

ITEM # _____ PREPARED BY: _____

Moved: _____ REVIEWED BY: Robert B. Rolwing
County Attorney

Seconded by: _____

JOINT ORDINANCE NO. _____

A JOINT ORDINANCE AMENDING THE MEMPHIS AND SHELBY COUNTY BUILDING CODE SO AS TO ADOPT THE 2021 EDITION OF THE ICC INTERNATIONAL RESIDENTIAL CODE AND LOCAL AMENDMENTS. SPONSORED BY COMMISSIONER EDMUND FORD, JR.

WHEREAS, the Shelby County Board of Commissioners and the Council of the City of Memphis seek to adopt and maintain a comprehensive set of coordinated Technical Codes and to update those Codes to assure the safe and effective construction of commercial and residential buildings and structures in the Community; and

WHEREAS, it has been determined that it is necessary and prudent to adopt a newer code edition covering the construction of residential structures which had previously been covered by regulations in the 2015 edition of *International Code Council (ICC) International Residential Code* which is outdated; and

WHEREAS, A copy of the 2021 Edition *ICC International Residential Code* has been placed in the Shelby County Commission Minutes Clerk for public review of those documents and as required by state statute before their adoption by reference by the Shelby County Board of Commissioners and the Council of the City of Memphis; and

WHEREAS, The provisions of the 2021 Edition of the *ICC International Residential Code*, when adopted by the Board and Council, will provide a modern and internally consistent Code for such construction and is within the family of codes already adopted in Memphis and Shelby County.

NOW, THEREFORE BE IT ORDAINED BY THE BOARD OF COMMISSIONERS OF SHELBY COUNTY, TENNESSEE, That all previous residential codes are hereby repealed except as may be set out in the attachments hereto, and that the 2021 Edition of the *ICC International Residential Code* is hereby adopted by reference, a copy of said code being on file in the Minutes Office of the Shelby County Board of Commissioners.

BE IT FURTHER ORDAINED, That the *2021 Edition of the ICC International Residential Code* is amended by adoption of the local amendments attached to this Joint Ordinance as Exhibit A.

BE IT FURTHER ORDAINED, That the 2021 Edition of the *ICC International Residential Code* and those local amendments attached to this Joint Ordinance as Exhibit A are hereby incorporated by reference as if set out herein in their entirety from the 2021 Edition of the *ICC International Residential Code* and that no Appendices from the 2021 Edition of the *ICC International Residential Code* are adopted.

BE IT FURTHER ORDAINED, The adoption of the 2021 Edition of the *ICC International Residential Code* and those local amendments attached thereto, shall be implemented through their inclusion in the appropriate section of the Memphis and Shelby County Building Code which contains a provision that addresses the appropriate standards for the construction of such residential structures.

BE IT FURTHER ORDAINED, That should any part of this ordinance or code be found to be unconstitutional or unenforceable by a court of competent jurisdiction that such a determination will have no effect on the other portions of the adopted Code and the amendments thereto.

BE IT FURTHER ORDAINED, That this Joint Ordinance shall take effect in the City of Memphis and the unincorporated areas of Shelby County on December 31, 2021 by virtue of the concurring and separate passage thereof by the Memphis City Council and by the Board of Commissioners of Shelby County or if not adopted by each legislative body by that date, at the date of such adoption by the last adopting body.

LEE HARRIS
County Mayor

Date _____

ATTEST:

Clerk of County Commission

First Reading: _____

Second Reading: _____

Adopted
Third Reading: _____

Exhibit A

Local Amendments to 2021 *ICC International Residential Code*

1. Amend “Section R101.1 Title” by adding the term “of Memphis and Shelby County” in the parenthetical phrase so when amended it shall read:

R101.1 Title. These provisions shall be known as the *Residential Code for One- and Two- Family Dwellings* of Memphis and Shelby County, and shall be cited as such and will be referred to as “this code.”

2. Amend Section “R101.2 Scope” by adding the following sentences at the end of the section after the word “height” and before the exception:

This code is also applicable to multi-family homes with 3 to 6 dwelling units meeting the definition of a “large home” and subject to the scope limitations specified within this code. Existing buildings undergoing repair, alteration or additions, and change of occupancy shall be permitted to comply with the *International Existing Building Code* as locally amended.

3. Amend Section R102.7 “Existing structures” by deleting the phrase “the *International Property Maintenance Code* or”

4. Delete “Section R103 Department of Building Safety” in its entirety including subsections “R103.1 Creation of enforcement authority”, “R103.2 Appointment” and “R103.3 Deputies” and replace it with the following:

Section R103

Reserved

5. Add a new subsection R105.1.1 entitled “Design and construction of retaining walls” which shall read as follows:

R105.1.1 Design and construction of retaining walls. Retaining wall systems over 3 feet in height above finished grade shall be designed by a professional engineer or a registered design professional licensed to practice in the state of Tennessee, for all applicable loads as specified in the Building Code and in keeping with nationally recognized standards. Design shall be based upon sound engineering and geo-technical principles.

