

ORDINANCE

**AN ORDINANCE OF THE COMMISSION
OF KNOX COUNTY, TENNESSEE RESCINDING
ARTICLE III. CABO ONE- AND TWO-FAMILY
DWELLING CODE, SEC. 10-56, SEC. 10-57 AND SEC.
10-58 AND ADOPTING THE 2006 INTERNATIONAL
RESIDENTIAL CODE (IRC), WITH AMENDMENTS.**

ORDINANCE NUMBER: O-06-11-102

**REQUESTED BY: KNOX COUNTY BUILDING
OFFICIAL**

PREPARED BY: KNOX COUNTY LAW DIRECTOR

**APPROVED AS TO FORM
AND CORRECTNESS: _____**

APPROVED 1ST READING: _____

APPROVED 2ND READING: _____

**APPROVED EMERGENCY: _____
(Yes) (No)**

**VETOED: _____
Date**

**VETO OVERRIDE: _____
Date**

MINUTE BOOK: _____ PAGE: _____

WHEREAS, Knox County has previously adopted codes for regulating the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above-grade in height with a separate means of egress and their accessory structures within Knox County which can be found at Knox County Code ARTICLE III. CABO ONE- AND TWO-FAMILY DWELLING CODE, Sections 10-56, 10-57, and 10-58; and

WHEREAS, it is the policy of Knox County to adopt such residential building codes and regulations as are necessary for the preservation and enhancement of the health, safety and welfare of the citizens of Knox County; and

WHEREAS, the 1995 CABO One and Two Family Dwelling Code previously adopted and amended by Knox County, as mentioned above, is obsolete and it is the sense of the Knox County Commission that the newest editions of the codes should be adopted; and

WHEREAS, the most current edition of the code to be adopted herein has been reviewed by the Knox County Building Official, and, in consultation with Knox County contractors, builders and designers, has suggested amendments to these codes, which amendments are contained herein; and

WHEREAS, the Knox County Mayor recommends approval of this Ordinance.

NOW, THEREFORE, BE IT ORDAINED BY THE COMMISSION OF KNOX COUNTY AS FOLLOWS:

1. The Knox County Commission hereby rescinds Knox County Code ARTICLE III. CABO ONE- AND TWO-FAMILY DWELLING CODE, Sections 10-56, 10-57, and 10-58 as written and hereby adopts the following in its place for the purpose of regulating the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, removal and demolition of detached one- and two-family dwellings and townhouses not more than three stories above-grade in height with a separate means of egress and their accessory structures within Knox County.

2. Knox County Code ARTICLE III. CABO ONE- AND TWO-FAMILY DWELLING CODE, Sections 10-56, 10-57, and 10-58 will now read as follows:

ARTICLE III. 2006 INTERNATIONAL RESIDENTIAL CODE (IRC)

Section 10-56. Adopted.

The county hereby adopts the 2006 edition of the International Residential Code, published by the International Code Council, Inc., by reference, as if set out at length in this section, with the amendments set out in this article.

Section 10-57. Amendments.

The code adopted by this article is amended as provided in this section (the section identifiers contained within these amendments is in conformity with the 2006 International Residential Code):

1. Section R101.1 Title.

Delete “[NAME OF JURISDICTION]” and insert “Knox County, Tennessee” in its place.

2. Section R102.5 Appendices.

At the end of this section, insert the following:

“The following Appendices are specifically included in the adoption. All others are excluded.

- | | |
|------------|--|
| Appendix A | Sizing and Capacities of Gas Piping |
| Appendix B | Sizing Of Venting Systems Serving Appliances Equipped With Draft Hoods, Category I Appliances, And Appliances Listed For Use with Type B Vents |
| Appendix C | Exit Terminals of Mechanical Draft and Direct-Vent Venting Systems |
| Appendix D | Recommended Procedure for Safety Inspection of an Existing Appliance Installation |
| Appendix E | Manufactured Housing Used As Dwellings |
| Appendix F | Radon Control Methods |
| Appendix G | Swimming Pools, Spas, and Hot Tubs |

Appendix H	Patio Covers
Appendix J	Existing Buildings And Structures
Appendix K	Sound Transmission
Appendix M	Home Day Care – R-3 Occupancy
Appendix N	Venting Methods
Appendix O	Gray Water Recycling Systems
Appendix Q	ICC International Residential Code Electrical Provisions/National Electrical Code Cross-Reference”

3. Section R105.2 Work exempt from permit.

Delete “2. Fences not over 6 feet (1829 mm) high.” and insert “2. Fences.” in its place.

4. Section R106.1 Submittal documents.

At the end of the first paragraph before the exception, insert “All construction documents, including the site plan, for all buildings over 5000 square feet in area and for all buildings with three or more attached dwellings shall be prepared and sealed by a registered design professional licensed by the State of Tennessee.”

