

ORDINANCE NO. \_\_\_\_\_

An ordinance amending Chapter 57, “Dallas One-and Two-Family Dwelling Code,” of the Dallas City Code, as amended; adopting with certain changes the 2015 Edition of the International Residential Code of the International Code Council, Inc.; regulating the construction, enlargement, alteration, repair, demolition, use, and maintenance of construction, plumbing, mechanical, and electrical work in the city on one- and two-family dwellings; providing a penalty not to exceed \$2,000; providing a saving clause; providing a severability clause; and providing an effective date.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That Chapter 57, “Dallas One- and Two-Family Dwelling Code,” of the Dallas City Code, as amended, is amended by adopting the 2015 Edition of the International Residential Code of the International Code Council, Inc. (which is attached as Exhibit A and made a part of this ordinance), with the following amendments:

1. Page xvii, “Legislation,” is deleted.
2. Chapter 1, “Scope and Administration,” of the 2015 International Residential Code is deleted and replaced with a new Chapter 1, “Scope and Administration,” to read as follows:

**“CHAPTER 1**

**SCOPE AND ADMINISTRATION**

**SECTION R101**

**GENERAL**

**R101.1 Title.** These regulations shall be known as the *Dallas One- and Two-Family Dwelling Code*, hereinafter referred to as “this code.”

**101.2 Administrative procedures.** All provisions of Chapter 52, “Administrative Procedures for the Construction Codes,” of the *Dallas City Code* apply to this code.”

3. Section R202, “Definitions,” of Chapter 2, “Definitions,” of the 2015 International Residential Code is amended by alphabetically adding, deleting, or amending the following definitions to read as follows:

**“COMMERCIAL DWELLING SITE.** Three or more *dwelling units on a lot.*”

**“ENERGY SYSTEMS LABORATORY.** An agency established by the Texas Legislature to assist communities in evaluating code amendments to the energy provisions of the *International Residential Code* and the *International Energy Conservation Code* which now define the minimum energy efficiency standards for the State of Texas.”

**“FIRE WALL.** A fire-resistance-rated wall having protected openings, which restricts the spread of fire and extends continuously from the foundation to or through the roof, with sufficient structural stability under fire conditions to allow collapse of construction on either side without collapse of the wall. Fire walls required by this code shall comply with the provisions of Section 706 of the *Dallas Building Code.*”

**“FLOOR AREA.** The area included within the surrounding exterior walls of a building or portion thereof, exclusive of vent shafts and courts. The floor area of a building, or portion thereof, not provided with surrounding exterior walls shall be the usable area under the horizontal projection of the roof or floor above.”

~~“**[RB] GLAZING AREA.** The interior surface area of all glazed fenestration, including the area of sash, curbing or other framing elements, that enclose *conditioned space*. Includes the area of glazed fenestration assemblies in walls bounding conditioned *basements*.]”~~

**“GRAY WATER.** Waste water that has not come into contact with toilet waste, kitchen sink waste, dishwasher waste or similarly contaminated sources. Gray water includes waste [discharged] from lavatories, bathtubs, showers, clothes washers and laundry sinks [trays].”

**“GREEN BUILDING.** Structures and their surrounding landscapes designed, constructed and maintained to decrease energy and water usage and costs, to improve the efficiency and longevity of building systems and to decrease the burdens imposed on the environment and public health.”

**“GREEN BUILT TEXAS.** An initiative of the Homebuilders Association of Greater Dallas that provides climate-specific guidelines and verification systems for residential and multifamily *green buildings.*”

**“GREEN BUILT TEXAS-CERTIFIABLE.** A proposed project that is not required to be registered with the Home Builders Association of Greater Dallas, but is planned, designed and constructed to meet or exceed a certified rating using version 2.0 of the *Green Built Texas* rating system.”

**“[RB] HISTORIC BUILDING.** A building that is designated as historic as defined in the *Dallas Existing Building Code*. [~~Buildings that are listed in or eligible for listing in the National Register of Historic Places, or designated as historic under an appropriate state or local law.~~]”

**“LEED.** The Leadership in Energy and Environmental Design *green building* rating systems are nationally accepted standards for *green buildings* developed by the *USGBC*.”

**“LEED-CERTIFIABLE.** A proposed project that is not required to be registered with the *USGBC*, but is planned, designed and constructed to meet or exceed a certified rating using LEED NC (new construction) version 2.2 to present, LEED CS (core and shell) version 2.0 to present, LEED CI (commercial interiors) version 2.0 to present, LEED for schools version 2007, LEED for healthcare, LEED for retail version 2 or LEED for homes.”

**“MULTIPLE BUILDING TOWNHOUSE.** See **TOWNHOUSE**.”

**“[RB] OCCUPIED SPACE.** The total area of all buildings or structures on any *lot* or parcel of ground projected on a horizontal plane, excluding permitted projections as allowed by this code. Any space that could be assumed to be occupiable shall not be exempt from the requirements of this code by designing the space without means of egress, light, or ventilation.”

**“ON-SITE NONPOTABLE WATER REUSE SYSTEMS.** Water systems for the collection, treatment, storage, distribution, and reuse of nonpotable water generated on site, including but not limited to graywater systems. [~~This definition does not include rainwater harvest systems.~~]”

**“PROPOSED PROJECT.** For purposes of the *green building* program, the erection of any new structure for which a person, firm or corporation is required to obtain a building permit.”

**“RECLAIMED WATER.** Nonpotable water that, as a result of [~~has been derived from~~] the treatment of domestic waste water, is suitable for a direct beneficial use or a controlled use when such system has been submitted and approved by the building official prior to installation. [~~by a facility or system licensed or permitted to produce water meeting the jurisdiction’s water requirements for its intended uses.~~] Also known as “Recycled Water”.”

**“SINGLE BUILDING TOWNHOUSE.** A multiple dwelling unit located on a commercial dwelling site with more than two units between exterior wall or fire walls complying with Section 706 of the *Dallas Building Code* in which each unit extends from foundation to roof and with a yard or public way on not less than two sides.”

**“STORM [~~SEWER,~~] DRAIN.** A drainage system that carries a natural precipitation, including snow-melt, [~~pipe used for conveying~~] rainwater, surface water [~~subsurface water and~~] or similar liquid waste that has contacted a surface at or below grade.”

“**TOWNHOME.** A dwelling located on a single-family or duplex dwelling site and constructed in a group of abutting structures separated by property lines with each dwelling extending from its foundation to its roof and with a yard or public way on at least two sides.”

“~~[RB]~~ **TOWNHOUSE.** A *multiple* ~~[single-family]~~ dwelling unit located on a commercial dwelling site and constructed with a maximum ~~[in a group]~~ of two ~~[three or more attached]~~ units located between exterior walls or fire walls complying with Section 706 of the *Dallas Building Code* in which each unit extends from foundation to roof and with a yard or public way on not less than two sides.”

“**USGBC.** The U.S. Green Building Council, a nonprofit organization comprised of leaders from the building industry formed to encourage sustainability by promoting buildings that are environmentally responsible, profitable and healthy places to live and work.”

4. Subsection R301.1, “Application,” of Section R301, “Design Criteria,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

**R301.1 Application.** Buildings and structures, and parts thereof, shall be constructed to safely support all loads, including dead loads, live loads, roof loads, flood loads, snow loads, wind loads and seismic loads as prescribed by this code. The construction of buildings and structures in accordance with the provisions of this code shall result in a system that provides a complete load path that meets the requirements for the transfer of loads from their point of origin through the load-resisting elements to the foundation. Buildings and structures constructed as prescribed by this code are deemed to comply with the requirements of this section.

**R301.1.1 Alternative provisions.** As an alternative to the requirements in Section R301.1, the following standards are permitted subject to the limitations of this code and the limitations therein. Where engineered design is used in conjunction with these standards, the design shall comply with the *Dallas* ~~[International]~~ *Building Code*.

1. AF&PA *Wood Frame Construction Manual* (WFCM).
2. AISI *Standard for Cold-Formed Steel Framing—Prescriptive Method for One- and Two-Family Dwellings* (AISI S230).
3. ICC *Standard on the Design and Construction of Log Structures* (ICC 400).

**R301.1.2 Construction systems.** The requirements of this code are based on platform and balloon-frame construction for light-frame buildings. The requirements for concrete and masonry buildings are based on a balloon framing system. Other framing systems must have equivalent detailing to ensure force transfer, continuity and compatible deformations.

**R301.1.3 Engineered design.** Where a building of otherwise conventional construction contains structural elements exceeding the limits of Section R301 or otherwise not conforming to this code, these elements shall be designed in accordance with accepted engineering practice. The extent of such design need only demonstrate compliance of nonconventional elements with other applicable provisions and shall be compatible with the performance of the conventional framed system. Engineered design in accordance with the Dallas [International] Building Code is permitted for buildings and structures, and parts thereof, included in the scope of this code.

**R301.1.4 Elevators.** The provisions of Section R321 shall apply to the design, construction, installation, operation, alteration and repair of elevators, dumbwaiters, escalators and moving walks and their hoistways.

**R301.1.5 Fire protection provisions.** In addition to the requirements of Section R313, an automatic sprinkler system must be installed when required by the *Dallas Fire Code*.

**R301.1.6 Draftstop requirements.** Draftstopping must be installed in accordance with Section 302.12.

**R301.1.7 Security.** Openings into dwellings must comply with Chapter 45 of this code.

**R301.1.8 Unity agreements.** The dissolution of common boundary lines for purposes of this code may be executed in accordance with Chapter 42 of the *Dallas Building Code*.

**R301.1.9 Special inspections.** The provisions of Chapter 17 of the *Dallas Building Code* apply to dwellings governed by this code.

**R301.1.10 Sound transmission ratings.** The sound transmission ratings of the wall assemblies between each *dwelling unit* of a two-family *dwelling*, a *townhome* or *townhouse* must comply with Appendix K.”

5. Table R301.2(1), “Climatic and Geographic Design Criteria,” of Subsection R301.2, “Climatic and Geographic Design Criteria,” of Section R301, “Design Criteria,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

**“TABLE R301.2(1)**

**CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA**

GROUND  SNOW  LOAD	WIND DESIGN				SEISMIC  DESIGN  CATEGORY <sup>f</sup>	SUBJECT TO DAMAGE FROM			WINTER  DESIGN  TEMP <sup>e</sup>	ICE BARRIER  UNDERLAYMENT  REQUIRED <sup>h</sup>	FLOOD  HAZARDS <sup>g</sup>	AIR  FREEZING  INDEX <sup>i</sup>	MEAN  ANNUAL  TEMP <sup>j</sup>
	Speed <sup>d</sup>  (mph)	Topographic effects <sup>k</sup>	Special wind region <sup>l</sup>	Wind-borne debris zone <sup>m</sup>		Weathering <sup>a</sup>	Frost line  depth <sup>b</sup>	Termite <sup>c</sup>					
5 lb/ft <sup>2</sup>	115 (V ult)	No	No	No	A	moderate	6"	very heavy	22° F	No	local codes	150	64.9° F

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

- a. Weathering may require a higher strength concrete or *grade* of masonry than necessary to satisfy the structural requirements of this code. The weathering column ~~[shall be filled in with the weathering index, “negligible,” “moderate” or “severe”]~~ for concrete as determined from Figure R301.2(3). The *grade* of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216 or C 652.
- b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). The ~~[jurisdiction shall fill in the frost line depth column with the]~~ minimum depth of footing below finish grade.
- c. The ~~[jurisdiction shall fill in this part of the table to indicate the]~~ need for protection ~~[depending on whether there has been a history of local]~~ from subterranean termite damage.
- d. The ~~[jurisdiction shall fill in this part of the table with the]~~ wind speed from the basic wind speed map [Figure R301.2(4)A]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
- e. The outdoor design dry-bulb temperature shall be selected from the columns of 971/2-percent values for winter from Appendix D of the *International Plumbing Code*. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the *building official*.
- f. The ~~[jurisdiction shall fill in this part of the table with the]~~ seismic design category determined from Section R301.2.2.1.
- g. Refer to Chapter 51A of the Dallas City Code. ~~[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 FIRMs and FBFMs or other flood hazard map adopted by the authority having jurisdiction, as amended.]~~
- h. 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 “YES.” Otherwise, the jurisdiction shall fill in this part of the table with “NO.”]~~
- i. The ~~[jurisdiction shall fill in this part of the table with the]~~ 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99 percent) value on the National Climatic Data Center data table “Air Freezing Index-USA Method (Base 32°F).”
- j. The ~~[jurisdiction shall fill in this part of the table with the]~~ mean annual temperature from the National Climatic Data Center data table “Air Freezing Index-USA Method (Base 32°F).”
- k. In accordance with Section R301.2.1.5 ~~[-, where there is local historical data documenting structural damage to buildings due to topographic wind speed up effects, the jurisdiction shall fill in this part of the table with “YES.” Otherwise, the jurisdiction shall indicate “NO” in this part of the table].~~
- l. In accordance with Figure R301.2(4)A ~~[-, where there is local historical data 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].~~
- m. In accordance with Section R301.2.1.2.1 ~~[-, the jurisdiction shall indicate the wind borne debris wind zone(s). Otherwise, the jurisdiction shall indicate “NO” in this part of the table].~~

6. Subsection R302.1, “Exterior Walls,” of Section R302, “Fire-Resistant Construction,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

“**R302.1 Exterior walls.** Construction, projections, openings and penetrations of *exterior walls* of *dwellings* and accessory buildings shall comply with Table R302.1(1); or *dwellings* equipped throughout with an *automatic sprinkler system* installed in accordance with Section P2904 shall comply with Table R302.1(2).

**Exceptions:**

1. Walls, projections, openings or penetrations in walls perpendicular to the line used to determine the *fire separation distance*.
2. Walls of *dwellings* and *accessory structures* located on the same *lot*.
3. Detached tool sheds and storage sheds, playhouses and similar structures exempted from permits are not required to provide wall protection based on location on the *lot*. Projections beyond the *exterior wall* shall not extend over the *lot line* unless allowed under the *Dallas Development Code*.
4. Detached garages accessory to a *dwelling* located within 2 feet (610 mm) of a *lot line* are permitted to have roof eave projections not exceeding 4 inches (102 mm).
5. Foundation vents installed in compliance with this code are permitted.
6. Carports open on all sides and constructed entirely of noncombustible materials may be constructed within 0 feet of the property line without fire-resistive construction or opening protection when the location of such is approved as required by other city ordinances. Projections beyond the exterior wall may not extend over the lot line unless allowed as determined by the *Dallas Development Code*.