6. Delete the provisions under “Section R105.2 Work exempt from permit” after the last numbered exemption for building permits section so that when amended it reads as follows:

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

Building

1. Reserved
2. Reserved
3. Retaining walls that are 3 feet (914 mm) in height or less as measured from the bottom of finished grade to the top of the wall, unless supporting a surcharge imposed by an adjacent structure. Such structures shall include but not be limited to permanent buildings and public roadways.
4. Free standing walls, not supporting a surcharge, that are 4 feet (1220 mm) in height or less as measured from the bottom of finished grade to the top of the wall.
5. Water tanks supported directly on grade if the capacity does not exceed 5,000 gallons (18927 L) and the ratio of the height to the diameter or width does not exceed 2 to 1.
6. Side walks and driveways not more than 30 inches (762mm) above adjacent grade and not over any basement or store below.
7. Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.
8. Prefabricated swimming pools that are less than 24 inches (610mm) deep.
9. Swings and other playground equipment accessory to a one or two family dwelling.
10. Window awnings supported by an exterior wall which do not project more than 54 inches (1732mm) from the exterior wall and do not require additional support.
11. Decks not exceeding 200 square feet (18.58M²) in area, that are not more than 30 inches (762mm) above grade at any point, are not attached to a dwelling and do not serve the exit door required by Section R311.4.
12. All detached single-family reroofing projects where no decking, structural and/or equipment supports are modified.

7. Add a new Item 8 to Section R105.3 Application for permit as follows:

8. Storm Water Clearance – **Include a** copy of the owner's notice of coverage letter from the Department of Environment and Conservation or a written notarized statement from the owner that no such letter is needed for this construction.

8. Add the following new sentence and exception to Section R105.3.1, after the last sentence following the word “practicable”

Permits shall be issued to a licensed and/or registered contractor who performs the work. If work is subcontracted, both contractors shall be licensed and/or registered.

Exception: A building permit for construction of a single-family dwelling may be obtained by the property owner as allowed by T.C.A. Section 62-6-103 entitled “License requirements – Recovery of expenses by unlicensed contractors” which allows a person or firm specified in subdivision (a)(2)(A) of the act to make an application for a permit to construct a single residence, provided that person shall not construct more than one (1) single residence within a period of two (2) years.

9. Delete the entire Section entitled “R112 Board of Appeals” and replace it with the following:

SECTION R112 BOARD OF APPEALS

R112.1 General. The Memphis and Shelby County Joint Board of Appeals, as established in the Memphis and Shelby County Building Code, shall hear all appeals and variance requests that arise under this Code.

10. Add the following definitions to Section R202 in the appropriate alphabetical locations:

Building Section – Whenever the term “Building Section” is used in the Memphis and Shelby County Residential Code herein adopted, it shall mean the Building Section of the Memphis and Shelby County Office of Construction Enforcement (MSCE).

Chief Appointing Authority – Whenever the term “Chief Appointing Authority” is used in the Technical Codes herein adopted, it shall mean the Mayors of the City of Memphis and County of Shelby, Tennessee.

City, Municipality, or Governing Body – Whenever the word “City” or “Municipality” or “Governing Body” is used in the Technical Codes herein adopted, it shall mean the City of Memphis and County of Shelby, Tennessee.

Freestanding Wall – A manmade structure built out of rock, block, timber, concrete or other similar material which does not either directly support retained material or serve as a facing of a cut slope. This definition shall not include standard wood privacy fences as used in residential applications.

International Electrical Code – Whenever the word “International Electrical Code” is used in this code herein adopted, it shall mean the 2020 Edition of the

National Electrical Code (NEC) with Local Amendments and will be known as the Memphis and Shelby County Electrical Code (MSCEC).

International Energy Conservation Code - Whenever the word “International Energy Conservation Code” is used in this code herein adopted, it shall mean the 2021 Edition of the *ICC International Energy Conservation Code* with Local Amendments and will be known as the Memphis and Shelby County Energy Conservation Code (MSCECC).

International Building Code – Whenever the word “International Building Code” is used in this code herein adopted, it shall mean the 2021 Edition of the *ICC International Building Code* with Local Amendments, will be known as the Memphis and Shelby County Building Code (MSCBC).

International Fuel Gas Code – Whenever the word “International Fuel Gas Code” is used in this code herein adopted, it shall mean the 2021 Edition of the *ICC International Fuel Gas Code* with Local Amendments and will be known as the Memphis and Shelby County Fuel Gas Code (MSCFGC).

International Fire Code. Whenever the word “International Fire Code (IFC)” is used in this code as adopted, it shall mean all the 2021 Edition of the *ICC International Fire Code* with local amendments as as adopted by the Memphis City Council for the City of Memphis and the Shelby County Commission for unincorporated Shelby County and will be known as the Memphis and Shelby County Fire Code (MSCFC)

International Mechanical Code – Whenever the word “International Mechanical Code” is used in this code herein adopted, it shall mean the 2021 Edition of the *ICC International Mechanical Code* with Local Amendments and will be known as the Memphis and Shelby County Mechanical Code (MSCMC).

International Plumbing Code – Whenever the word “International Plumbing Code” is used in this code herein adopted, it shall mean the 2021 Edition of the *ICC International Plumbing Code* with Local Amendments and will be known as the Memphis and Shelby County Plumbing Code (MSCPC).

Large Home. A building with three (3) to six (6) attached dwelling units consolidated into a single structure. A large home is located on a single tract or lot, and contains common walls. The building looks like a conventional single-family house with a functional street facing primary entrance. Dwelling units within the building may be situated either wholly or partially over or under other dwelling units.

Retaining Wall – A manmade structure built out of rock, block, wood, concrete or other similar material and used to either directly support retained material or to serve as a facing of a cut slope. This definition includes, but is not limited to other systems design to retain earth or other materials such geosynthetic-reinforced soil system or pre-engineered modular materials.

Structural Wall. An interior load-bearing wall and/or a wall that forms the perimeter of a floor opening, as defined by 301.2.2.3.11.12, Item 3.