5. Section R109.1.2 Plumbing, mechanical, gas and electrical systems.

Delete “, and prior to framing inspection”

6. Section R109.1.4 Frame and masonry inspection.

Delete “and after the plumbing, mechanical and electrical rough inspections are approved”

7. Table R301.2(1) Climatic And Geographic Design Criteria.

Insert “10 PSF” in the table for Ground Snow Load.

Insert “90” in the table for Wind Speed.

Insert “C” in the table for Seismic Design Category.

Insert “Severe” in the table for Weathering.

Insert “12 inches” in the table for Frost Line Depth.

Insert “Moderate to heavy” in the chart for Termite.

Insert “19 degrees Fahrenheit” in the table for Winter Design Temp.

Insert “No” in the table for Ice Shield Underlayment Required.

Insert “210” in the table for Air Freezing Index.

Insert “59.4” in the table for Mean Annual Temp.

Delete footnote g. in its entirety and in its place insert “g. Flood hazard areas shall be as determined by the Knox County Department of Engineering and Public Works.”

8. Figure R301.1(7) Component And Cladding Pressure Zones.

Change the figure number from “R301.1(7)” to “R301.2(7)”

9. Section R301.2.2 Seismic provisions.

In the exception insert “and townhouses” after the word “dwellings” and at the end of the section insert “All references to “townhouses in seismic design category C” in Chapters 6, 7 and 28 shall not apply in Knox County.”

10. Section R311.5.3.1 Riser height.

Delete “7 ¾ inches (196 mm)” and replace it with “8 inches”.

11. Section R311.5.3.2 Tread depth.

Delete “10 inches (254 mm)” and replace it with “9 inches” in both places and change “6 inches (152mm)” to “4 inches” for the winder tread minimum width at the narrow end.

12. Section 311.5.6 Handrails.

Change “four or more risers” to “a total rise of 30 inches or more”.

13. Section R313.2 Location.

Insert “4. In each garage or storage area with a four foot or wider door to the outside. These smoke alarms shall be specifically approved for use in garages in the manufacturers written instructions. **Exception:** Heat detectors interconnected with the alarm system and having battery back up may be used in a garage or storage area.”

14. Section R317.1 Two-family dwellings.

Insert “from the foundation” after the second occurrence of the word “extend”.

15. Section R324.1.6 Protection of water supply and sanitary sewage.

Delete “and Chapter 3 of the *International Private Sewage Disposal Code*” and insert “, the requirements of the water and sewer service utility providers and the Knox County Health Department” in its place.

16. Figure R403.1(1) Concrete and Masonry Foundation Details.

Insert a note in the figure as follows: “The bottom of all foundations shall extend a minimum of 12 inches below finished grade.”

17. Section R404.1 Concrete and masonry foundation walls.

Delete the entire second paragraph including items one through five.

18. Table R404.1(1) Top Reactions and Prescriptive Support for Foundation Walls

Delete Table R404.1(1) in its entirety.

19. Table R404.1(2) Maximum Plate Anchor-Bolt Spacing for Supported Foundation Wall.

Delete Table R404.1(2) in its entirety.

20. Table R404.1(3) Maximum Aspect Ratio, L/W for Unbalanced Foundations

Delete Table R404.1(3) in its entirety.

21. Section R404.1.3 Design required.

Delete the word “or” and insert the word “and” in its place at the end of the sentence in item 2. of this section.

22. Section R404.1.3.1 Permanent lateral support for foundation and retaining walls.

Add new section numbers, titles and text as follows:

“R404.1.3.1 Permanent lateral support for foundation and retaining walls. Masonry foundation walls shall be laterally supported in accordance with the applicable provisions of Chapter 6 Wall Construction Sections R606 General Masonry Construction, R607 Unit Masonry, and R608 Multiple Wythe Masonry.”

“R404.1.3.2 Masonry and concrete foundation walls supporting less than four feet of unbalanced backfill. Where masonry or concrete foundation walls supporting less than four feet of unbalanced backfill do not extend and attach to the floor sheathing above, they shall be laterally braced at the top of the wall at intervals not to exceed four feet on center. Bracing shall be provided by the floor structural members where they are perpendicular to the wall and by blocking or bridging where the floor structural members are parallel to the wall. Such blocking or bridging shall be installed in the first two spaces between the floor structural members. For nominal “two by” lumber floor structural members the blocking shall be nominal “two by” solid full depth blocking the same size as the floor joists. For engineered floor structural members such as trusses or I-joists such blocking shall be in accordance with the manufacturers written instructions and shall be not less than a 2”x 4” diagonal brace connected to the sill plate on top of the wall and connected to the top of the first structural member and a 2”x 4” flat block connected to the top of the first and second structural members in line with the diagonal brace.”