7. Subsection R302.2, “Townhouses,” of Section R302, “Fire-Resistant Construction,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

“**R302.2 Townhouses and townhomes.** Common walls not associated with a property line and separating *townhouses* or *townhomes* shall be assigned a fire-resistance rating in accordance with Section R302.2, Item 1 or 2. The common wall shared by two *townhouses* shall be constructed without plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall shall be rated for fire exposure from both sides and shall extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations shall be in

accordance with Chapters 34 through 43. Penetrations of the membrane of common walls for electrical outlet boxes shall be in accordance with Section R302.4.

1. Where a fire sprinkler system in accordance with Section P2904 is provided, the common wall shall be not less than a 1-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263.
2. Where a fire sprinkler system in accordance with Section P2904 is not provided, the common wall shall be not less than a 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263.

Each *townhome* must provide at the property line its own fire-resistance-rated wall assembly meeting the requirements of Section R302.1 for exterior walls.

**Exception:** When approved by the *Dallas Development Code*, townhomes may provide at the property line a common 2-hour fire-resistance-rated wall assembly tested in accordance with ASTM E 119 or UL 263 if such walls do not contain plumbing or mechanical equipment, ducts or vents in the cavity of the common wall. The wall must be rated for fire exposure from both sides and must extend to and be tight against exterior walls and the underside of the roof sheathing. Electrical installations, if allowed by the *Dallas Development Code*, must be installed in accordance with the *Dallas Electrical Code*. Penetrations of electrical outlet boxes must be in accordance with Section R302.4. Use of this common wall provision may require the foundation on either side of the property line to be removable along with an associated deed restriction when required by the *Dallas Development Code*.

**R302.2.1 Continuity.** The fire-resistance-rated wall or assembly separating *townhouses* shall be continuous from the foundation to the underside of the roof sheathing, deck or slab. The fire-resistance rating shall extend the full length of the wall or assembly, including wall extensions through and separating attached enclosed *accessory structures*.

**R302.2.2 Parapets for townhouses.** Parapets constructed in accordance with Section R302.2.3 shall be constructed for *townhouses* as an extension of exterior walls or common walls in accordance with the following:

1. Where roof surfaces adjacent to the wall or walls are at the same elevation, the parapet shall extend not less than 30 inches (762 mm) above the roof surfaces.
2. Where roof surfaces adjacent to the wall or walls are at different elevations and the higher roof is not more than 30 inches (762 mm) above the lower roof, the parapet shall extend not less than 30 inches (762 mm) above the lower roof surface.

**Exception:** A parapet is not required in the preceding two cases where the roof covering complies with a minimum Class C rating as tested in accordance with ASTM E 108 or UL 790 and the roof decking or sheathing is of noncombustible materials or *approved* fire-retardant-treated wood for a distance of 4 feet (1219



mm) on each side of the wall or walls, or one layer of 5/8-inch (15.9 mm) Type X gypsum board is installed directly beneath the roof decking or sheathing, supported by not less than nominal 2-inch (51 mm) ledgers attached to the sides of the roof framing members, for a distance of not less than 4 feet (1219 mm) on each side of the wall or walls and any openings or penetrations in the roof are not within 4 feet (1219 mm) of the common walls.

3. A parapet is not required where roof surfaces adjacent to the wall or walls are at different elevations and the higher roof is more than 30 inches (762 mm) above the lower roof. The common wall construction from the lower roof to the underside of the higher roof deck shall have not less than a 1-hour fire-resistance rating. The wall shall be rated for exposure from both sides.

**R302.2.3 Parapet construction.** Parapets shall have the same fire-resistance rating as that required for the supporting wall or walls. On any side adjacent to a roof surface, the parapet shall have noncombustible faces for the uppermost 18 inches (457 mm), to include counterflashing and coping materials. Where the roof slopes toward a parapet at slopes greater than 2 units vertical in 12 units horizontal (16.7-percent slope), the parapet shall extend to the same height as any portion of the roof within a distance of 3 feet (914 mm), and the height shall be not less than 30 inches (762 mm).

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

**Exceptions:**

1. Foundations supporting *exterior walls* or common walls.
2. Structural roof and wall sheathing from each unit fastened to the common wall framing.
3. Nonstructural wall and roof coverings.
4. Flashing at termination of roof covering over common wall.
5. *Townhouses* separated by a common wall as provided in Section R302.2, Item 1 or 2.
6. Foundations of townhomes may be continuous across property lines when allowed by the *Dallas Development Code*.
8. Paragraph R302.5.1, “Opening Protection,” of Subsection R302.5, “Dwelling-Garage Opening and Penetration Protection,” of Section R302, “Fire-Resistant Construction,” of

Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

“**R302.5.1 Opening protection.** Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1 3/8 inches (35 mm) in thickness, solid or honeycomb-core steel doors not less than 1 3/8 inches (35 mm) thick, or 20-minute fire-rated doors~~[, equipped with a self-closing device].~~”

9. Subsection R302.12, “Draftstopping,” of Section R302, “Fire-Resistant Construction,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

“**R302.12 Draftstopping.** In combustible construction where there is usable space both above and below the concealed space of a floor-ceiling assembly, draftstops shall be installed so that the area of the concealed space does not exceed 1,000 square feet (92.9 m<sup>2</sup>). Draftstopping shall divide the concealed space into approximately equal areas. Where the assembly is enclosed by a floor membrane above and a ceiling membrane below, draftstopping shall be provided in floor-ceiling assemblies under the following circumstances:

1. Ceiling is suspended under the floor framing.
2. Floor framing is constructed of truss-type open-web or perforated members.

**Exception:** When the entire building, including within the floor-ceiling assembly, is protected by an approved automatic sprinkler system, the floor-ceiling assembly is not required to be subdivided.

**R302.12.1 Materials.** Draftstopping materials shall be not less than 1/2-inch (12.7 mm) gypsum board, 3/8-inch (9.5 mm) wood structural panels or other *approved* materials adequately supported. Draftstopping shall be installed parallel to the floor framing members unless otherwise *approved* by the *building official*. The integrity of the draftstops shall be maintained.

**R302.12.2 Draftstopping attics.** Draftstopping shall be installed in attics and concealed roof spaces, such that any horizontal area does not exceed 9,000 square feet (836.13 m<sup>2</sup>).

**Exception:** When the entire building, including the attic spaces, is protected by an *approved* automatic sprinkler system, the attic is not required to be subdivided.”

10. Subsection R303.3, “Bathrooms,” of Section R303, “Light, Ventilation and Heating,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

**“R303.3 Bathrooms.** Bathrooms, water closet compartments and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet (0.3 m<sup>2</sup>), one-half of which must be openable.

**Exception:** The glazed areas shall not be required where artificial light and a local exhaust system are provided. The minimum local exhaust rates shall be determined in accordance with Section M1507. Exhaust air from the space shall be exhausted directly to the outdoors unless the space contains only a water closet, a lavatory or a combination thereof which may be ventilated with an *approved* mechanical recirculating fan or similar device designed to remove odors from the air.”

11. Subsection R311.2, “Egress Door,” of Section R311, “Means of Egress,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended by adding a new Paragraph R311.2.1, “Bars, Grilles, Covers and Screens at Egress Door,” to read as follows:

**“R311.2.1 Bars, grilles, covers and screens at egress door.** Bars, grilles, covers, screens or similar devices are permitted to be placed at the egress door provided that the bars, grilles, covers, screens or similar devices shall be releasable from the inside without the use of a key, tool, special knowledge or force greater than that required for the normal operation of passage hardware.”

12. Subparagraph R311.7.5.1, “Risers,” of Paragraph R311.7.5, “Stair Treads and Risers,” of Subsection R311.7, “Stairways,” of Section R311, “Means of Egress,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

**“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. Open risers are permitted provided that the openings located more than 30 inches (762 mm), as measured vertically, to the floor or grade below do not permit the passage of a 4-inch-diameter (102 mm) sphere.

**Exceptions:**

1. The opening between adjacent treads is not limited on spiral stairways.
2. The riser height of spiral stairways shall be in accordance with Section R311.7.10.1.
3. Private steps and stairways serving an occupant load of less than 10 and stairways to unoccupied roofs may be constructed with an 8-inch maximum riser height.

13. Subparagraph R311.7.5.2, “Treads,” of Paragraph R311.7.5, “Stair Treads and Risers,” of Subsection R311.7, “Stairways,” of Section R311, “Means of Egress,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

**“R311.7.5.2 Treads.** The tread depth shall be not less than 10 inches (254 mm). The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread’s leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch (9.5 mm).

**Exception:** Private steps and stairways serving an occupant load of less than 10 and stairways to unoccupied roofs may be constructed with a 9-inch minimum tread depth.

**R311.7.5.2.1 Winder treads.** Winder treads shall have a tread depth of not less than 10 inches (254 mm) measured between the vertical planes of the foremost projection of adjacent treads at the intersections with the walkline. Winder treads shall have a tread depth of not less than 6 inches (152 mm) at any point within the clear width of the stair. Within any flight of stairs, the largest winder tread depth at the walkline shall not exceed the smallest winder tread by more than 3/8 inch (9.5 mm). Consistently shaped winders at the walkline shall be allowed within the same flight of stairs as rectangular treads and do not have to be within 3/8 inch (9.5 mm) of the rectangular tread depth.

**Exception:** The tread depth at spiral stairways shall be in accordance with Section R311.7.10.1.”

14. Section R313, “Automatic Fire Sprinkler Systems,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

**“SECTION R313  
AUTOMATIC FIRE SPRINKLER SYSTEMS**

**R313.1 Townhouse automatic fire sprinkler systems.** An automatic residential fire sprinkler system shall be installed in *townhouses*.

**Exceptions:**

1. An automatic residential fire sprinkler system shall not be required where [~~additions~~ *or*] *alterations* are made to existing *townhouses* or townhomes that do not have an automatic residential fire sprinkler system installed.
2. The floor area of an existing unsprinklered *townhouse* or *townhome* greater than 7,500 square feet (696.77 m<sup>2</sup>) and not housing a Group H occupancy may be increased by not more than 25 percent of the existing floor area (92.90 m<sup>2</sup>). Only one increase in floor area is permitted under this exception.
3. New *townhouses* or townhomes that are separated into fire areas no greater than 7,500 square feet (696.77 m<sup>2</sup>) by the use of 2-hour-rated fire walls. Horizontal assemblies may not be used to satisfy this requirement.

**R313.1.1 Design and installation.** Automatic residential fire sprinkler systems for multiple building *townhouses* shall be designed and installed in accordance with Section P2904 or NFPA 13D. Automatic residential fire sprinkler systems for single building *townhouses* shall be designed and installed in accordance with NFPA 13R.

**R313.2 One- and two-family dwellings automatic fire systems.** An automatic residential fire sprinkler system shall be installed in one- and two-family *dwellings*.

**Exceptions:**

1. 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.
2. The floor area of an existing unsprinklered dwelling greater than 7,500 square feet (696.77 m<sup>2</sup>) and not housing a Group H occupancy may be increased by not more than 25 percent of the existing floor area (92.90 m<sup>2</sup>). Only one increase in the floor area is permitted under this exception.
3. New *dwellings* that are separated into fire areas no greater than 7,500 square feet (696.77 m<sup>2</sup>) by the use of 2-hour rated fire walls. Horizontal assemblies may not be used to satisfy this requirement.

**R313.2.1 Design and installation.** Automatic residential fire sprinkler systems shall be designed and installed in accordance with Section P2904 or NFPA 13D.”

15. Paragraph R314.2.2, “Alterations, Repairs, and Additions,” of Subsection R314.2, “Where Required,” of Section R314, “Smoke Alarms,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

**“R314.2.2 Alterations, repairs and additions.** Where *alterations, repairs* or *additions* requiring a permit occur, or where one or more sleeping rooms are added or created in existing *dwelling units*, the individual *dwelling unit* shall be equipped with smoke alarms located as required for new *dwelling units*.

**Exceptions:**

1. Work involving the exterior surfaces of *dwelling units*, such as the replacement of roofing or siding, the *addition* or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.
2. Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section.
3. Hard wiring of smoke alarms in existing areas shall not be required where the alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure.”

16. Paragraph R315.2.2, “Alterations, Repairs, and Additions,” of Subsection R315.2, “Where Required,” of Section R315, “Carbon Monoxide Alarms,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

**“R315.2.2 Alterations, repairs and additions.** Where *alterations, repairs* or *additions* requiring a permit occur, or where one or more sleeping rooms are added or created in existing *dwelling units*, the individual *dwelling unit* shall be equipped with carbon monoxide alarms located as required for new *dwelling units*.

**Exceptions:**

1. Work involving the exterior surfaces of *dwelling units*, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, is exempt from the requirements of this section.
2. Installation, alteration or repairs of electrical powered plumbing or mechanical systems are exempt from the requirements of this section.”

17. Subsection R317.1, “Location Required,” of Section R317, “Protection of Wood and Wood-Based Products Against Decay,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

**“R317.1 Location required.** Protection of wood and wood- based products from decay shall be provided in the following locations by the use of naturally durable wood or wood that is preservative-treated in accordance with AWPA U1 for the species, product, preservative and end use. Preservatives shall be listed in Section 4 of AWPA U1.

1. Wood joists or the bottom of a wood structural floor when closer than 18 inches (457 mm) or wood girders when closer than 12 inches (305 mm) to the exposed ground in crawl spaces or unexcavated area located within the periphery of the building foundation.
2. Wood framing members that rest on concrete or masonry exterior foundation walls and are less than 8 inches (203 mm) from the exposed ground.
3. Sills and sleepers on a concrete or masonry slab that is in direct contact with the ground unless separated from such slab by an impervious moisture barrier.
4. The ends of wood girders entering exterior masonry or concrete walls having clearances of less than 1/2 inch (12.7 mm) on tops, sides and ends.
5. Wood siding, sheathing and wall framing on the exterior of a building having a clearance of less than 6 inches (152 mm) from the ground or less than 2 inches (51 mm) measured vertically from concrete steps, porch slabs, patio slabs and similar horizontal surfaces exposed to the weather.
6. Wood structural members supporting moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier.
7. Wood furring strips or other wood framing members attached directly to the interior of exterior masonry walls or concrete walls below *grade* except where an *approved* vapor retarder is applied between the wall and the furring strips or framing members.
8. When the bottoms of wood structural floor elements, including joists, girders and subfloor, are less than 8 inches (203 mm) above the horizontal projection of the outside ground level and extend toward the outside ground beyond the plane represented by the interior face of the foundation wall studs, such elements shall be approved naturally durable or preservative-treated wood.