Chapter 3 Building Planning

11. Table R301.2 (1) shall read as follows and all existing footnotes shall remain unchanged.

**Table R301.2
Climatic and Geographic Design Criteria**

GROUND SNOW LOAD ^o	WIND DESIGN				SEISMIC DESIGN CATEGORY ^f	SUBJECT TO DAMAGE FROM			ICE BARRIER UNDERLAYMENT REQUIRED ^h	FLOOD HAZARD ^g	AIR FREEZING INDEX ⁱ	MEAN ANNUAL TEMPERATURE (°F) ^j
	Speed ^d (mph)	Topographic effects ^k	Special wind region ^l	Windborne debris zone ^m		Weathering ^a	Frost Line Depth ^b	Termite ^c				
10 lb/ft ²	105	No	No	No	D ₁	Moderate	5 Inches	Moderate to Heavy	No	February 6, 2013	158	61.8

12. Sections R301.2.2.1 “Determination of seismic design category” and R301.2.2.1.1 Alternative determinations of seismic design category” shall be deleted in their entirety along with Table R301.2.2.1.1 and that section held in reserve so that when amended the code shall read as follows:

Section R301.2.2.1 – Reserved

R301.2.2 Seismic provisions. The seismic provisions of this code shall apply as follows:

1. Townhouses in Seismic Design Categories C, D₀, D₁ and D₂.
2. Detached one- and two-family dwellings and large homes in Seismic Design Categories D₀, D₁, and D₂
3. Large homes in Seismic Design Categories C, D₀, D₁, and D₂.
4. Townhouses and detached one- and two-family dwellings shall be allowed to follow Section R301.2.2.3.11 as an alternative compliance method for meeting the structural requirements of this code’s seismic provisions.

13. A new section R301.2.2.3.11 is added entitled “Alternative compliance method for structural requirements.” along with its various subsections numbered R301.2.2.3.11.1 thru R301.2.2.3.11.12 which shall read as follows:

R301.2.2.3.11 Alternative compliance method for seismic structural requirements. In addition to meeting all the structural requirements for Seismic Design Category C and sections R301.2.2, an alternative compliance method for meeting seismic structural requirements when wood framing is used shall include compliance with the following items. In the event any requirement in this section differs from wind code structural requirements, the more stringent will apply.

R301.2.2.3.11.1 Anchorage exterior walls (Sole Plates). Exterior wall sole plates shall be secured to the foundation or framing below by one of the following methods:

1. Foundation: ½ inch (12.7 mm) anchor bolts, with 3 inch by 3 inch (76 mm by 76 mm) washers, embedded in the foundation a minimum of 7 inches (178 mm) in depth. Such anchor bolts are to be placed 4 feet on center maximum and within 12 inches (305 mm) of the end of each plate section. A minimum of 2 anchors per plate section is required.
2. Foundation: MASA anchors or equivalent embedded in the foundation and placed at 4 feet (1219 mm) on center maximum and within 12 inches (305 mm) of the end of each plate section. A minimum of 2 anchors per plate section is required.
3. Elevated Floors: 10d nails placed at 8 inches on center and embedded in a continuous rim board. Rim board depth to match depth of floor framing. Rim board shall be nailed to the end of each floor framing member with three 10d nails. Where floor framing parallels exterior wall, 2 rim boards shall be provided and nailed per Table R602.3(1). The Rim board shall be fastened to wall top plate with metal plates at 6 feet (1829 mm) on center; installed plate capacity shall equal or exceed 440 pounds

R301.2.2.3.11.2 Anchorage all interior structural walls (Sole Plates). Interior wall framing shall be secured by one of the following methods:

1. Foundation: ½ inch (12.7mm) anchor bolts, with 3 inches by 3-inch (76 mm by 76 mm) washers, embedded a minimum of 7 inches (178 mm) in depth in the concrete foundation (thickened slab) at 4 feet (1219 mm) on center maximum and within 12 inches (305mm) of the end of each plate section.
2. Foundation: By power actuated fasteners that provide 210 pounds per linear foot shear capacity, placed 2 feet (610 mm) on center maximum and within 12 inches (305 mm) of each plate section or equivalent means of anchorage. A minimum of 2 anchors are required per plate section.
3. Elevated Floors: 10d nails placed at 8 inches (204 mm) on center and embedded in one of the following:
 - a) Structural wall top plate flush with bottom of floor sheathing, or
 - b) Floor joist parallel with and directly below plate, or
 - c) Blocking, depth to match, placed between floor joists and running the full length of the plate. Blocking to be nailed per Table R602.3(1).

R301.2.2.3.11.3 Stud spacing - Exterior walls. All 2x4 exterior walls shall be a maximum of 16 inch (406 mm) stud spacing up to 3 stories. Gypcrete flooring or similar cementitious leveling products shall not be used on elevated floors.

Exception: Thin-set or other base material required for installation of flooring products in isolated confined spaces such as bathrooms.

R301.2.2.3.11.4 Wall sheathing.

R301.2.2.3.11.4.1 Exterior wall sheathing. Exterior wall sheathing shall be 7/16 inch (11mm) exterior rated OSB or equivalent or 7/16 inch (11mm) exterior rated plywood, minimum. Sheathing is to be fastened every 6 inches (152 mm) on the edges and 12 inches (305 mm) at intermediate supports.

R301.1.2.2.3.11.4.2 Interior wall sheathing. Interior walls shall have sheathing on both sides. Interior sheathing shall be a minimum of ½ inch (12.7mm) gypsum fastened every 7 inches (178 mm) on edges and every 7 inches (178 mm) at intermediate supports. Minimum fastener size shall be 5d cooler or wallboard nails or 1 ¼" #6 Types S or W screws.