“R404.1.3.3 Masonry and concrete foundation walls supporting four feet or more of unbalanced backfill. Where masonry or concrete foundation walls supporting four feet or more of unbalanced backfill do not extend and attach to the floor sheathing above, they shall be laterally braced at the top of the wall at intervals not to exceed two feet on center. Bracing shall be provided by the floor structural members where they are perpendicular to the wall

and by blocking or bridging where the floor structural members are parallel to the wall. Such blocking or bridging shall be installed in the first three spaces between the floor structural members. For nominal “two by” lumber floor structural members the blocking shall be nominal “two by” solid full depth blocking the same size as the floor joists. For engineered floor structural members such as trusses or I-joists such blocking shall be in accordance with the manufacturers written instructions and shall be not less than a 2”x 4” diagonal brace connected to the sill plate on top of the wall and connected to the top of the first structural member and a 2”x 4” flat block connected to the top of the first and second structural members in line with the diagonal brace.”

“R404.1.3.4 Lateral support for the bottom of masonry and concrete foundation walls. Where masonry or concrete foundation walls are required by Table R404.1.1(1), R404.1.1(2), R404.1.1(3), R404.1.1(4) or R404.1.1(5) to have vertical steel reinforcing, the bottom of the wall shall be laterally supported. Lateral support shall be provided by a full basement concrete slab floor a minimum of a 3 ½” thick poured tight against the bottom of the foundation walls with no compressible materials allowed for expansion or other purposes. If no floor slab is to be poured, such as in crawl spaces, lateral support of the bottom of the foundation wall shall be accomplished by embedding steel reinforcing in the foundation, which shall extend up into the wall and be tied to the wall reinforcing. This reinforcing shall be of the same size and spacing as is required for the wall.”

23. Section R408.1 Ventilation

At the end of the section, add the following:

“Exception: The minimum net area of ventilation openings may be reduced to not less than 1 square foot for each 1500 square feet of the under-floor space area where the ground surface is treated with an approved vapor retarder material and the required openings are placed so as to provide cross ventilation of the under-floor space.”

24. Section R502.11.4 Truss Design Drawings.

Delete “to the building official and approved prior to installation” and replace it with “for review when required by the building official”.

25. Section R602.6 Drilling and notching studs.

In subsection “2. Drilling.” delete the second occurrence of the word “no”.

26. Table R602.10.1 Wall Bracing.

In the section for Category C for wall bracing of a one story or top of a two or three story change “30%” to “16%” and change “45%” to “25%” and in the section for Category C for wall bracing of the first story of a two story or the second story of a three story change “16%” to “30%” and change “25%” to “45%”.

27. Section R613.2 Window sills.

Delete section R613.2 in its entirety.

28. Section R802.10.1 Truss design drawings.

Delete “to the building official and approved prior to installation” and replace it with “for review when required by the building official”.

29. Table N1102.1 Insulation And Fenestration Requirements By Component

In the row for climate zone “4 except Marine”, change Ceiling R-Value from “R38” to “R-30” and change Floor R-Value from “R-19” to “R-13”.

30. Section N1103.2.1 Insulation.

Change “R-8” to “R-6” in the first sentence and delete the second sentence entirely.

31. Section M1305.1.3 Appliances in attics.

In the first sentence delete the word “have” and replace with “be provided with”.

32. Section P2603.6.1 Sewer depth.

Delete “[NUMBER]” in two places and insert “twelve inches” in two places.

33. Section E3303.2 Inspection Required.

Delete the word “shall” and replace with the word “may”.

34. Section AE304.3.2.1 Investigation.

Delete the word “shall” and replace with the word “may”.

35. Section AE304.3.2.2 Fee.

Delete the word “shall” and replace with the word “may” in the first three places it occurs.

36. Section AE305.5.1 Structural inspections for the manufactured home installation.

At the end of the section insert “**Exception:** The inspections required by this section shall not apply to manufactured homes as exempted by the State of Tennessee but shall apply to any construction or installation of decks, porches, steps or other structures or equipment. All manufactured homes shall pass a final inspection and have a certificate of occupancy issued.”

37. Section AF103.5.3 Vent pipe.

At the end of the section insert “**Exception:** The vent pipe shall be allowed to terminate in the attic and may be capped unless tests verify the radon potential to be 4 pCi/L or greater.”

38. Section AF103.6.1 Vent pipe.

At the end of the section insert “**Exception:** The vent pipe shall be allowed to terminate in the attic and may be capped unless tests verify the radon potential to be 4 pCi/L or greater.”

39. Section AF103.12 Power source.

Delete Section AF103.12 in its entirety.

40. Section AH105.1 General.

Delete the word “con-forming” and replace with “conforming”.

Section 10-58. Reserved.

3. This Ordinance shall take effect upon passage, the public welfare requiring it.

Presiding Officer of the Commission **Date**

County Clerk **Date**

Approved: _____
County Mayor **Date**

Vetoed: _____
County Mayor **Date**