**R317.1.1 Field treatment.** Field-cut ends, notches and drilled holes of preservative-treated wood shall be treated in the field in accordance with AWPA M4.

**R317.1.2 Ground contact.** All wood in contact with the ground, embedded in concrete in direct contact with the ground or embedded in concrete exposed to the weather that supports permanent structures intended for human occupancy shall be *approved* pressure-preservative-treated wood suitable for ground contact use, except that untreated wood used entirely below groundwater level or continuously submerged in fresh water shall not be required to be pressure-preservative treated.

**R317.1.3 Geographical areas.** In geographical areas where experience has demonstrated a specific need, *approved* naturally durable or pressure-preservative-treated wood shall be used for those portions of wood members that form the structural supports of buildings, balconies, porches or similar permanent building appurtenances when those members are exposed to the weather without adequate protection from a roof, eave, overhang or other covering that would prevent moisture or water accumulation on the surface or at joints between members. Depending on local experience, such members may include:

1. Horizontal members such as girders, joists and decking.
2. Vertical members such as posts, poles and columns.
3. Both horizontal and vertical members.

**R317.1.4 Wood columns.** Wood columns shall be *approved* wood of natural decay resistance or *approved* pressure-preservative-treated wood.

**Exceptions:**

1. Columns exposed to the weather or in *basements* where supported by concrete piers or metal pedestals projecting 1 inch (25 mm) above a concrete floor or 6 inches (152 mm) above exposed earth and the earth is covered by an *approved* impervious moisture barrier.
2. Columns in enclosed crawl spaces or unexcavated areas located within the periphery of the building when supported by a concrete pier or metal pedestal at a height more than 8 inches (203 mm) from exposed earth and the earth is covered by an impervious moisture barrier.
3. Deck posts supported by concrete piers or metal pedestals projecting not less than 1 inch (25 mm) above a concrete floor or 6 inches (152 mm) above exposed earth.

**R317.1.5 Exposed glued-laminated timbers.** The portions of glued-laminated timbers that form the structural supports of a building or other structure and are exposed to weather and not properly protected by a roof, eave or similar covering shall be pressure treated with preservative, or be manufactured from naturally durable or preservative-treated wood.”



18. Subsection R321.1, “Elevators,” of Section R321, “Elevators and Platform Lifts,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

“**R321.1 Elevators.** Where provided, passenger elevators, limited-use and limited-application elevators or private residence elevators shall comply with ASME A17.1/CSA B44.

**Exception:** The appendices of ASME A17.1—2013 do not apply. The building owner shall be responsible for the safe operation and maintenance of each elevator, dumbwaiter, escalator or moving walk installation and shall cause periodic inspections, test and maintenance to be made on such conveyance.”

19. Subsection R322.1, “General,” of Section R322, “Flood-Resistant Construction,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

“**R322.1 General.** Buildings and structures constructed in whole or in part in flood hazard areas, including A or V Zones and Coastal A Zones, as established in Table R301.2(1), and substantial improvement and restoration of substantial damage of buildings and structures in flood hazard areas, shall be designed and constructed in accordance with the provisions contained in this section. Buildings and structures that are located in more than one flood hazard area shall comply with the provisions associated with the most restrictive flood hazard area. Buildings and structures located in whole or in part in identified floodways shall be designed and constructed in accordance with ASCE 24.

**Exception:** Buildings and structures permitted to be located, designed and constructed in the flood plain areas in accordance with the regulations of the *Dallas Development Code*.

**R322.1.1 Alternative provisions.** As an alternative to the requirements in Section R322, ASCE 24 is permitted subject to the limitations of this code and the limitations therein.

**R322.1.2 Structural systems.** Structural systems of buildings and structures shall be designed, connected and anchored to resist flotation, collapse or permanent lateral movement due to structural loads and stresses from flooding equal to the design flood elevation.

**R322.1.3 Flood-resistant construction.** Buildings and structures erected in areas prone to flooding shall be constructed by methods and practices that minimize flood damage.

**R322.1.4 Establishing the design flood elevation.** The design flood elevation shall be used to define flood hazard areas. At a minimum, the design flood elevation shall be the higher of the following:

1. The base flood elevation at the depth of peak elevation of flooding, including wave height, that has a 1 percent (100-year flood) or greater chance of being equaled or exceeded in any given year; or
2. The elevation of the design flood associated with the area designated on a flood hazard map adopted by the community, or otherwise legally designated.

**R322.1.4.1 Determination of design flood elevations.** If design flood elevations are not specified, the *building official* is authorized to require the applicant to comply with either of the following:

1. Obtain and reasonably use data available from a federal, state or other source; or
2. Determine the design flood elevation in accordance with accepted hydrologic and hydraulic engineering practices used to define special flood hazard areas. Determinations shall be undertaken by a registered *design professional* who shall document that the technical methods used reflect currently accepted engineering practice. Studies, analyses and computations shall be submitted in sufficient detail to allow thorough review and approval.

**R322.1.4.2 Determination of impacts.** In riverine flood hazard areas where design flood elevations are specified but floodways have not been designated, the applicant shall demonstrate that the effect of the proposed buildings and structures on design flood elevations, including fill, when combined with other existing and anticipated flood hazard area encroachments, will not increase the design flood elevation more than 1 foot (305 mm) at any point within the *jurisdiction*.

**R322.1.5 Lowest floor.** The lowest floor shall be the lowest floor of the lowest enclosed area, including *basement*, and excluding any unfinished flood-resistant enclosure that is useable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the building or structure in violation of this section.

**R322.1.6 Protection of mechanical, plumbing and electrical systems.** Electrical systems, *equipment* and components; heating, ventilating, air conditioning; plumbing *appliances* and plumbing fixtures; *duct systems*; and other service *equipment* shall be located at or above the elevation required in Section R322.2 or R322.3. If replaced as part of a substantial improvement, electrical systems, *equipment* and components; heating, ventilating, air conditioning and plumbing *appliances* and plumbing fixtures; *duct systems*; and other service *equipment* shall meet the requirements of this section. Systems, fixtures, and *equipment* and components shall not be mounted on or penetrate through walls intended to break away under flood loads.

**Exception:** Locating electrical systems, *equipment* and components; heating, ventilating, air conditioning; plumbing *appliances* and plumbing fixtures; *duct systems*; and other service *equipment* is permitted below the elevation required in Section R322.2 or R322.3 provided that they are designed and installed to prevent water from entering or

accumulating within the components and to resist hydrostatic and hydrodynamic loads and stresses, including the effects of buoyancy, during the occurrence of flooding to the design flood elevation in accordance with ASCE 24. Electrical wiring systems are permitted to be located below the required elevation provided that they conform to the provisions of the electrical part of this code for wet locations.

**R322.1.7 Protection of water supply and sanitary sewage systems.** New and replacement water supply systems shall be designed to minimize or eliminate infiltration of flood waters into the systems in accordance with the plumbing provisions of this code. New and replacement sanitary sewage systems shall be designed to minimize or eliminate infiltration of floodwaters into systems and discharges from systems into floodwaters in accordance with the plumbing provisions of this code [~~and Chapter 3 of the *International Private Sewage Disposal Code*~~].

**R322.1.8 Flood-resistant materials.** Building materials and installation methods used for flooring and interior and exterior walls and wall coverings below the elevation required in Section R322.2 or R322.3 shall be flood damage-resistant materials that conform to the provisions of FEMA TB-2.

**R322.1.9 Industrialized housing [~~Manufactured homes~~].** The bottom of the frame of new and replacement industrialized homes [~~manufactured homes~~] on foundations that conform to the requirements of Section R322.2 or R322.3, as applicable, shall be elevated to or above the elevations specified in Section R322.2 (flood hazard areas including A Zones) or R322.3 in coastal high-hazard areas (V Zones and Coastal A Zones). The foundation [~~anchor and tie-down~~] requirements of this code [~~the applicable state or federal requirements~~] shall apply. The foundation and anchorage of industrialized [~~manufactured~~] homes to be located in identified floodways shall be designed and constructed in accordance with ASCE 24.

**R322.1.10 As-built elevation documentation.** A registered *design professional* shall prepare and seal documentation of the elevations specified in Section R322.2 or R322.3.”

20. Subsection R326.1, “General,” of Section R326, “Swimming Pools, Spas and Hot Tubs,” of Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended to read as follows:

“**R326.1 General.** The design and construction of pools and spas shall comply with Appendix Q, Swimming Pools, Spas and Hot Tubs [~~the *International Swimming Pool and Spa Code*~~].”

21. Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended by adding a new Section R327, “Aircraft Noise Attenuation Requirements,” to read as follows:

**“SECTION R327  
AIRCRAFT NOISE ATTENUATION REQUIREMENTS**

**R327.1 Definitions.** The following words and terms shall, for the purposes of this chapter, and as used elsewhere in this code, have the meanings shown herein.

**A-WEIGHTED SOUND LEVEL.** An A-weighted sound level is a sound level occurring in the 1,000 to 6,000 Hz frequency range that is increased by 10 dB if the noise event occurs between 10:00 p.m. and 7:00 a.m. The A-weighted sound level reflects the greater intrusiveness of sounds that the ear perceives as louder compared to other frequencies. “dBA” or “dB(A)” indicate a sound level measurement has been A-weighted.

**DAY-NIGHT AVERAGE SOUND LEVEL.** The day-night average sound level is the noise exposure in areas around airports (abbreviated as “DNL” in text and “L<sub>dn</sub>” in equations). DNL is a measure of the average A-weighted sound level of all aircraft flights occurring in a 24-hour period.

**R327.2 Aircraft noise zone.** All land within a DNL noise contour of 65 dBA or greater, as shown on the aircraft noise maps available for review at the division of building inspection is subject to these regulations. A building that is only partly located within an aircraft noise zone is also subject to these regulations.

**R327.3 Noise insulation.**

**R327.3.1 Certification of plans prior to issuance of building permit.** A registered Texas engineer who has demonstrable knowledge of acoustical engineering shall certify that the plans and specifications comply with the noise insulation standards of Section 327.3.2. The *building official* shall not issue a building permit for any building within an aircraft noise zone unless the plans and specifications for the building meet the noise insulation standards of Section 327.3.2.

**Exception:** The plans and specifications may be prepared and certified by a member of the National Council of Acoustical Consultants or another organization approved by the *building official*.

**R327.3.2 Noise insulation standards.** New buildings must be constructed with sound insulation or other means to achieve a DNL of 45 dBA or less inside the building. If the cost of modifications to an existing building is 75 percent or more of the total assessed improvement value of the site, the building must also meet this standard. Garages and similar accessory buildings that do not include living space are exempt from this requirement.”

22. Chapter 3, “Building Planning,” of the 2015 International Residential Code is amended by adding a new Section R328, “Green Building Program,” to read as follows:

**“SECTION R328  
GREEN BUILDING PROGRAM**

**R328.1 Purpose.** The purpose of this section is to establish *green building* standards to help reduce the use of natural resources, create a healthier and more sustainable living environment and minimize the negative environmental impacts of development in Dallas and the North Texas region.

**R328.2 All new construction.** All *proposed projects* must satisfy the minimum requirements of Chapter 11 of this code and:

1. meet the minimum requirements of ICC 700;
2. meet the prescriptive requirements of Section 328.5;
3. be *LEED-certifiable* under the LEED for homes standard;
4. be *Green Built Texas-certifiable*; or
5. meet an equivalent minimum *green building* standard certification level as determined by the *building official*.

Formal certification by the *USGBC*, *Green Built Texas* or an equivalent entity is not required.

**Exceptions:**

1. Additions to existing one- and two-family dwellings that are 200 square feet or less in floor area and contain no bathroom or restroom plumbing fixtures (water closets, lavatories, tubs, showers).
2. Carports, garages, storage buildings, agricultural barns, stables and similar structures that are accessory to one- and two-family dwellings 400 square feet or less in floor area.

**R328.3 LEED.** For *proposed projects* utilizing LEED for homes, the point total must include 1 point under the water efficiency credit titled “Indoor Water Use.”

**R328.4 Green Built Texas.** For *proposed projects* utilizing the *Green Built Texas* standards, energy use requirements must be met by complying with the minimum requirements of Chapter 11 of this code.

**R328.5 Prescriptive requirements.**

**R328.5.1 Storm water.** For all *proposed projects*, lots must be designed so that at least 70 percent of the built environment, not including any area under a roof, is permeable or

designed to capture water runoff for infiltration onsite. The following areas may be counted toward the 70 percent requirement:

1. Vegetative landscape such as grass, trees and shrubs.
2. Permeable paving, installed by an experienced professional. Permeable paving must include porous above-ground materials, such as open pavers and engineered products, and a 6-inch porous sub-base. The base layer must be designed to ensure proper drainage from the home.
3. Impermeable surfaces that are designed to direct all runoff toward an appropriate permanent infiltration feature such as a vegetated swale, onsite rain garden or rainwater cistern.

### **R328.5.2 Water efficiency.**

#### **R328.5.2.1 New construction.** *Proposed projects must:*

1. Utilize drip irrigation emitters for all bedding areas of an approved landscape plan, and
2. Meet water reduction strategies that include installing high-efficiency (low-flow) fixtures or fittings which meet at least three of the following requirements:
  - 2.1. The average flow rate for all lavatory faucets must be less than or equal to 2.0 gallons per minute.
  - 2.2. The average flow rate for all shower heads must be less than or equal to 2.0 gallons per minute.
  - 2.3. The average flow rate for all toilets must be:
    - 2.3.1. Less than or equal to 1.3 gallons per flush;
    - 2.3.2. Be dual flush and meet the requirements of ASME A 112.19.14; or
    - 2.3.3. Meet the U.S. Environmental Protection Agency Water Sense specification and be certified and labeled correctly.
  - 2.4. Utilize ENERGY STAR labeled dishwashers that use 6.0 gallons or less per cycle.
  - 2.5. Utilize ENERGY STAR labeled clothes washers with a modified energy factor (MEF) greater than or equal to 2.0 and a water factor (WF) of less than 5.