R301.2.2.3.11.5. Garage door openings. Brace wall panels are required for garage openings as per Section R602.10.6 of this Code.

Exception - An engineered pre-manufactured wall panel is allowed to be used at garage openings.

R301.2.2.3.11.6.APA Narrow Wall systems are not permitted. Use of APA narrow wall systems is not permitted for establishing compliance with these requirements.

R301.2.2.3.11.7 Connections across floor joist space. 18 gauge galvanized steel coil strapping (ex. CS 18) installed at 48 inch (1219 mm) on center across floor joist space or equivalent is required on all exterior walls and stacked interior structural walls. Strapping shall run vertical along edge of studs and shall be centered on floor joist space. Stud shall be vertically aligned.

R301.2.2.3.11.8 Roof framing connections. Roof framing members shall be fastened to wall top plate with 18 gauge galvanized steel clips (ex. H2.5A) or equivalent, not to exceed 48 inches (1219 mm) on center maximum. Provide clips in addition to fastening requirements in Table R602.3(1). This requirement applies to all contact points with structural walls. In the event wind fastening requirements differ, the more stringent shall apply.

R301.2.2.3.11.9 Shearwall holddowns.

1. Exterior walls: A single holddown shall be installed at each end of each wall over 8 feet (2438 mm) in length (2 holddowns per wall length). Holddown capacity (P), in pounds, shall be equal to 210 lbs/ft times wall height. ($P = 210 * H$)
2. Wall height (H): distance from wall bottom plate to wall top plate.
3. A cut sheet of the holddown type(s) used shall be provided to code enforcement when requested by the Building Official. Cut sheet shall show tested product load rating and manufacturer information.

R301.2.2.3.11.10 Opening straps/clips. This section applies only to window and door openings and only to openings located in exterior walls and interior structural walls. Louver, pipe penetrations, dryer vents, and all other wall openings are not required to meet this section unless they exceed 4 sq. ft. in area.

1. Studs above and below headers and window sill plates: Provide 18 gauge galvanized steel clips (ex. H2.5A) or equivalent at 32 inches (813 mm), top and bottom of studs, minimum 2 clips per opening width at headers and sills.
2. Headers: Headers shall bear on minimum 1 ply jack post and be fastened to post with 18 gauge galvanized steel clips (ex. H2.5A), or continuous sheathing from king post to header or sill or equivalent.
3. Window Sill plate: Sill plate shall be end nailed with three 10d nails each end through minimum 1 ply of king/jack posts, or continuous sheathing from king post to header or sill, or equivalent.
4. King/Jack posts: Provide 20 gauge galvanized steel stud plate connector (ex. SP1) or equivalent from post to wall plate, top and bottom. Post plys shall be nailed together with 10d nails at 8 inches (204 mm) on center staggered full height.

R301.2.2.3.11.11 Brick veneer.

1. Exterior brick veneer shall not exceed 25 feet (7620 mm) in height above non-combustible foundation. Brick at gable peaks shall not exceed 40 feet (12 192 mm) in height above non-combustible foundation.

2. Exterior brick veneer shall comply with all other applicable Chapter 7 IRC requirements.

3. Interior brick veneer and masonry chimneys shall comply with Chapter 7 IRC requirements.

R301.2.2.3.11.12 Floor openings. When floor openings in the second or third floors exceed 15 percent of the ground floor square footage, garage space excluded, they shall be considered as large floor openings.

1. The gross floor area shall be the area bounded by exterior walls.

2. Openings for stairs and egress are excluded from the net floor opening area.

3. Perimeter interior walls bounding a large floor opening shall be considered structural walls and shall be subject to all requirements as such. If perimeter walls are not present below opening perimeter (i.e. beam and column system is used), the supporting structure shall be engineered.

14. R302.3 and R302.3.1 shall be amended to delete the entire sections and replace with the following:

R302.3 Two-family dwellings and large homes.

R302.3.1 Two Family Dwellings

Dwelling units in two-family dwellings shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating where tested in accordance with ASTM E199, UL 263, or Section 703.2.2 of the International Building Code. Such separation shall be provided regardless of whether a lot line exists between the dwelling units or not. Fire-resistance-rated floor/ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing.

Exceptions:

1. A fire-resistance rating of ½ hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with [Section P2904 NFPA 13D](#).
2. Wall assemblies need not extend through attic spaces where the ceiling is protected by not less than 5/8-inch (15.9 mm) Type X gypsum board, an attic draft stop constructed as specified in Section R302.12.1 is provided above and along the wall assembly separating the dwellings and the structural framing

supporting the ceiling is protected by not less than ½-inch (12.7 mm) gypsum board or equivalent.

R302.3.2 Large Homes Under 5000 Square Feet and Under 3 Stories in Height

R302.3.2.1 Dwelling units in large homes under 5,000 square feet in area and less than three (3) stories in height shall be separated from each other by wall and floor assemblies having not less than a 2-hour fire-resistance rating where tested in accordance with ASTM E199, UL 263, or Section 703.2.2 of the International Building Code. Such separation shall be provided regardless of whether a lot line exists between the dwelling units or not. Fire-resistance-rated floor/ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing or rated floor/ceiling assembly.

Exception:

1. A fire-resistance rating of 1-hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13D.
2. A fire-resistance rating of ½-hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13.

R302.3.2.2 Up to two dwelling units on the second story may utilize a shared egress path.

