal sheathing panel thickness will be 23/32 inch, the minimum wood structural panel span rating 24/16 to be nailed with 8d ring shank (0.131 inch x 2.5 inch) or 10d (0.148 inch x 3 inch) nails on 4 inches on center along the edges and 4 inches on center in the field.

(5) Section X101.5 Ceiling joist and rafter connections. This section has been added to require ceiling joists and rafters to be nailed to each other in a manner to achieve a connection that can transfer a 500-pound force in both compression and tension across the connections. This section has been added to read: X101.5 Ceiling joist and rafter connections. In addition to the provisions of Chapter 8, ceiling joists and rafters shall be nailed to each other in a manner to achieve a connection that can transfer a 500-pound force in both compression and tension across the connection.

(6) Section X101.6 Rafter uplift resistance. This section has been added to require individual rafters to be attached to supporting wall assemblies by connections capable of resisting uplift forces of 500 pounds. This section has been added to read: X101.6 Rafter uplift resistance. Individual rafters shall be attached to supporting wall assemblies by connections capable of resisting uplift forces of 500 pounds.

(7) Section X101.7 Gable end walls. This section has been added to clarify connections and sheathing for gable end walls. This section has been added to read: X101.7 Gable end walls. Gable end walls will be sheathed per X101.4 and will have connections to both a.) supporting wall assemblies and b.) roof framing by connections capable of resisting uplift forces of 500 pounds in both compression and tension across the connection.

(8) Section X101.8 Exterior wall bracing. This section has been added to clarify sheathing methods to be utilized to brace exterior walls and prohibit intermittent bracing on exterior walls. This section has been added to read: X101.8 Exterior wall bracing. Only continuous sheathing methods per R602.10.4.2 may be used to brace exterior walls. Frame garage doors using the sheathed portal frame method CS-PF. Lumber sheathing and attachment per X101.4. Any form of intermittent bracing is not allowed on an exterior wall. Intermittent bracing may only be used for interior braced wall lines.

(9) Section X101.9 Multi story construction. This section has been added to require nailing upper and lower story wall sheathing to a common rim board. This section has been added to read: X101.9 Multi story construction. Nail upper and lower story wall sheathing to common rim board in order to maintain continuity between stories.

(10) Section X101.10 Wood floor above crawl space construction. This section has been added to require extending structural wood sheathing to lap the sill plate. This section has been added to read: X101.10 Wood floor above crawl space construction. Extend structural wood sheathing to lap the sill plate. Nail to sill plate at 4 inches on center along the edges. Nail to rim board if present with 8d ring shank (0.131 inch x 2.5 inch) or 10d (0.148 inch x 3 inch) nails at 4 inches on center along both the top and bottom edges of the rim board.

(11) Section X101.11 Garage Doors. This section has been added to require garage doors to be rated for 135 mile per hour winds. This section has been added to read: X101.11 Garage Doors. Garage doors are to be wind rated to 135 mph.

[**Source:** Amended and renumbered from 748:20-5-27 at 39 Ok Reg 2364, eff 9-14-22]