**R328.5.2.2 Additions to existing one- and two-family dwellings.** Additions to existing one- and two-family *dwellings* must meet at least two of the following water reduction strategies:

1. The average flow rate for all lavatory faucets must be less than or equal to 2.0 gallons per minute.
2. The average flow rate for all shower heads must be less than or equal to 2.0 gallons per minute.
3. The average flow rate for all toilets must be:
  - 3.1. Less than or equal to 1.3 gallons per flush;
  - 3.2. Be dual flush and meet the requirements of ASME A 112.19.14; or
  - 3.3. Meet the U.S. Environmental Protection Agency Water Sense specification and be certified and labeled correctly.

**R328.5.3 Energy efficiency.** All *proposed projects* must meet the minimum requirements of Chapter 11 of this code.

**R328.5.4 Heat island mitigation.** *Proposed projects* shall install an ENERGY STAR qualified roof on all roofs with a slope of 2:12 or greater.

**Exceptions:**

1. A vegetated roof may be installed subject to approval by the *building official*.
2. Installation of a radiant barrier that is manufactured as an integral part of roof decking or roof sheathing materials may be installed in lieu of an ENERGY STAR qualified roof.
3. Attic encapsulated with foam insulation at a minimum of R-22 may be installed in lieu of an ENERGY STAR qualified roof.

**R328.5.5 Indoor air quality.**

**R328.5.5.1 HVAC.** For *proposed projects*, all air-handling equipment and ductwork must be outside the fire-rated envelope of the garage.

**R328.5.5.2 Minimize pollutants from the garage.** For *proposed projects*, surfaces between conditioned space and an attached garage must be tightly sealed.

**R328.5.5.2.1 Conditioned spaces above a garage.**

1. All penetrations must be sealed.
2. All floor and ceiling joist bays must be sealed.
3. The walls and ceilings of conditioned spaces above a garage must be painted.

**R328.5.5.2.2 Conditioned spaces next to a garage.**

1. All penetrations must be sealed.
2. All doors must be weather stripped.
3. All cracks at the base of the wall must be sealed.

**R328.5.5.2.3 Air filters.**

1. For *proposed projects*, air filters must be installed with a minimum reporting value (MERV) equal to or greater than 8.
2. For *proposed projects*, air handlers must be able to maintain adequate air pressure and air flow.
3. For *proposed projects*, air filter housings must be airtight to prevent bypass or leakage.”

23. Subsection R401.2, “Requirements,” of Section R401, “General,” of Chapter 4,

“Foundations,” of the 2015 International Residential Code is amended to read as follows:

**“R401.2 Requirements.** Foundation construction shall be capable of accommodating all loads in accordance with Section R301 and of transmitting the resulting loads to the supporting soil. Fill soils that support footings and foundations shall be designed, installed and tested in accordance with accepted engineering practice. Gravel fill used as footings for wood and precast concrete foundations shall comply with Section R403. Every foundation or footing, or any addition of any size to an existing post-tension foundation, regulated by this code must be designed and sealed by an engineer registered in the State of Texas.”

24. Paragraph R403.1.4, “Minimum Depth,” of Subsection R403.1, “General,” of Section R403, “Footings,” of Chapter 4, “Foundations,” of the 2015 International Residential Code is amended to read as follows:

**“R403.1.4 Minimum depth.** Exterior footings shall be placed not less than 12 inches (305 mm) below the undisturbed ground surface. Where applicable, the depth of footings shall also conform to Sections R403.1.4.1 through R403.1.4.2.



**Exception:** A one-story wood or metal-frame building not used for human occupancy with an area of 400 square feet (37.2 m<sup>2</sup>) or less, with an eave height of 10 feet (3048 mm) or less may be constructed with walls supported on a wood foundation plate when approved by the *building official*.

**R403.1.4.1 Frost protection.** Except where otherwise protected from frost, foundation walls, piers and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:

1. Extended below the frost line specified in Table R301.2.(1).
2. Constructed in accordance with Section R403.3.
3. Constructed in accordance with ASCE 32.
4. Erected on solid rock.

**Exceptions:**

1. Protection of freestanding *accessory structures* with an area of 600 square feet (56 m<sup>2</sup>) or less, of light-frame construction, with an eave height of 10 feet (3048 mm) or less shall not be required.
2. Protection of freestanding *accessory structures* with an area of 400 square feet (37 m<sup>2</sup>) or less, of other than light-frame construction, with an eave height of 10 feet (3048 mm) or less shall not be required.
3. Decks not supported by a dwelling need not be provided with footings that extend below the frost line.

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

25. Subsection R408.7, “Flood Resistance,” of Section R408, “Under-Floor Space,” of Chapter 4, “Foundations,” of the 2015 International Residential Code is amended to read as follows:

**“R408.7 Flood resistance.** For buildings located in flood hazard areas as established in Table R301.2(1):

1. Walls enclosing the under-floor space shall be provided with flood openings in accordance with Section R322.2.2.

**Exception:** Walls that meet the requirements of the floodplain regulations of the *Dallas Development Code*.

2. The finished ground level of the under-floor space shall be equal to or higher than the outside finished ground level on at least one side.

**Exceptions:**

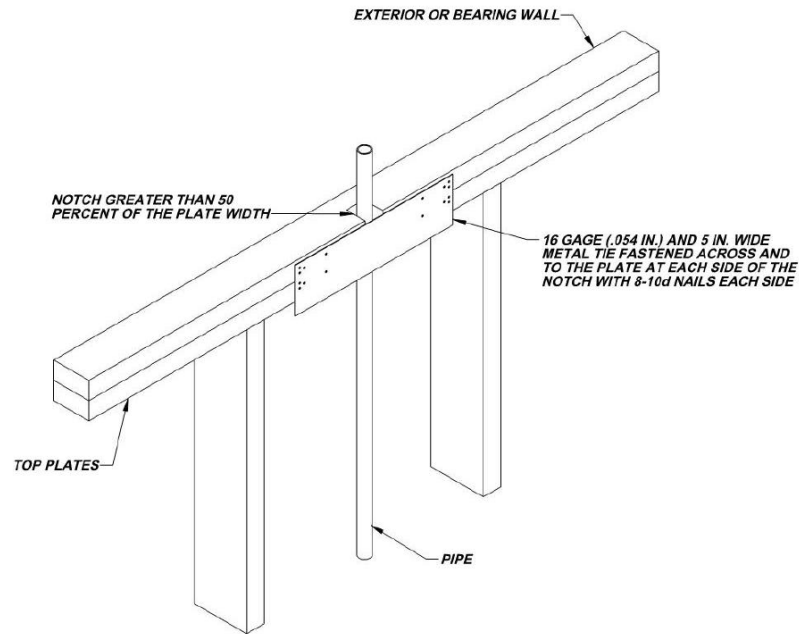
1. Under-floor spaces that meet the requirements of FEMA/FIA TB 11-1.
  2. Under-floor spaces that meet the requirements of the floodplain regulations of the Dallas Development Code.
26. Paragraph R602.6.1, “Drilling and Notching of Top Plate,” of Subsection R602.6, “Drilling and Notching of Studs,” of Section R602, “Wood Wall Framing,” of Chapter 6, “Wall Construction,” of the 2015 International Residential Code is amended to read as follows:

**“R602.6.1 Drilling and notching of top plate.** When piping or ductwork is placed in or partly in an exterior wall or interior load-bearing wall, necessitating cutting, drilling or notching of the top plate by more than 50 percent of its width, a galvanized metal tie not less than 0.054 inch thick (1.37 mm) (16 ga) and 5 [~~4~~/~~2~~] inches (127 [~~38~~] mm) wide shall be fastened across and to the plate at each side of the opening with not less than eight 10d (0.148 inch diameter) nails having a minimum length of 1 1/2 inches (38 mm) at each side or equivalent. Fasteners will be offset to prevent splitting of the top plate material. The metal tie must extend a minimum of 6 inches past the opening. See Figure R602.6.1.

**Exception:** When the entire side of the wall with the notch or cut is covered by wood structural panel sheathing.”

27. Figure R602.6.1, “Top Plate Framing to Accommodate Piping,” of Subsection R602.6, “Drilling and Notching of Studs,” of Section R602, “Wood Wall Framing,” of Chapter 6, “Wall Construction,” of the 2015 International Residential Code is deleted and replaced with a new Figure R602.6.1, “Top Plate Framing to Accommodate Piping,” to read as follows:

**“FIGURE R602.6.1  
TOP PLATE FRAMING TO ACCOMMODATE PIPING**



”

28. Subparagraph R703.8.4.1, “Size and Spacing,” of Paragraph R703.8.4, “Anchorage,” of Subsection R703.8, “Anchored Stone and Masonry Veneer, General,” of Section R703, “Exterior Covering,” of Chapter 7, “Wall Covering,” of the 2015 International Residential Code is amended to read as follows:

**“R703.8.4.1 Size and spacing.** Veneer ties, if strand wire, shall be not less in thickness than No. 9 U.S. gage [(0.148 inch) (4 mm)] wire and shall have a hook embedded in the mortar joint, or if sheet metal, shall be not less than No. 22 U.S. gage by [(0.0299 inch) (0.76 mm)] 7/8 inch (22 mm) corrugated. Each tie shall support not more than 2.67 square feet (0.25 m<sup>2</sup>) of wall area and shall be spaced not more than 32 inches (813 mm) on center horizontally and 24 inches (635 mm) on center vertically. In stud framed exterior walls, all ties must be anchored to studs as follows:

1. When studs are 16 inches (407 mm) on center, stud ties must be spaced no further apart than 24 inches (737 mm) vertically starting approximately 12 inches (381 mm) from the foundation; or
2. When studs are 24 inches (610 mm) on center, stud ties must be spaced no further apart than 16 inches (483 mm) vertically starting approximately 8 inches (254 mm) from the foundation.

**Exception:** In Seismic Design Category D<sub>0</sub>, D<sub>1</sub> or D<sub>2</sub> or townhouses in Seismic Design Category C or in wind areas of more than 30 pounds per square foot pressure (1.44 kPa), each tie shall support not more than 2 square feet (0.2 m<sup>2</sup>) of wall area.

**R703.8.4.1.1 Veneer ties around wall openings.** Additional metal ties shall be provided around wall openings greater than 16 inches (406 mm) in either dimension. Metal ties around the perimeter of openings shall be spaced not more than 3 feet (914 mm) on center and placed within 12 inches (305 mm) of the wall opening.”

29. Subsection R902.1, “Roofing Covering Materials,” of Section R902, “Fire Classification,” of Chapter 9, “Roof Assemblies,” of the 2015 International Residential Code is amended to read as follows:

**“R902.1 Roofing covering materials.** Roofs shall be covered with materials as set forth in Sections R904 and R905. Class A, B or C roofing shall be installed [~~in jurisdictions designated by law as requiring their use or where the edge of the roof is less than 3 feet (914 mm) from a lot line~~]. Class A, B and C roofing required by this section to be listed shall be tested in accordance with UL 790 or ASTM E 108.

**Exceptions:**

1. Class A roof assemblies include those with coverings of brick, masonry and exposed concrete roof deck.
2. Class A roof assemblies include ferrous or copper shingles or sheets, metal sheets and shingles, clay or concrete roof tile, or slate installed on noncombustible decks.
3. Class A roof assemblies include minimum 16 ounces per square foot copper sheets installed over combustible decks.
4. Class A roof assemblies include slate installed over underlayment over combustible decks.
5. Non-classified roof coverings are permitted on one-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 200 square feet (18.58 m<sup>2</sup>).”

30. Subsection R908.1, “General,” of Section R908, “Reroofing,” of Chapter 9, “Roof Assemblies,” of the 2015 International Residential Code is amended to read as follows:

**“R908.1 General.** Materials and methods of application used for re-covering or replacing an existing roof covering shall comply with the requirements of Chapter 9. All individual replacement shingles or shakes must comply with Section R902.1.

**Exceptions:**

1. Reroofing shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section R905 for roofs that provide positive roof drainage.
2. For roofs that provide positive drainage, re-covering or replacing an existing roof covering shall not require the secondary (emergency overflow) drains or scuppers of Section R903.4.1 to be added to an existing roof.”

31. Paragraph R908.3.1, “Roof Re-Cover,” of Subsection R908.3, “Roof Replacement,” of Section R908, “Reroofing,” of Chapter 9, “Roof Assemblies,” of the 2015 International Residential Code is amended to read as follows:

**“R908.3.1 Roof re-cover.** The installation of a new roof covering over an existing roof covering shall be permitted where any of the following conditions occur:

1. Where the new roof covering is installed in accordance with the roof covering manufacturer’s approved instructions
2. Complete and separate roofing systems, such as standing-seam metal roof systems, that are designed to transmit the roof loads directly to the building’s structural system and do not rely on existing roofs and roof coverings for support, shall not require the removal of existing roof coverings.
3. Metal panel, metal shingle and concrete and clay tile roof coverings shall be permitted to be installed over existing wood shake roofs where applied in accordance with Section R908.4.
4. The application of a new protective coating over an existing spray polyurethane foam roofing system shall be permitted without tear-off of existing roof coverings.
5. Where the application of a new roof covering results in not more than a total of two roof coverings and complies with all other provisions of this section.

**R908.3.1.1** A *roof re-cover* shall not be permitted where any of the following conditions occur:

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.

2. Where the existing roof covering is slate, clay, cement or asbestos-cement tile.
3. Where the existing roof has three [~~two~~] or more applications of any type of roof covering.”

32. Subsection N1101.4 (R102.1.1), “Above Code Programs,” of Section N1101, “General,” of Chapter 11 [RE], “Energy Efficiency,” of the 2015 International Residential Code is amended by adding new Paragraph N1101.4.1 (R102.1.2), “Alternative Compliance,” to read as follows:

**“N1101.4.1 (R102.1.2) Alternative compliance.** A building certified by a national, state or local accredited energy efficiency program and determined by the Energy Systems Laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the code official, be considered in compliance. The United States Environmental Protection Agency's Energy Star Program certification of energy code equivalency shall be considered in compliance.”

33. Subsection N1101.6 (R202), “Defined Terms,” of Section N1101, “General,” of Chapter 11 [RE], “Energy Efficiency,” of the 2015 International Residential Code is amended by adding in alphabetical order new defined terms to read as follows:

**“DYNAMIC GLAZING.** Any fenestration product that has the fully reversible ability to change its performance properties, including *U*-factor, solar heat gain coefficient (SHGC) or visible transmittance (VT).”