R302.3.2.3 Local amendment to seismic provisions of this code shall not apply to large homes.

R302.3.2.4 Public spaces in large homes shall be limited solely to any shared means of egress.

R302.3.3 Large Homes 5000 Square Feet to a maximum of 8,000 sq. ft. and Up to Three Stories in Height

R302.3.3.1 Large homes 5,000 square feet to a maximum of 8,000 sq. ft. in area or greater and up to three (3) stories in height shall be equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13R.

R302.3.3.2 Dwelling units in large homes shall be separated from each other by wall and floor assemblies having not less than a 1-hour fire-resistance rating where tested in accordance with ASTM E199, UL 263, or Section 703.2.2 of the International Building Code. Such separation shall be provided regardless of whether a lot line exists between the dwelling units or not. Fire-resistance-rated floor/ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend from the foundation to the underside of the roof sheathing or rated floor/ceiling assembly.

Exception:

A fire-resistance rating of ½-hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13.

R302.3.3.3 Plans shall be prepared by structural engineer licensed in the State of Tennessee and shall bear the design professional’s stamp and signature. Separate mechanical, electrical and plumbing drawings shall not be required.

R302.3.3.4 Local amendment to seismic provisions of this code shall not apply to large homes.

R302.3.3.5 Public spaces in large homes shall be limited solely to any shared means of egress.

R302.3.3.6 Dwelling units on the second and third floor level may utilize a properly designed shared path of egress.

R302.3.3.7 Large homes greater than 8,000 sq. ft. shall be designed in accordance with the International Building Code.

R302.3.4 Supporting Construction.

Where floor assemblies are required to be fire-resistance rated by Section R302.3, the supporting construction of such assemblies shall have an equal or greater fire-resistance rating.

15. Delete Section R313.1 “Townhouse automatic fire system”, its Exception and Section 313.1.1 “Design and installation” in their entirety with no replacement

16. Delete Section R313.2 “One and two-family dwellings automatic fire system”, its Exception and Section 313.2.1 “Design and installation” in their entirety with no replacement.

17. Amend Section R320 entitled “Accessibility” is amended by adding a new Section R320.2 as follows :

R320.3 Visitability Requirements (Applicable in the City of Memphis Only):

R320.3.1 Statement of intent - The adoption of Ordinance #5541 by the City of Memphis on December 12, 2013 was specifically enacted to further the policy of the City of Memphis to provide new single-family and duplexes, which are constructed with public funds as described in this section, be provided with design features to provide accessibility and usability for persons with mobility impairments. The purpose of that ordinance is to specifically promulgate certain

standards which may be less restrictive than ICC/ANSI A117.1 while economically providing solutions to accessibility.

R320.3.2 Applicability - This exception shall be applicable to new single-family and duplexes which receive City and Federal assistance. For purposes of this Section, "City or Federal Assistance" shall mean funding or assistance from the City of Memphis, or any agent thereof, through any of the following means:

- i. Receipt of a building contract or similar contractual agreement involving any city funding program or funding provided through the Division of Housing and Community Development, Memphis Housing Authority, or the Memphis Land Bank, Inc.
- ii. Real estate purchased, lease or donate from the City of Memphis or any agent thereof
- iii. Dispersal under city auspices of any Federal or State construction funds such as HOME, CDBG; or
- v. Receipt of any other funding or financial benefit from the City of Memphis or any agency thereof.

R320.3.3 Design requirements

R320.3.3.1 Building entrances. Applicable dwelling units shall be designed and constructed to have at least one building entrance on an accessible route served by a ramp complying with ANSI A117.1-1986, Section 4.8, having a maximum slope not to exceed one in twelve (1:12), unless it is impractical to do so because of terrain or unusual character of the site. Such building entrance doors shall comply with ANSI A117.1, 4.3, and shall have a minimum clear opening of 32 inches. Any entrance at the front, side or back is acceptable as long as it is served by an accessible route such a garage, carport or sidewalk. An accessible ramp may not be removed from the home during the first year of initial ownership.

R320.3.3.2. Interior door criteria. All dwelling units, whether or not on an accessible route, shall be designed in such a manner that all the doors allow passage into and within all premises and are sufficiently wide to allow passage by persons in wheelchairs. Lever hardware is required. Doors, except those serving closets less than 15 square feet in area, within individual dwelling units intended for user passage must provide minimum 32" clear opening. A 2'10" door or standard 6'0" sliding patio door assembly is deemed sufficient to comply with this required provide however compliance with ANSI Section 4.13.6 (Maneuvering Clearance at Doors) shall be mandatory.

R320.3.3.3. Accessible routes into and through the dwelling unit. An accessible route shall be designed and constructed in such a manner that a 36" wide level route, except at doors, must be provide through the main floor of the unit with ramped or beveled changes at door thresholds.

R320.3.3.4 Wall reinforcement in bathrooms - Reinforcements in the walls shall be provided at designated locations as specified by ANSI A117.1, Section 4.24, Section 4.32, figure 48 and figure 49 so that grab bars may be installed, if needed, at a later date with the necessity of removing portions of the existing wall.

R320.3.3.5 Light switches electrical outlets, thermostats and other environmental controls. All applicable dwelling units shall be designed and constructed in such a manner that all premises contain light switches, electrical outlets, thermostats and other controls in accessible locations. Controls shall meet the requirements of ANSI A117.1, Section 4.25. Where multiple controls serve the same elements (e.g. two remote switches for a light) only one need be accessible.

R320.3.4 Contracts. The provisions of this Section shall be incorporated in applicable City of Memphis contracts.

R320.3.5 Waiver of exterior disability accessibility regulations. The requirements of R320.2.3.1 of this section (Building Entrances) may be waived by the Director of the Memphis Division of Housing and Community Development (the Director), through the issuance of an “Exterior Disability Accessibility Waiver” (“waiver”)

R320.3.5.1 Application. A person requesting said waiver shall file an application for disability accessibility waiver with the Director, including all documents necessary to prove the existence of the exemption standard herein. The application shall demonstrate the topographical conditions on the site render it impossible to comply with the provision of said section.

R320.3.5.2 Granting waiver. If the application so demonstrates, the Director shall issue an Exterior Disability Accessibility Waive to the applicant, in writing, within ten (10) days of receipt of a completed application which shall become an official component of any issued contract. The Director shall retain a copy of said waiver in the Department’s official records and shall also forward a copy of said waiver to the Building Official at the Office of Construction Code Enforcement at the time of issuance.

18. Delete Section R327 in its entirety and replace it with the following

Section R327 Swimming Pools, Spas and Hot Tubs

R327.1 General. The provisions of this section shall control the design and construction of swimming pools, spas and hot tubs installed in or on the lot of a one- or two-family dwelling.

R327.2 Pools in flood hazard areas. Pools that are located in flood hazard areas established by Table R301.2(1), including above ground pools, on ground pools and in ground pools that involve the placement of fill, shall comply with Section AG101.21 or AG101.2.2.

Exception; Pools located in riverine flood hazard areas which are outside of designated floodways.

R327.2.1 Pools located in designated floodways. Where pools are located in designated floodways, documentation shall be submitted to the building official which demonstrates that the construction of the pool will not increase the designated flood elevation at any point with the jurisdiction.

R327.2.2 Pools located where floodways have not been designated. Where pools are located where design floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates the proposed pool will not increase the design flow elevation more than 1 foot (305mm) at any point within the jurisdiction.

R327.3 Definitions General. For the purposes of these requirements, the terms used shall be defined as follows and as set forth in Chapter 2.

Above Ground/Inground Pool. See Swimming Pool

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

Hot Tub. See Swimming Pool.

In-Ground Pool. See Swimming Pool

Residential. That which is situated on the premise of a detached one- or two family dwelling, or a one family townhouse not more than three stories in height.

Spa, Nonportable. See Swimming Pool

Spa Portable. A nonpermanent structure intended for recreational bathing, in which all controls, water heating and water circulation equipment are an integral part of the product.

Swimming Pool. Any structure intended for swimming or recreational bathing that contain water more than 24 inches (610mm) deep. This includes in-ground, above ground and on ground swimming pools, hot tubs and spas.

Swimming Pool, Indoor. A swimming pool which is totally contained within a structure and surrounded on all four sides by walls of the enclosing structure.

Swimming Pool, Outdoor. Any swimming pool which is not an indoor pool.

R327.4 Swimming Pools

R327.4.1 In-ground Pools. In-Ground Pools shall be designed and constructed in compliance with ANSI/NSPI-5.

R327.4.2 Above ground and on-ground pools. Above ground and on ground pools shall be designed and constructed in compliance with ANSI/NSPI-4.

R327.4.3 Pools in flood hazard areas. In flood hazard areas established by Table R301.2(1), pools in coastal high-hazard areas shall be designed and constructed in compliance with ASCE24.

Section 326.5 Spas and Hot Tubs

R327.5.1 Permanently installed spas and hot tubs. Permanently installed spas and hot tubs shall be designed and constructed in compliance with ANSI/NSPI-3.

R327.5.2 Portable spas and hot tubs. Portable spas and hot tubs shall be designed and constructed in compliance with ANSI/NSPI-6.

R327.6 Barrier Requirements

R327.6.1 Application. The provisions of this section shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near-drownings by restricting access to swimming pools, spas and hot tubs.

R327.6.2 Outdoor swimming pools. An outdoor swimming pool, including in-ground, above ground or on ground pool, hot tub or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches (1219 mm) above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (51mm) measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above grade such as an above ground pool, the barrier may be at ground level such that the pool structure or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the tops of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).
2. Openings in the barrier shall not allow the passage of a 4 inch diameter (102 mm) sphere.
3. Solid barriers which do not have openings such as masonry or stone walls, shall not contain indentations or protrusions, except for normal construction tolerances and tooled masonry joints.
4. Where the barrier is composed of horizontal and vertical members, and the distance between the tops of the horizontal members is less than 45 inches (1143mm) the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1 ¾ inches (44 mm) in width. Where there are decorative cutouts with vertical members, spacing within the cutouts shall not exceed 1 ¾ inches (44 mm) in width.
5. Where the barrier is composed of horizontal and vertical members, and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall not exceed 4 inches (102 mm).
6. Maximum mesh size for chain link fences shall be 2 ¼ inches (57 mm) square, unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1 ¾ inches (44 mm).
7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal member shall be more than 1 ¾ inches (44 mm).

8. Access gates shall comply with the required of items 1 through 7, and shall be equipped to accommodate a locking device. Pedestrian access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Gates other than pedestrian access 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 gate, the release mechanism and opening shall comply with the following;

8.1 The release mechanism shall be located on the pool side of the gate at least 3 inches (76 mm) below the top of the gate and

8.2 The gate and barrier shall have no opening larger than ½ inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

9. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:

9.1 The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346;

9.2. Doors with direct access to the pool through the wall shall be equipped with an alarm which produces an audible warring when the door and or its screen if present are opened. The alarm shall be listed and labeled in accordance with UL 2017. The deactivation switches shall be located at least 54 inches (1373 mm) above the threshold of the door; or

9.3 Other means of protection, such as self-closing doors with self-latching device that are approved the governing body shall be accepted as long as the degree of protection afforded is not less than the protection afforded by item 9.1 or 9.2 described herein.