**“PROJECTION FACTOR.** The ratio of the horizontal depth of the overhang, eave or permanently attached shading device, divided by the distance measured vertically from the bottom of the fenestration glazing to the underside of the overhang, eave or permanently attached shading device.”

34. Subsection N1102.2 (R402.2), “Specific Insulation Requirements (Prescriptive),” of Section N1102 (R402), “Building Thermal Envelope,” of Chapter 11 [RE], “Energy Efficiency,” of the 2015 International Residential Code is amended by adding a new Paragraph N1102.2.14 (R402.2.14), “Insulation Installed in Walls,” to read as follows:

**“N1102.2.14 (R402.2.14) Insulation installed in walls.** To insure that insulation remains in place, insulation installed in walls shall be totally enclosed on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing, netting or other equivalent material approved by the building official.”

35. Paragraph N1102.3.2 (R402.3.2). “Glazed Fenestration SHGC,” of Subsection N1102.3 (R402.3), “Fenestration (Prescriptive),” of Section N1102 (R402), “Building Thermal Envelope,” of Chapter 11 [RE], “Energy Efficiency,” of the 2015 International Residential Code is amended to read as follows:

**“N1102.3.2 (R402.3.2) Glazed fenestration SHGC.** An area-weighted average of fenestration products more than 50-percent glazed shall be permitted to satisfy the SHGC requirements.

*Dynamic glazing* shall be permitted to satisfy the SHGC requirements of Table N1102.1.2 (Table R402.1.2) provided the ratio of the higher to lower labeled SHGC is greater than or equal to 2.4, and the *dynamic glazing* is automatically controlled to modulate the amount of solar gain into the space in multiple steps. *Dynamic glazing* shall be considered separately from other fenestration, and area-weighted averaging with other fenestration that is not dynamic glazing shall not be permitted.

**Exception:** *Dynamic glazing* is not required to comply with this section when both the lower and higher labeled SHGC already comply with the requirements of Table N1102.1.2 (Table R402.1.2).

Where vertical fenestration is shaded by an overhang, eave, or permanently attached shading device, the SHGC required in Table N1102.1.2 (R402.1.2) shall be reduced by using the multipliers in Table N1102.3.2 (R402.3.2) SHGC Multipliers for Permanent Projections.

**Table N1102.3.2 (R402.3.2) SHGC Multipliers for Permanent Projections<sup>a</sup>**

<u>Projection Factor</u>	<u>SHGC Multiplier (all Other Orientation)</u>	<u>SHGC Multiplier (North Oriented)</u>
<u>0 - 0.10</u>	<u>1.00</u>	<u>1.00</u>
<u>&gt;0.10 – 0.20</u>	<u>0.91</u>	<u>0.95</u>
<u>&gt;0.20 – 0.30</u>	<u>0.82</u>	<u>0.91</u>
<u>&gt;0.30 – 0.40</u>	<u>0.74</u>	<u>0.87</u>

<u>&gt;0.40 – 0.50</u>	<u>0.67</u>	<u>0.84</u>
<u>&gt;0.50 – 0.60</u>	<u>0.61</u>	<u>0.81</u>
<u>&gt;0.60 – 0.70</u>	<u>0.56</u>	<u>0.78</u>
<u>&gt;0.70 – 0.80</u>	<u>0.51</u>	<u>0.76</u>
<u>&gt;0.80 – 0.90</u>	<u>0.47</u>	<u>0.75</u>
<u>&gt;0.90 – 1.00</u>	<u>0.44</u>	<u>0.73</u>

<sup>a</sup>North oriented means within 45 degrees of true north.”

36. Subparagraph N1102.4.1.2 (R402.4.1.2), “Testing,” of Paragraph N1102.4.1 (R402.4.1), “Building Thermal Envelop,” of Subsection N1102.4 (R402.4), “Air Leakage (Mandatory),” of Section N1102 (R402) “Building Thermal Envelope,” of Chapter 11 [RE], “Energy Efficiency,” of the 2015 International Residential Code amended to read as follows:

**“N1102.4.1.2 (R402.4.1.2) Testing.** The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding five air changes per hour in Climate Zones 1 and 2, and three air changes per hour in Climate Zones 3 through 8. Testing shall be conducted in accordance with ASTM E 779 or ASTM E 1827 and reported at a pressure of 0.2 inches w.g. (50 Pascals). Where required by the *code official*, testing shall be conducted by an *approved* third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the *code official*. Testing shall be performed at any time after creation of all penetrations of the *building thermal envelope*.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures.
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures.
3. Interior doors, if installed at the time of the test, shall be open.
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed.



5. Heating and cooling systems, if installed at the time of the test, shall be turned off.
6. Supply and return registers, if installed at the time of the test, shall be fully open.

Mandatory testing shall only be performed by individuals that are certified to perform air infiltration testing certified by national or state organizations as approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed or have any financial interest in the company that constructs the structure.

37. Paragraph N1103.3.3 (R403.3.3), “Duct Testing (Mandatory),” of Subsection N1103.3 (R403.3), “Ducts,” of Section N1103 (R403), “Systems,” of Chapter 11 [RE], “Energy Efficiency,” of the 2015 International Residential Code is amended to read as follows:

**“N1103.3.3 (R403.3.3) Duct Testing (Mandatory).** Ducts shall be pressure tested to determine air leakage by one of the following methods:

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. Registers shall be taped or otherwise sealed during the test.
2. Postconstruction 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. Registers shall be taped or otherwise sealed during the test.

**Exception:** A total [~~duct-air~~] leakage test shall not be required where the ducts and air handlers are located entirely within the building thermal envelope.

Mandatory testing shall only be performed by individuals that are certified to perform duct testing leakage testing certified by national or state organizations as approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed or have any financial interest in the company that constructs the structure. A written report of the results of the test shall be signed by the party conducting the test and provided to the *code official*.”

38. Paragraph N1105.6.2 (R405.6.2) “Specific Approval,” of Subsection N1105.6 (R405.6), “Calculation Software Tools,” of Section N1105 (R405) “Simulated Performance Alternative (Performance),” of Chapter 11 [RE], “Energy Efficiency,” of the 2015 International Residential Code is amended to read as follows;

**“N1105.6.2 (R405.6.2) Specific approval.** Performance analysis tools meeting the applicable provisions of Section N1105 shall be permitted to be *approved*. Tools are permitted to be *approved* based on meeting a specified threshold for a jurisdiction. The *code [building] official* shall be permitted to approve tools for a specified application or limited scope.

Acceptable performance software simulation tools may include, but are not limited to, REM Rate™, Energy Gauge and IC3. Other performance software programs accredited by RESNET BESTEST and having the ability to provide a report as outlined in N1105.4.2 may also be deemed acceptable performance simulation programs and may be considered by the building official.”

39. Table N1106.4 (R406.4) “Maximum Energy Rating Index,” of Subsection N1106.4 (406.4), “ERI-Based Compliance,” of Section N1106 (R406) ”Energy Rating Index Compliance Alternative,” Chapter 11 [RE], “Energy Efficiency,” of the 2015 International Residential Code is deleted and replaced with the following tables:

**“TABLE N1106.4 (R406.4)<sup>1</sup>  
MAXIMUM ENERGY RATING INDEX**

<b>CLIMATE ZONE</b>	<b>ENERGY RATING INDEX</b>
3	65

<sup>1</sup> This table is effective until August 31, 2019.

**TABLE N1106.4 (R406.4)<sup>2</sup>  
MAXIMUM ENERGY RATING INDEX**

<b>CLIMATE ZONE</b>	<b>ENERGY RATING INDEX</b>
3	63

<sup>2</sup> This table is effective from September 1, 2019 through August 31, 2022.

**TABLE N1106.4 (R406.4)<sup>3</sup>**  
**MAXIMUM ENERGY RATING INDEX**

CLIMATE ZONE	ENERGY RATING INDEX
3	59

<sup>3</sup> This table is effective on and after September 1, 2022.”

40. Paragraph M1305.1.3, “Appliances in Attics,” of Subsection M1305.1, “Appliance Access for Inspection Service, Repair and Replacement,” of Section M1305, “Appliance Access,” of Chapter 13, “General Mechanical System Requirements,” of the 2015 International Residential Code is amended to read as follows:

**“M1305.1.3 Appliances in attics.** *Attics containing appliances requiring access shall be provided with an opening and a clear and unobstructed passageway large enough to allow removal of the largest appliance, but not less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) long measured along the centerline of the passageway from the opening to the appliance. The passageway shall have continuous solid flooring in accordance with Chapter 5 not less than 24 inches (610 mm) wide. A level service space not less than 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present along all sides of the appliance where access is required. The clear access opening dimensions shall not be less than 20 inches by 30 inches (508 mm by 762 mm) or larger where such dimensions are not [~~and~~] large enough to allow removal of the largest appliance. A walkway to an appliance must be rated as a floor as approved by the building official. As a minimum, provide one of the following for access to the attic space:*

1. A permanent stair.
2. A pull down stair with a minimum 300 lb (136 kg) capacity.
3. An access door from an upper floor.

An access panel may be used in lieu of Items 1, 2 or 3 due to structural conditions with prior approval of the building official.

**Exceptions:**

1. The passageway and level service space are not required where the *appliance* can be serviced and removed through the required opening.

2. Where the passageway is unobstructed and not less than 6 feet (1829 mm) high and 22 inches (559 mm) wide for its entire length, the passageway shall be not more than 50 feet (15,250 mm) long.

**M1305.1.3.1 Electrical requirements.** A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet shall be installed at or near the *appliance* location in accordance with the *Dallas Electrical Code* [~~Chapter 39~~]. Exposed lamps shall be protected from damage by location or lamp guards.”

41. Subparagraph M1305.1.4.3, “Electrical Requirements,” of Paragraph M1305.1.4, “Appliances Under Floors,” of Subsection M1305.1, “Appliance Access for Inspection Service, Repair and Replacement,” of Section M1305, “Appliance Access,” of Chapter 13, “General Mechanical System Requirements,” of the 2015 International Residential Code is amended to read as follows:

“**M1305.1.4.3 Electrical requirements.** A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet shall be installed at or near the *appliance* location in accordance with the *Dallas Electrical Code*. *Low voltage wiring of 50 volts or less must be installed in a manner to prevent physical damage* [~~Chapter 39~~]. Exposed lamps shall be protected from damage by location or lamp guards.”

42. Subsection M1307.3, “Elevation of Ignition Source,” of Section M1307, “Appliance Installation,” of Chapter 13, “General Mechanical System Requirements,” of the 2015 International Residential Code is amended to read as follows:

“**M1307.3 Elevation of ignition source.** Equipment and *a[A]ppliances* having an *ignition source* shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the floor in garages. For the purpose of this section, rooms or spaces that are not part of the *living space* of a *dwelling unit* and that communicate directly with a private garage through openings shall be considered to be part of the garage.

**Exceptions:**

1. Elevation of the ignition source is not required for appliances that are listed as flammable-vapor-ignition resistant.
2. Electric appliance or electric water heaters.

**M1307.3.1 Protection from impact.** *Appliances* shall not be installed in a location subject to vehicle damage except where protected by *approved* barriers.”

43. Section M1307, “Appliance Installation,” of Chapter 13, “General Mechanical System Requirements,” of the 2015 International Residential Code is amended by adding a new Subsection M1307.7, “Prohibited Locations,” to read as follows:

“**M1307.7 Prohibited locations.** Fuel-fired appliances must not be located in, or obtain combustion air from, any of the following rooms or spaces:

1. Sleeping rooms.
2. Bathrooms.
3. Toilet rooms.
4. Storage closets.

**Exception:** This section does not apply to the following applications:

1. Direct-vent appliances that obtain all combustion air directly from outdoors.
2. Solid fuel-fired appliances, provided that the room is not a confined space and the building is not of unusually tight construction.
3. Appliances installed in a dedicated enclosure in which all combustion air is taken directly from the outdoors, in accordance with Chapter 7. Access to such enclosure must be through a solid door, weather-stripped in accordance with the exterior door leakage requirements of the *Dallas Energy Conservation Code* and equipped with an approved self-closing device.”

44. Subsection M1401.4, “Exterior Installations,” of Section M1401, “General,” of Chapter 14, “Heating and Cooling Equipment and Appliances,” of the 2015 International Residential Code is amended to read as follows:

“**M1401.4 Exterior installations.** *Equipment* and *appliances* installed outdoors shall be *listed* and *labeled* for outdoor installation. Supports and foundations shall prevent excessive vibration, settlement or movement of the *equipment*. Supports and foundations shall be in accordance with Section M1305.1.4.1.

**M1401.4.1 Side yard clearances.** A unitary air conditioning unit installed in a required side yard must comply with the requirements of Section 51A-4.402(a)(4) of the *Dallas Development Code*.

**M1401.4.2 Low voltage wiring.** Low voltage wiring of 50 volts or less must be installed in an approved manner as defined in the *Dallas Electrical Code* in order to prevent physical damage to the wiring.”

45. Subsection M1411.3, “Condensate Disposal,” of Section M1411, “Heating and Cooling Equipment,” of Chapter 14, “Heating and Cooling Equipment and Appliances,” of the 2015 International Residential Code is amended to read as follows:

**“M1411.3 Condensate disposal.** Condensate from all cooling coils or evaporators shall be conveyed from the drain pan outlet to an *approved* place of disposal. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than 1/8 unit vertical in 12 units horizontal (1-percent slope.) Condensate shall not discharge into a street, alley, sidewalk, rooftop or other areas so as to [~~where it would~~] cause a nuisance.

**M1411.3.1 Auxiliary and secondary drain systems.** In addition to the requirements of Section M1411.3, a secondary drain or auxiliary drain pan shall be required for each cooling or evaporator coil where damage to any building components could [~~will~~] occur as a result of overflow from the *equipment* drain pan or stoppage in the condensate drain piping. Such piping shall maintain a minimum horizontal slope in the direction of discharge of not less than 1/8 unit vertical in 12 units horizontal (1-percent slope). Drain piping shall be not less than 3/4-inch (19 mm) nominal pipe size. One of the following methods shall be used:

1. An auxiliary drain pan with a separate drain shall be installed under the coils on which condensation will occur. The auxiliary pan drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall have a minimum depth of 1.5 inches (38 mm), shall not be less than 3 inches (76 mm) larger than the unit or the coil dimensions in width and length and shall be constructed of corrosion-resistant material. Galvanized sheet steel pans shall have a minimum thickness of not less than 0.0236-inch (0.6010 mm) (No. 24 Gage). Nonmetallic pans shall have a minimum thickness of not less than 0.0625 inch (1.6 mm).
2. A separate overflow drain line shall be connected to the drain pan installed with the *equipment*. This overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection. However, the conspicuous point must not create a nuisance.
3. An auxiliary drain pan without a separate drain line shall be installed under the coils on which condensation will occur. This pan shall be equipped with a water level

detection device conforming to UL 508 that will shut off the *equipment* served prior to overflow of the pan. The pan shall be equipped with a fitting to allow for drainage. The auxiliary drain pan shall be constructed in accordance with Item 1 of this section. A water level detection device may be installed only with prior approval of the building official.