10. Where an above ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure and the means of access is a ladder or steps.

10.1 The ladder or steps shall be capable of being secured, locked or removed to protect access, or

10.2 The ladder or steps shall be surrounded by a barrier which meets the requirements of items 1 through 9. When the ladder or steps are secured, locked or remove, any opening created shall not allow the passage of a 4-inch (102 mm) diameter sphere.

Chapter 4 Foundations

19. Delete Section 401.3 and its Exception in their entirety and substitute the following:

401.3 Drainage and foundation elevation. – Surface drainage shall be diverted to a storm sewer conveyance or other approved point of collection that does not create a hazard. Lots shall be graded to drain surface water away from foundation walls. The finish floor (elevation) shall be nominal 10 inches above the exterior finish grade (ground) and the finish grade shall slope a minimum of 8% (1 in 12) away from foundation for a minimum of 3 feet for drainage.

20. Section R403.1.1 “Minimum size” is deleted in its entirety and replaced with the following:

R403.1.1 Minimum size. Minimum size for concrete and masonry footings shall be as set fourth in Table R403.1 and Figure R403.1 (1). The footing width, *W*, shall be based on the load-bearing value of the soil in accordance with Table R401.4.1. All footings shall be at least 10 inches (255mm) in thickness. Footing projections, *P*, shall be at least 2 inches (51mm) and shall not exceed the thickness of the footing. The size of footing supporting piers and columns shall be based on the tributary load and allowable soil pressure in accordance with Table R401.4.1.

21. Section R403.1.4 “Minimum depth” is deleted in its entirety and replaced with the following language.

R403.1.4 Minimum depth. All footings shall bear on undisturbed or properly compacted soils a minimum of 13 inches (330 mm) below grade. When applicable the depth of footing shall also conform to Section R403.1.4.1 through R403.1.4.2.

22. Figure R403.1 (2) entitled “Permanent Wood Foundation Basement Wall Section” and Figure R403.1 (3) entitled “Permanent Wood Foundation Crawl Space Section” are deleted with no replacement provided.

23. Section R403.2 is deleted in its entirety and replaced with the following language.

Section R403.2. Reserved

24. Section R404.2: is deleted in its entirety and replaced with the following language.

Section R404.2 Reserved

25. Section R405.2 is deleted in its entirety and replaced with the following language.

Section R405.2. Reserved

26. Section R406.3 is deleted in its entirety and replaced with the following language.

Section R406.2. Reserved

Chapter 5 Floors

27. Section R504 is deleted in its entirety and replaced with the following language.

Section R504. Reserved

Chapter 7 Wall Covering

28. Section R703.2 Water-Resistive Barrier is amended to add #5 in the list of approved materials as follows:

5. Tyvek sheeting for exterior sheathing

29. Delete Chapter 11 in its entirety and replace it with the following Sections:

Chapter 11 Energy efficiency

Section N1101 – General

N1101.1 Scope. This chapter sets forth the energy-efficiency related requirements for the design and construction of buildings regulated by this code.

Exception: Provided that they are separated by building envelope assemblies from the remainder of the building, portions of the building that do not enclose conditioned space shall be exempt from the building envelope provision, but shall comply with the provisions for building mechanical and service water heating systems.

N1101.2 Compliance for one and two family dwellings and Large Homes.

Compliance for one and two family dwellings and large homes shall be demonstrated by meeting the requirements of the 2021 Edition of the *ICC International Energy Conservation Code* for detached one and two family dwellings in Climate Zone 3A as found in the Residential provisions thereof and as those provisions are amended by the local ordinances adopting that code.

N1101.3 Compliance for townhouses. Compliance for townhouses shall be demonstrated by meeting the requirements of the 2021 Edition of the *ICC International Energy Conservation Code* for residential buildings of Group R-2 or townhouses in Climate Zone 3A as found in the Residential provisions thereof and as those provisions are amended by the local ordinances adopting that code.

Part V-Mechanical

30. Delete Chapter 12 in its entirety and replace it with the following:

Chapter 12 Mechanical Administration

Section M1201 General. The administration of the Mechanical Provisions of this Code shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

31. Delete Chapter 13 in its entirety and replace it with the following:

Chapter 13 General Mechanical System Requirements

Section M1301 General. The General Mechanical System Requirements Provisions of this Code shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code

32. Delete Chapter 14 in its entirety and replace it with the following:

Chapter 14 Heating And Cooling Equipment

Section M1401 General. The heating and cooling equipment provisions of this Code shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

33. Delete Chapter 15 in its entirety and replace it with the following:

Chapter 15 Exhaust Systems

Section M1501 General. The exhaust system provisions of this Code shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

34. Delete Chapter 16 in its entirety and replace it with the following:

Chapter 16 Duct Systems

Section M1601 General. The provisions of this code relating to the construction and operation of duct system shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

35. Delete Chapter 17 in its entirety and replace it with the following:

CHAPTER 17 Combustion Air

Section M1701 General. The provisions of this code relating to the construction and operation of combustion air shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

36. Delete Chapter 18 in its entirety and replace it with the following:

Chapter 18 Chimneys And Vents

Section M1801 General. The provisions of this code relating to the construction and operation of chimneys and vents shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code and Building Code .