4. A water level detection device conforming to UL 508 shall be installed that will shut off the *equipment* served in the event that the primary drain is blocked. The device shall be installed in the primary drain line, the overflow drain line or the *equipment*-supplied drain pan, located at a point higher than the primary drain line connection and below the overflow rim of such pan. A water level detection device may be installed only with prior approval of the building official.

**M1411.3.1.1 Water-level monitoring devices.** On down-flow units and all other coils that have no secondary drain or provisions to install a secondary or auxiliary drain pan, a water-level monitoring device shall be installed inside the primary drain pan. This device shall shut off the equipment served in the event that the primary drain becomes restricted. Devices shall not be installed in the drain line. A water level detection device may be installed only with prior approval of the building official.

**Exception:** Fuel-fired appliances that automatically shut down operation in the event of a stoppage in the condensate drainage system.

**M1411.3.2 Drain pipe materials and sizes.** Components of the condensate disposal system shall be ABS, cast iron, copper, cross-linked polyethylene, CPVC, galvanized steel, [~~PE-RT,~~] polyethylene, polypropylene or PVC pipe or tubing. When exposed to ultra violet light, schedule 80 PVC pipe or tubing is required. Components shall be selected for the pressure, [~~and~~] temperature and exposure rating of the installation. Joints and connections shall be made in accordance with [~~the applicable provisions of~~] Chapter 30. Condensate waste and drain line size shall be not less than 3/4-inch (19 mm) internal [~~nominal~~] diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with Table 307.2.2, "Condensate Drain Sizing," of the Dallas Mechanical Code [~~an approved method~~].

**M1411.3.3 Drain line maintenance.** Condensate drain lines shall be configured to permit the clearing of blockages and performance of maintenance without requiring the drain line to be cut.

**M1411.3.4 Appliances, equipment and insulation in pans.** Where *appliances, equipment* or insulation are subject to water damage when auxiliary drain pans fill, those portions of the *appliances, equipment* and insulation shall be installed above the flood level rim of the pan. Supports located inside of the pan to support the *appliance* or *equipment* shall be water resistant and *approved*."

46. Paragraph M1502.4.2, “Duct Installation,” of Subsection M1502.4, “Dryer Exhaust Ducts,” of Section M1502, “Clothes Dryer Exhaust,” of Chapter 15, “Exhaust Systems,” of the 2015 International Residential Code is amended to read as follows:

**“M1502.4.2 Duct installation.** Exhaust ducts shall be supported at intervals not to exceed 12 feet (3658 mm) and shall be secured in place. The insert end of the duct shall extend into the adjoining duct or fitting in the direction of airflow. Exhaust duct joints shall be sealed in accordance with Section M1601.4.1 [~~and shall be mechanically fastened~~]. Ducts shall not be joined with screws or similar fasteners [~~that protrude more than 1/8 inch (3.2 mm) into the inside of the duct~~].”

47. Subsection M1503.4, “Makeup Air Required,” of Section M1503, “Range Hoods,” of Chapter 15, “Exhaust Systems,” of the 2015 International Residential Code is amended to read as follows:

**“M1503.4 Makeup air required.** Exhaust hood systems capable of exhausting in excess of 400 cubic feet per minute (0.19 m<sup>3</sup>/s) shall be mechanically or naturally provided with makeup air at a rate approximately equal to the difference between the exhaust air rate and 400 cubic feet per minute (0.19 m<sup>3</sup>/s). Such makeup air systems shall be equipped with a means of closure and shall be automatically controlled to start and operate simultaneously with the exhaust system [~~not less than one damper. Each damper shall be a gravity damper or an electrically operated damper that automatically opens when the exhaust system operates. Dampers shall be accessible for inspection, service, repair and replacement without removing permanent construction or any other ducts not connected to the damper being inspected, serviced, repaired or replaced~~].

**Exception:** Where all appliances in the house are of sealed combustion, power-vent, unvented or electric, the exhaust hood system is permitted to exhaust up to 600 cubic feet per minute (0.28 m<sup>3</sup>/s) without providing makeup air. Exhaust hood systems capable of exhausting in excess of 600 cubic feet per minute (0.28 m<sup>3</sup>/s) must be provided with a makeup air rate approximately equal to the difference between the exhausted air rate and 600 cubic feet per minute (0.28 m<sup>3</sup>/s).

**M1503.4.1 Location.** Kitchen exhaust makeup air shall be discharged into the same room in which the exhaust system is located or into rooms or duct systems that communicate through one or more permanent openings with the room in which such exhaust system is located. Such permanent openings shall have a net cross-sectional area not less than the required area of the makeup air supply openings.”



48. Subsection M1507.2, “Recirculation of Air,” of Section M1507, “Mechanical Ventilation,” of Chapter 15, “Exhaust Systems,” of the 2015 International Residential Code is amended to read as follows:

“**M1507.2 Recirculation of air.** Exhaust air from bathrooms and toilet rooms shall not be recirculated within a residence or to another *dwelling unit* and shall be exhausted directly to the outdoors. Exhaust air from bathrooms and toilet rooms shall not discharge into an *attic*, crawl space or other areas inside the building.

Exception: Toilet rooms within private dwellings that contain only a water closet, lavatory or combination thereof may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.”

49. Chapter 20, “Boilers and Water Heaters,” of the 2015 International Residential Code is retitled as Chapter 20, “Boilers.”

50. Subsection M2005.1, “General,” of Section M2005, “Water Heaters,” of Chapter 20, “Boilers,” of 2015 International Residential Code is deleted and replaced with a new Subsection 2005.1, “General,” to read as follows:

“**M2005.1 General.** Water heaters shall be installed in accordance with Chapter 28 and the manufacturer’s instructions. Gas-fired water heaters shall comply with the requirements of Chapter 24 and electric water heaters shall comply with the *Dallas Electrical Code*.”

51. Paragraph G2407.6.2 (304.6.2), “One-Permanent-Opening Method,” of Subsection G2407.6 (304.6), “Outdoor Combustion Air,” of Section G2407 (304), “Combustion, Ventilation and Dilution Air,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is deleted.

52. Subsection G2407.10 (304.10), “Louvers and Grilles,” of Section G2407 (304), “Combustion, Ventilation and Dilution Air,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended to read as follows:

“**G2407.10 (304.10) Louvers and grilles.** The required size of openings for *combustion*, ventilation and *dilution air* shall be based on the net free area of each opening. Where the free area through a design of louver, grille or screen is known, it shall be used in calculating the size

opening required to provide the free area specified. Where the design and free area of louvers and grilles are not known, it shall be assumed that wood louvers will have 25-percent free area and metal louvers and grilles will have 50 [75]-percent free area. Screens shall have a mesh size not smaller than ¼ inch (6.4 mm). Nonmotorized louvers and grilles shall be fixed in the open position. Motorized louvers shall be interlocked with the *appliance* so that they are proven to be in the full open position prior to *main burner* ignition and during *main burner* operation. Means shall be provided to prevent the *main burner* from igniting if the louvers fail to open during *burner* start-up and to shut down the *main burner* if the louvers close during operation.”

53. Subsection G2408.2 (305.3), “Elevation of Ignition Source,” of Section G2408 (305), “Installation,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended to read as follows:

**G2408.2 (305.3) Elevation of ignition source.** *Equipment and appliances having an ignition source shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the floor in [~~hazardous locations and public garages,~~] private garages[~~, repair garages, motor fuel dispensing facilities and parking garages~~]. For the purpose of this section, rooms or spaces that are not part of the *living space* of a *dwelling unit* and that communicate directly with a private garage through openings shall be considered to be part of the private garage.*

**Exceptions:**

1. Elevation of the *ignition source* is not required for *appliances* that are listed as flammable-vapor-ignition resistant.
2. Electric appliances or electric water heaters.

**G2408.2.1 (305.3.1) Installation in residential garages.** In residential garages where *appliances* are installed in a separate, enclosed space having access only from outside of the garage, such *appliances* shall be permitted to be installed at floor level, provided that the required *combustion air* is taken from the exterior of the garage.”

54. Subsection G2408.3 (305.5), “Private Garages,” of Section G2408 (305), “Installation,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is deleted.

55. Subsection G2411.1 (310.1), “Pipe and Tubing Other Than CSST,” of Section G2411 (310), “Electrical Bonding,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is deleted and replaced with a new Subsection G2411.1 (310.1), “Pipe and Tubing,” to read as follows:

**“G2411.1 (310.1) Pipe and tubing.** Metal piping systems that are likely to become energized shall be bonded by a qualified contractor and in accordance with the requirements of the *Dallas Electrical Code*.”

56. Subsection G2412.5 (401.5), “Identification,” of Section G2412 (401), “General,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended to read as follows:

**“G2412.5 (401.5) Identification.** For other than black steel *pipe*, exposed *piping* shall be identified by a permanently attached yellow label marked “Gas” in black letters. The marking shall be spaced at intervals not exceeding 5 feet (1524 mm). The marking shall not be required on *pipe* located in the same room as the equipment [~~*appliance*~~] served. Both ends of each section of medium pressure shall identify its operating gas pressure with an approved permanently attached tag. The tags are to be composed of aluminum or stainless steel and the following wording shall be stamped into the tag:

WARNING  
½ to 5 psi gas pressure  
Do Not Remove.”

57. Subsection G2413.3 (402.3), “Sizing,” of Section G2413 (402), “Pipe Sizing,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended to read as follows:

**“G2413.3 (402.3) Sizing.** *Gas piping* shall be sized in accordance with one of the following:

1. *Pipe* sizing tables or sizing equations in accordance with Section G2413.4.
2. The sizing tables included in a *listed piping* system’s manufacturer’s installation instructions.
3. Other *approved* engineering methods.

**Exception:** Corrugated stainless steel tubing (CSST) shall be a minimum of ½ inch (18 EDH).”

58. Subsection G2415.12 (404.12), “Minimum Burial Depth,” of Section G2415 (404), “Piping System Installation,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended to read as follows:

**G2415.12 (404.12) Minimum burial depth.** Underground *pipng systems* shall be installed a minimum depth of 18 [±2] inches (458 [305] mm), measured from top of pipe to existing [below] grade[, except as provided for in Section G2415.12.1.

~~**G2415.12.1 (404.12.1) Individual outside appliances.** Individual lines to outside lights, grills or other *appliances* shall be installed not less than 8 inches (203 mm) below finished grade, provided that such installation is *approved* and is installed in locations not susceptible to physical damage.]”~~

59. Subsection G2417.1 (406.1), “General,” of Section G2417 (406), “Inspection, Testing and Purging,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended to read as follows:

**G2417.1 (406.1) General.** Prior to acceptance and initial operation, all *pipng* installations shall be visually inspected and pressure tested to determine that the materials, design, fabrication and installation practices comply with the requirements of this code. The permit holder shall make the applicable tests prescribed in Sections G2417.1.1 through G2417.7.3 to determine compliance with the provisions of this code. The permit holder shall give reasonable advance notice to the *building official* when the piping system is ready for testing. The equipment, material, power and labor necessary for the inspections and test shall be furnished by the permit holder and the permit holder shall be responsible for determining that the work will withstand the test pressure prescribed in the following tests.

**G2417.1.1 (406.1.1) Inspections.** Inspection shall consist of visual examination, during or after manufacture, fabrication, assembly or *pressure tests*.

**G2417.1.2 (406.1.2) Repairs and additions.** In the event repairs or additions are made after the *pressure test*, the affected *pipng* shall be tested.

With prior approval of the building official, m[M]inor repairs and additions are not required to be *pressure tested* provided that the work is inspected and connections are tested with a noncorrosive leak-detecting fluid or other *approved* leak-detecting methods.

**G2417.1.3 (406.1.3) New branches.** Where new branches are installed to new *appliances*, only the newly installed branches shall be required to be *pressure tested*. Connections between the new *pipng* and the existing *pipng* shall be tested with a noncorrosive leak-detecting fluid or other *approved* leak-detecting methods.

**G2417.1.4 (406.1.4) Section testing.** A *pipng system* shall be permitted to be tested as a complete unit or in sections. Under no circumstances shall a *valve* in a line be used as a bulkhead between gas in one section of the *pipng system* and test medium in an adjacent section, except where a double block and bleed valve system is installed. A valve shall not be subjected to the test pressure unless it can be determined that the valve, including the valve closing mechanism, is designed to safely withstand the test pressure.

**G2417.1.5 (406.1.5) Regulators and valve assemblies.** *Regulator* and valve assemblies fabricated independently of the *piping system* in which they are to be installed shall be permitted to be tested with inert gas or air at the time of fabrication.

**G2417.1.6 (406.1.6) Pipe clearing.** Prior to testing, the interior of the pipe shall be cleared of all foreign material.”

60. Subsection G2417.4 (406.4), “Test Pressure Measurement,” of Section G2417 (406), “Inspection, Testing and Purging,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended to read as follows:

“**G2417.4 (406.4) Test pressure measurement.** Test pressure shall be measured with [a ~~manometer or with~~] a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the *pressure test* period. The source of pressure shall be isolated before the *pressure tests* are made. [~~Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure.~~]

**G2417.4.1 (406.4.1) Test pressure.** The test pressure to be used shall be not less than [~~1½ times the proposed maximum working pressure, but not less than~~] 3 psig (20 kPa gauge). For tests requiring a pressure of 3 psig, diaphragm gauges must utilize a dial with a minimum diameter of 3 ½ inches, a set hand, 1/10 pound increments and pressure range not to exceed 6 psi for tests requiring a pressure of 3 psig. For tests requiring a pressure of 10 psig, diaphragm gauges must utilize a dial with a minimum diameter of 3 ½ inches, a set hand, a minimum of 2/10 pound increments and a pressure range not to exceed 20 psi. For welded piping, and for piping carrying gas at pressures in excess of 14 inches water column pressure (3.48 kPa) (1/2 psi) and less than 200 inches of water column pressure (52.2 kPa) (7.5 psi), the test pressure must not be less than 10 pounds per square inch (69.6 kPa). For piping carrying gas at a pressure that exceeds 200 inches of water column (52.2 kPa) (7.5 psi), the test pressure must be not less than one and one-half times the proposed maximum working pressure. [, irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe.]