37. Delete Chapter 19 in its entirety and replace it with the following:

Chapter 19 Special Appliances, Equipment and Systems

Section M1101 General. The provisions of this code relating to the construction and operation of special fuel burning equipment shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

38. Delete Chapter 20 in its entirety and replace it with the following:

Chapter 20 Boilers And Water Heaters

Section M2001 General. The provisions of this code relating to the installation and operation of boilers and gas water heaters shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

39. Delete Chapter 21 in its entirety and replace it with the following:

Chapter 21 Hydronic Piping

Section M2101 General. The provisions of this code related to the installation and operation of hydronic piping shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

40. Delete Chapter 22 in its entirety and replace it with the following:

Chapter 22 Special Piping And Storage Systems

Section M2201 General. The provisions of this code related to the installation and operation of special piping and storage systems shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

41. Delete Chapter 23 in its entirety and replace it with the following:

Chapter 23 Solar Thermal Energy Systems

Section M2301 General. The provisions of this code related to the installation and operation of Solar Energy Systems shall be determined by reference to the latest adopted Memphis and Shelby County Mechanical Code.

Part VI – Fuel Gas

42. Delete Chapter 24 in its entirety and replace it with the following:

Chapter 24 Fuel Gas

Section G2401 General. The provisions of this code related to the installation and operation of Fuel Gas shall be determined by reference to the latest adopted Memphis and Shelby County Fuel Gas Code.

Part VII - Plumbing

43. Delete Chapter 25 in its entirety and replace it with the following:

Chapter 25 Plumbing Administration

Section P2401 General. The provisions of this code related to the Plumbing Administration shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

44. Delete Chapter 26 in its entirety and replace it with the following:

Chapter 26 General Plumbing Requirements

Section P2601 General. The provisions of this code related to the General Plumbing Requirements shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

45. Delete Chapter 27 in its entirety and replace it with the following:

Chapter 27 Plumbing Fixtures

Section P2701 General. The provisions of this code related to the Plumbing Fixtures shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

46. Delete Chapter 28 in its entirety and replace it with the following:

Chapter 28 Water Heaters

Section P2801 General. The installation and operation of electric water heaters shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing and Electrical Codes.

47. Delete Chapter 29 in its entirety and replace it with the following:

Chapter 29 Water Supply And Distribution

Section P2901 General. The provisions of this code related to the installation and operation of water supply and distribution systems shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

48. Delete Chapter 30 in its entirety and replace it with the following:

Chapter 30 Sanitary Drainage

Section P3001 General. The provisions of this code related to the installation and operation of sanitary drainage systems shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

49. Delete Chapter 31 in its entirety and replace it with the following:

Chapter 31 Vents

Section P3101 General. The provisions of this code related to the installation and operation of vents systems and related devices attached to a plumbing system shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

50. Delete Chapter 32 in its entirety and replace it with the following:

Chapter 32 Traps

Section P3201 General. The provisions of this code related to the installation and operation of traps that are part of or attached to plumbing systems shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

51. Delete Chapter 33 in its entirety and replace it with the following:

Chapter 33 Storm Drainage

Section P3301 Scope. The provision of this code related to the design, materials, construction and installation of storm drains shall be determined by reference to the latest adopted Memphis and Shelby County Plumbing Code.

Part VII –Electrical

52. Delete Chapter 34 in its entirety and replace it with the following:

Chapter 34 General Requirements

Section E3401 General. The provisions of this code related to the General Requirements for electrical installations shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

53. Delete Chapter 35 in its entirety and replace it with the following:

Chapter 35 Electrical Definitions

Section E3501 Electric Definitions. The provisions of this code related to the Electric Definitions shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

54. Delete Chapter 36 in its entirety and replace it with the following:

Chapter 36 Services

Section E3601 Services. The provisions of this code related to the electrical services shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

55. Delete Chapter 37 in its entirety and replace it with the following:

Chapter 37 Branch Circuit And Feeder Requirements

Section E3701 General. The provisions of this code related to Branch Circuit and Feeder Requirements for electrical installations shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

56. Delete Chapter 38 in its entirety and replace it with the following:

Chapter 38 Wiring Methods

Section E3801 General. The provisions of this code related to the General Requirements for electrical installations shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

57. Delete Chapter 39 in its entirety and replace it with the following:

Chapter 39 Power And Lighting Distribution

Section E3901 General. The provisions of this code related to Power and Lighting Distribution for electrical installations shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

58. Delete Chapter 40 in its entirety and replace it with the following:

Chapter 40 Devices And Luminaires

Section E4001 General. The provisions of this code related to Devices and Lighting Fixtures shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

59. Delete Chapter 41 in its entirety and replace it with the following:

Chapter 41 Appliance Installation

Section 4101 General. The provisions of this code related to Application Installation for electrical installations shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.

60. Delete Chapter 42 in its entirety and replace it with the following:

Chapter 42 Swimming Pools

Section E4201 General. The provisions of this code related to the electric installations for swimming pools shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code. Those related to building matters will be determined by reference to the latest adopted Memphis and Shelby County Building Code.

61. Delete Chapter 43 in its entirety and replace it with the following:

Chapter 43 Class 2 Remote-Control, Signaling And Power-Limited Circuits

Section E4301 General. The provisions of this code related to Class 2 Remote-control, signaling and Power-limited Circuits shall be determined by reference to the latest adopted Memphis and Shelby County Electric Code.