Diaphragm gauges used for testing must display a current calibration and be in good working condition. The appropriate test must be applied to the diaphragm gauge used for testing.

**G2417.4.2 (406.4.2) Test duration.** The test duration shall be held for a length of time satisfactory to the building official, but in no case for [not] less than 15 [10] minutes. For welded piping, and for piping carrying gas at pressures in excess of 14 inches water column pressure (3.48 kPa), the test duration must be held for a length of time satisfactory to the building official, but in no case for less than 30 minutes.”

61. Subsection G2420.1 (409.1), “General,” of Section G2420 (409), “Shutoff Valves,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended by adding a new Paragraph G2420.1.4, “Valves in CSST Installations,” to read as follows:

**“G2420.1.4 Valves in CSST installations.** Shutoff valves installed with corrugated stainless steel (CSST) piping systems must be supported with an approved termination fitting, or equivalent support, suitable for the size of the valves, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration, but in no case greater than 12 inches from the center of the valve. Supports must be installed so as not to interfere with the free expansion and contraction of the system's piping, fittings and valves between anchors. All valves and supports must be designed and installed so they will not be disengaged by movement of the supporting piping.”

62. Paragraph G2420.5.1 (409.5.1), “Located Within Same Room,” of Subsection G2420.5 (409.5), “Appliance Shutoff Valve,” of Section G2420 (409), “Shutoff Valves,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended to read as follows:

**“G2420.5.1 (409.5.1) Located within same room.** The shutoff *valve* shall be located in the same room as the *appliance*. The shutoff *valve* shall be within 6 feet (1829 mm) of the *appliance*, and shall be installed upstream of the union, connector or quick disconnect device it serves. Such shutoff *valves* shall be provided with access. *Appliance shutoff valves* located in the firebox of a *fireplace* shall be installed in accordance with the *appliance* manufacturer's instructions. A secondary valve shall be installed within 3 feet (914 mm) of the firebox if *appliance* shutoff is in the firebox.”

63. Subsection G2421.1 (410.1), “Pressure Regulators,” of Section G2421 (410), “Flow Controls,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended to read as follows:

**“G2421.1 (410.1) Pressure regulators.** A line *pressure regulator* shall be installed where the *appliance* is designed to operate at a lower pressure than the supply pressure. *Line gas pressure regulators* shall be *listed* as complying with ANSI Z21.80. *Access* shall be provided to *pressure regulators*. *Pressure regulators* shall be protected from physical damage. *Regulators* installed on the exterior of the building shall be *approved* for outdoor installation. Access to regulators must comply with the requirements for access to appliances as specified in Section M1305.”

**Exception:** A passageway or level service space is not required when the regulator is capable of being serviced and removed through the required attic opening.”

64. Subparagraph G2422.1.2.3 (411.1.3.3), “Prohibited Locations and Penetrations,” of Paragraph G2422.1.2 (411.1.3), “Connector Installation,” of Subsection G2422.1 (411.1), “Connecting Appliances,” of Section G2422 (411), “Appliance Connections,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended to read as follows:

**“G2422.1.2.3 (411.1.3.3) Prohibited locations and penetrations.** Connectors shall not be concealed within, or extended through, walls, floors, partitions, ceilings or *appliance* housings.

**Exception[s]:**

- ~~[1. Connectors constructed of materials allowed for *pipng systems* in accordance with Section G2414 shall be permitted to pass through walls, floors, partitions and ceilings where installed in accordance with Section G2420.5.2 or G2420.5.3~~
- 2.] Rigid black steel pipe connectors shall be permitted to extend through openings in *appliance* housings.
- ~~[3. *Fireplace* inserts that are factory equipped with grommets, sleeves or other means of protection in accordance with the listing of the *appliance*.~~
4. ~~Semirigid *tubing* and listed connectors shall be permitted to extend through an opening in an *appliance* housing, cabinet or casing where the tubing or connector is protected against damage.]”~~

65. Paragraph G2439.7.2 (614.8.2), “Duct Installation,” of Subsection G2439.7 (614.8), “ Domestic Clothes Dryer Exhaust Ducts,” of Section G2439 (614), “Clothes Dryer Exhaust,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended to read as follows:

**“G2439.7.2 (614.8.2) Duct installation.** Exhaust ducts shall be supported at 4-foot (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 protrude more than 1/8 inch (3.2 mm) into the inside of the duct].”~~

66. Subsection G2445.2 (621.2), “Prohibited Use,” of Section G2445 (621), “Unvented Room Heaters,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended to read as follows:

“**G2445.2 (621.2) Prohibited use.** One or more *unvented room heaters* shall not be used as the sole source of comfort heating in a *dwelling unit*.”

**Exception:** Existing *approved* unvented heaters may continue to be used in *dwelling units*, in accordance with the code provisions in effect when installed, when *approved* by the *building official* unless an unsafe condition is determined to exist as described in Section 203 of Chapter 52 of the *Dallas City Code*, “Administrative Procedures for the Construction Codes.”

67. Paragraph G2448.1.1 (624.1.1), “Installation Requirements,” of Subsection G2448.1 (624.1), “General,” of Section G2448 (624), “Water Heaters,” of Chapter 24, “Fuel Gas,” of the 2015 International Residential Code is amended to read as follows:

“**G2448.1.1 (624.1.1) Installation requirements.** The requirements for *water heaters* relative to access, sizing, *relief valves*, drain pans and scald protection shall be in accordance with Chapter 28 and all other provisions of this code.”

68. Paragraph P2603.5.1, “Sewer Depth,” of Subsection P2603.5, “Freezing,” of Section P2603, “Structural and Piping Protection,” of Chapter 26, “General Plumbing Requirements,” of the 2015 International Residential Code is amended to read as follows:

“**P2603.5.1 Sewer depth.** [~~*Building sewers that connect to private sewage disposal systems shall be a not less than [NUMBER] inches (mm) below finished grade at the point of septic tank connection.*~~] *Building sewers* shall be not less than 12 [~~[NUMBER]~~] inches (304 mm) below grade.”

69. Chapter 26, “General Plumbing Requirements,” of the 2015 International Residential Code is amended by adding a new Section P2610, “Irrigation Systems,” to read as follows:

**“SECTION P2610  
IRRIGATION SYSTEMS**



**P2610.1 Irrigation systems.** All potable water source irrigation systems must comply with the provisions of Appendix J, “Standards for Designing, Installing and Maintaining Landscape Irrigation Systems,” of the *Dallas Plumbing Code*. All nonpotable water source irrigation systems must comply with the provisions of Chapter 13, “Water Reuse,” and Appendix J, “Standards for Designing, Installing and Maintaining Landscape Irrigation Systems.”

70. Chapter 26, “General Plumbing Requirements,” of the 2015 International Residential Code is amended by adding a new Section P2611, “Water Reuse Systems,” to read as follows:

**“SECTION P2611  
WATER REUSE SYSTEMS**

**P2611.1 Water reuse systems.** All water reuse systems must comply with the provisions of Chapter 13, “Water Reuse Systems,” of the *Dallas Plumbing Code*.”

71. Subsection P2709.1, “Construction,” of Section P2709, “Shower Receptors,” of Chapter 27, “Plumbing Fixtures,” of the 2015 International Residential Code is amended to read as follows:

**“P2709.1 Construction.** Where a shower receptor has a finished curb threshold, it shall be not less than 1 inch (25 mm) below the sides and back of the receptor. The curb shall be not less than 2 inches (51 mm) and not more than 9 inches (229 mm) deep when measured from the top of the curb to the top of the drain. The finished floor shall slope uniformly toward the drain not less than ¼ unit vertical in 12 units horizontal (2-percent slope) nor more than ½ unit vertical per 12 units horizontal (4-percent slope) and floor drains shall be flanged to provide a water-tight joint in the floor. Thresholds must be of sufficient width to accommodate a minimum 22-inch (559 mm) door.

**Exception:** Showers designed to comply with ICC/ANSI A117.1 or other designs as approved by the *building official*.”

72. Subsection P2718.1, “Waste Connection,” of Section P2718, “Clothes Washing Machine,” of Chapter 27, “Plumbing Fixtures,” of the 2015 International Residential Code is amended to read as follows:

**“P2718.1 Waste connection.** The discharge from a clothes washing machine shall be through an *air break* into a standpipe. Standpipes must be individually trapped. Standpipes must extend not less than 18 inches (457 mm) but not greater than 42 inches (1066 mm) above the trap weir.

Access must be provided to all standpipes and drains for rodding. A trap serving a standpipe cannot be installed below the floor.”

73. Subsection P2801.3, “Installation,” of Section P2801, “General,” of Chapter 28, “Water Heaters,” of the 2015 International Residential Code is amended to read as follows:

**“P2801.3 Installation.** Water heaters shall be installed in accordance with the manufacturer’s instructions, this chapter and Chapter[s 20 and] 24.”

74. Subsection P2801.4 “Location,” of Section P2801, “General,” of Chapter 28, “Water Heaters,” of the 2015 International Residential Code is amended to read as follows:

**“P2801.4 Location.** Water heaters and storage tanks shall be installed in accordance with their listing and this chapter. Water heaters [Section M1305] and shall be located and connected to provide access for observation, maintenance, servicing, [and] replacement and inspection without removing permanent construction, other appliances or any other piping or ducts not connected to the appliance being inspected, serviced, repaired or replaced. A level working space not less than 30 inches deep and 30 inches wide (762 mm by 762 mm) shall be provided in front of the control side to service an appliance.

**P2801.4.1 Water heaters in attics.** Attics containing water heaters requiring access shall be provided with an opening and a clear and unobstructed passageway large enough to allow removal of the water heater, but not less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) long measured along the centerline of the passageway from the opening to the water heater. The passageway shall have continuous solid flooring in accordance with Chapter 5 not less than 24 inches (610 mm) wide. A level service space at least 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present along all sides of the water heater where access is required. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm) or larger where such dimensions are not and large enough to allow removal of the water heater. A walkway to the water heater must be rated as a floor as approved by the *building official*. As a minimum, provide one of the following for access to the attic space:

1. A permanent stair.
2. A pull down stair with a minimum 300 lb (136 kg) capacity.
3. An access door from an upper floor.

An access panel may be used in lieu of Items 1, 2 or 3 due to structural conditions with prior approval of the *building official*.

**Exceptions:**

1. The passageway and level service space are not required where the water heater can be serviced and removed through the required opening.
2. Where the passageway is unobstructed and not less than 6 feet (1829 mm) high and 22 inches (559 mm) wide for its entire length, the passageway shall be not more than 50 feet (15 250 mm) long.

**P2801.4.1.1 [M1305.1.3.1] Electrical requirements.** A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet shall be installed at or near the water heater location in accordance with the *Dallas Electrical Code*.

**P2801.4.2 [M1305.1.2] Water heaters in rooms.** Water heaters installed in a compartment, alcove, basement or similar space shall be accessed by an opening or door and an unobstructed passageway measuring not less than 24 inches (610 mm) wide and large enough to allow removal of the water heater in the space, provided there is a level service space of not less than 30 inches (762 mm) deep and the height of the appliance, but not less than 30 inches (762 mm), at the front or service side of the appliance with the door open.”

75. Subsection P2801.5, “Prohibited Locations,” of Section P2801, “General,” of Chapter 28, “Water Heaters,” of the 2015 International Residential Code is amended to read as follows:

**“P2801.5 Prohibited locations.** Fuel fired water heaters shall not be located in rooms used for sleeping purposes, bathrooms, toilet rooms or storage closets, or in a space that opens into such rooms or spaces, except where the installation complies with one of the following:

1. The water heater is a listed direct-vent appliance installed in accordance with the conditions of the listing and the manufacturer’s instructions.
2. The water heater is installed in a room or space that opens into a room used for sleeping purposes, bathroom, toilet room or storage closet, and such room or space is used for no other purpose and is provided with a solid weather-stripped air tight door equipped with an approved self-closing device. All combustion air shall be taken directly from the outdoors in accordance with Section G2407.6. [~~Water heaters shall be located in accordance with Chapter 20.~~]”

78. Paragraph P2801.6.1, “Pan Size and Drain,” of Subsection P2801.6, “Required Pan,” of Section P2801, “General,” of Chapter 28, “Water Heaters,” of the 2015 International Residential Code is amended to read as follows:

**“P2801.6.1 Pan size and drain.** The pan shall be not less than 1 1/2 inches (38 mm) deep and shall be of sufficient size and shape to receive dripping or condensate from the tank or water heater. The pan shall be drained by an indirect waste pipe of not less than 3/4 inch (19 mm) diameter. Piping for safety pan drains shall be of those materials indicated in Table P2905.5. Where a pan drain was not previously installed, a pan drain shall not be required for a replacement water heater installation.

**Exception:** Multiple pan drains may terminate to a single discharge piping system when approved by the administrative authority and permitted by the water heater’s manufacturer installation instructions and installed according to manufacturer’s instructions.”

79. Subsection P2801.7, “Water Heaters Installed in Garages,” of Section P2801, “General,” of Chapter 28, “Water Heaters,” of the 2015 International Residential Code is amended to read as follows:

**“P2801.7 Water heaters installed in garages.** Water heaters having an *ignition source* shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the garage floor.

**Exception:** Elevation of the *ignition source* is not required for water heaters [~~appliances~~] that meet one of the following conditions:

1. [~~are~~ *not*] Listed as flammable vapor ignition resistant.
2. Electric water heaters.”

80. Section P2801, “General,” of Chapter 28, “Water Heaters,” of the 2015 International Residential Code is amended by adding new Subsections P2801.9 through P2801.19 to read as follows:

**“P2801.9 Protection from vehicle impact damage.** Water heaters shall not be installed in a location subject to vehicle impact damage except where protected by an approved means.

**P2801.10 Outdoor locations.** Water heaters installed in outdoor locations shall be either listed for outdoor installation or provided with protection from outdoor environmental factors that influences the operability, durability and safety of the water heater.

**P2801.11 Water heater valves.** A readily accessible full-open valve shall be installed in the cold-water supply line to each water heater at or near the water heater.

**P2801.12 Combustion, ventilation and dilution air.** Air for combustion, ventilation and dilution of flue gases for water heaters installed in structures shall comply section G2407 (304).

**P2801.13 Vents.** Vents for fuel gas water heaters shall be installed in accordance with Chapter 24 of this code.

**P2801.14 Pressure regulators.** Pressure regulators shall be installed in accordance with Section G2421 (410) of this code.

**P2801.15 Shutoff valves.** Each fuel gas water heater shall be provided with shut off valves in accordance with Section G2420 (409) of this code.

**P2801.16 Appliance connectors.** Fuel gas water heaters shall be connected to the gas system in accordance with Section G2422 (411) of this code.

**P2801.17 Drips and sloped piping.** Where wet gas exists, drips and sloped piping shall be installed in accordance with Section G2419 (408) of this code.

**P2801.18 (G2410.2) Electrical connections.** Electrical connections between water heaters and the building wiring, including grounding of the appliance, shall conform to the *Dallas Electrical Code*.

**P2801.18.1 (G2410.1) Pipe and tubing.** Metal piping systems that are likely to become energized shall be bonded by a qualified contractor and in accordance with the requirements of the *Dallas Electrical Code*.

**P2801.19 Thermal expansion control.** When required, thermal expansion control shall be installed in accordance with Section P2903.4 of this code.”

81. Paragraph P2804.6.1, “Requirements for Discharge Pipe,” of Subsection P2804.6, “Installation of Relief Valves,” of Section P2804, “Relief Valves,” of Chapter 28, “Water Heaters,” of the 2015 International Residential Code is amended to read as follows:

**“P2804.6.1 Requirements for discharge pipe.** The discharge piping serving a pressure-relief valve, temperature-relief valve or combination valve shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap [~~located in the same room as the water heater~~].
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.

4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.

**Exception:** Multiple relief devices may be installed to a single T&P discharge piping system when first approved by the *building official* and permitted by the manufacturer's installation instructions and installed pursuant to those instructions.

5. Discharge by indirect means [~~to the floor, to the pan serving the water heater or storage tank,~~] to an approved waste receptor or to the outdoors.
6. Discharge in a manner that does not cause personal injury or structural damage.
7. Discharge to a termination point that is readily observable by the building occupants.
8. Not be trapped.
9. Be installed to flow by gravity.
10. Terminate not less [~~more~~] than 6 inches (152 mm) or more [~~and not less~~] than 24 inches (609 mm) [~~two times the discharge pipe diameter~~] above grade nor more than 6 inches (152 mm) above the [~~floor or~~] waste receptor flood level rim.
11. Not have a threaded connection at the end of the piping.
12. Not have valves or tee fittings.
13. Be constructed of those materials included in Section P2906.5 or materials tested, rated and *approved* for such use in accordance with ASME A112.4.1.
14. Be one nominal size larger than the size of the relief-valve outlet, where the relief-valve discharge piping is constructed of PEX or PE-RT tubing. The outlet end of such tubing shall be fastened in place.”
82. Section P2901, “General,” of Chapter 29, “Water Supply and Distribution,” of the

2015 International Residential Code is deleted and replaced with a new Section P2901, “General,” to read as follows:

**“SECTION P2901  
GENERAL**

**P2901.1 Potable water required.** Only potable water shall be supplied to plumbing fixtures that provide water for drinking, bathing or culinary purposes. Unless otherwise provided in this code, potable water shall be supplied to all plumbing fixtures.

**P2901.2 Nonpotable water use.** Where nonpotable water systems are installed, the nonpotable water system shall be supplied to only water closets, urinals or lawn irrigation systems. Nonpotable water systems shall be installed in accordance with Section 2910 of this code and all applicable sections of the *Dallas Plumbing Code*.

**Exception:** The requirements of this section and the *Dallas Plumbing Code* shall not be construed to require signage for water closets and urinals.

**P2901.2.1 (608.8) Identification of nonpotable water systems.** Where nonpotable water systems are installed, all identification requirements for the piping conveying the nonpotable water shall be in accordance with Section 608.8 of the *Dallas Plumbing Code*.”

83. Paragraph P2902.5.3, “Lawn Irrigation Systems,” of Subsection P2902.5, “Protection of Potable Water Connections,” of Section P2902, “Protection of Potable Water Supply,” of Chapter 29, “Water Supply and Distribution,” of the 2015 International Residential Code is amended to read as follows:

“**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 double-check assembly or a reduced pressure principle 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 principle backflow prevention assembly.”

84. Subsection P2903.2, “Maximum Flow and Water Consumption,” of Section P2903, “Water Supply System,” of Chapter 29, “Water Supply and Distribution,” of the 2015 International Residential Code is amended to read as follows:

“**P2903.2 Maximum flow and water consumption.** Where the state-mandated maximum flow rate is more restrictive than those of this section, the state flow rate prevails. [~~The maximum water consumption flow rates and quantities for plumbing fixtures and fixture fittings shall be in accordance with Table P2903.2.]”~~

85. Paragraph P2903.9.1, “Service Valve,” of Subsection P2903.9, “Valves,” of Section P2903, “Water Supply System,” of Chapter 29, “Water Supply and Distribution,” of the 2015 International Residential Code is amended to read as follows:

**“P2903.9.1 Service valve.** Each *dwelling unit* shall be provided with an accessible main shutoff valve near the entrance of the water service. The valve shall be of a full-open type having nominal restriction to flow~~[, with provision for drainage such as a bleed orifice or installation of a separate drain valve. Additionally, the water service shall be valved at the curb or lot line in accordance with local requirements].~~”

86. Section P2904, “Dwelling Unit Fire Sprinkler Systems,” of Chapter 29, “Water Supply and Distribution,” of the 2015 International Residential Code is deleted and replaced with a new Section P2904, “Dwelling Unit Fire Sprinkler Systems,” to read as follows:

**“SECTION P2904  
DWELLING UNIT FIRE SPRINKLER SYSTEMS**

**P2904.1 General.** The design and installation of multipurpose residential fire sprinkler systems must be in accordance with the most current edition of NFPA 13D.”

87. Subsection P2906.2, “Lead Content,” of Section P2906, “Materials, Joints and Connections,” of Chapter 29, “Water Supply and Distribution,” of the 2015 International Residential Code is amended to read as follows:

**“P2906.2 Lead contents of water supply pipe and fittings.** On potable water systems, the maximum allowable lead content in pipes, pipe fittings, plumbing fittings and fixtures shall be not more than a weighted average of 0.25 percent with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings and fixtures. ~~[The lead content in pipe and fittings used in the water supply system shall be not greater than 8 percent.]~~

**Exceptions:**

1. Pipes, pipe fittings, plumbing fittings, fixtures or backflow preventers used only for nonpotable services such as manufacturing, industrial processing, irrigation systems as per Appendix F of the *Dallas Plumbing Code* or any other non-potable service.
2. Flush valves, fill valves, flushometer valves, tub fillers, shower valves, service saddles or water distribution main gate valves that are 2 inches (50 mm) in diameter or larger.



~~[P2906.2.1 Lead content of drinking water pipe and fittings. Pipe, pipe fittings, joints, valves, faucets and fixture fittings utilized to supply water for drinking or cooking purposes shall comply with NSF 372 and shall have a weighted average lead content of 0.25 percent lead or less.]”~~

88. Section P2910, “Nonpotable Water Systems,” of Chapter 29, “Water Supply and Distribution,” of the 2015 International Residential Code is deleted and replaced with a new Section P2910, “Nonpotable Water Systems,” to read as follows:

**“SECTION 2910  
NONPOTABLE WATER SYSTEMS**

**P2910.1 General.** The provisions of Chapter 13 of the *Dallas Plumbing Code* shall govern the materials, design, construction and installation for nonpotable water piping systems used only for flushing of water closets or urinals. The use and application of nonpotable water shall comply with Chapter 13 of the *Dallas Plumbing Code*. Landscape irrigation systems supplied by a nonpotable water source shall comply.”

89. Paragraph P3003.9.2, “Solvent Cementing,” of Subsection P3003.9, “PVC Plastic,” of Section P3003, “Joints and Connections,” of Chapter 30, “Sanitary Drainage,” of the 2015 International Residential Code is amended to read as follows:

**“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 B137.3 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.

**[Exception:** A primer shall not be required where all of the following conditions apply:

- ~~1. The solvent cement used is third party certified as conforming to ASTM D 2564.~~
- ~~2. The solvent cement is used only for joining PVC drain, waste and vent pipe and fittings in non-pressure applications in sizes up to and including 4 inches (102 mm) in diameter.]”~~

90. Section P3009, “Subsurface Landscape Irrigation Systems,” of Chapter 30, “Sanitary Drainage,” of the 2015 International Residential Code is deleted and replace with a new Section P3009, “Subsurface Landscape Irrigation Systems,” to read as follows.

**“SECTION 3009  
SUBSURFACE LANDSCAPE IRRIGATION SYSTEMS**

**P3009.1 General.** The provisions of Appendix F and Chapter 13 of the *Dallas Plumbing Code* shall govern the materials, design, construction and installation for subsurface landscape irrigation systems.”

91. Subsection P3105.1, “Distance of Trap from Vent,” of Section P3105, “Fixture Vents,” of Chapter 31, “Vents,” of the 2015 International Residential Code is amended to read as follows:

**“P3105.1 Discharge of trap from vent.** Each fixture trap shall have a protecting vent located so that the slope and the *developed length* in the *fixture drain* from the trap weir to the vent fitting are within the requirements set forth in Table P3105.1.

~~[**Exception:** The *developed length* of the *fixture drain* from the trap weir to the vent fitting for self-siphoning fixtures, such as water closets, shall not be limited.]”~~

92. Section P3111, “Combination Waste and Vent System,” of Chapter 31, “Vents,” of the 2015 International Residential Code is deleted.

93. Subsection P3112.2, “Vent Connection,” of Section P3112, “Island Fixture Venting,” of Chapter 31, “Vents,” of the 2015 International Residential Code is deleted and replaced with a new Subsection P3112.2, “Installation,” to read as follows:

**“P3112.2 Installation.** Traps for island sinks and similar equipment must be roughed in above the floor and may be vented by extending the vent as high as possible, but not less than the drain board height and then returning it downward and connecting it to the horizontal sink drain immediately downstream from the vertical fixture drain. The return vent must be connected to the horizontal drain through a wye-branch fitting and must, in addition, be provided with a foot vent taken off the vertical fixture vent by means of a wye-branch immediately below the floor and extending to the nearest partition and then through the roof to the open air or may be connected to other vents at a point not less than 6 inches (152 mm) above the flood level rim of the fixtures served. Drainage fittings must be used on all parts of the vent below the floor level and minimum slope of ¼ inch per foot (20.9 mm/m) back to the drain must be maintained. The return bend used under the drain board must be a one piece fitting or an assembly of a 45 degree (0.79 radius), a 90 degree (1.6 radius) and a 45 degree (0.79 radius) elbow in the order named. Pipe sizing must be as elsewhere required in this code. The island sink drain, upstream of the return vent, must serve no other fixtures. An accessible cleanout must be installed in the vertical portion of the foot vent.”

94. Subsection P3201.5, “Prohibited Trap Designs,” of Section P3201, “Fixture Traps,” of Chapter 32, “Traps,” of the 2015 International Residential Code is amended to read as follows:

“**P3201.5 Prohibited trap designs.** The following types of traps are prohibited:

1. Bell traps.
2. ~~[Separate fixture]~~ Traps not integral with a fixture and that depend on interior partitions for the seal, except those ~~[lavatory]~~ traps constructed of an approved material that is resistant to corrosion and degradation ~~[made of plastic, stainless steel or other corrosion-resistant material]~~.
3. “S” traps.
4. Drum traps.
5. Traps designed with moving or removable parts to maintain the seal.”

95. Chapter 34, “General Requirements,” of the 2015 International Residential Code is deleted and replaced with a new Chapter 34, “General Requirements,” to read as follows:

**“CHAPTER 34  
GENERAL REQUIREMENTS**

**SECTION E3401  
GENERAL**

**E3401.1 Applicability.** The provisions of the *Dallas Electrical Code* establish the general scope of the electrical system and equipment requirements of this code.”

96. Chapter 35, “Electrical Definitions”; Chapter 36, “Services”; Chapter 37, “Branch Circuit and Feeder Requirements”; Chapter 38, “Wiring Methods”; Chapter 39, “Power and Lighting Distribution”; Chapter 40, “Devices and Luminaires”; Chapter 41, “Appliance Installation”; Chapter 42, “Swimming Pools”; and Chapter 43, “Class 2 Remote-Control, Signaling and Power-Limited Circuits,” of the 2015 International Residential Code are deleted.

97. The ASME standards of Chapter 44, “Referenced Standards,” of the 2015 International Residential Code are amended by adding the following standard to read as follows:

“A112.19.14—2006 (R2011) Six-Liter Water Closets Equipped With a Dual Flushing Device . . . . . 328.5.2.1,  
328.5.2.2”

98. The ASTM standards of Chapter 44, “Referenced Standards,” of the 2015 International Residential Code are amended by amending the following standard to read as follows:

“E 119—2012a Test Methods for Fire Tests of Building Construction and Materials . . . . .Table R302.1(1),  
Table R302.1(2), R302.2, [~~R302.2.2,~~] R302.3, R302.4.1, R302.11.1”

99. The ICC standards of Chapter 44, “Referenced Standards,” of the 2015 International Residential Code are amended by adding or amending the following standards to read as follows:

“ICC/ANSI A117.1 —09 Accessible and Usable Buildings and Facilities . . . . . R321.3, P2709.1”

“ICC 700—12 National Green Building Standard . . . . . 328.2”

100. The NFPA standards of Chapter 44, “Referenced Standards,” of the 2015 International Residential Code are amended by amending the following standards to read as follows:

“~~[70—14 [11] National Electrical Code . . . . .E3401.1, E3401.2, E4301.1, Table E4303.2,  
E4304.3, E4304.4, R324.3]~~”

101. The NSF standards of Chapter 44, “Referenced Standards,” of the 2015 International Residential Code are amended by deleting the following standard as follows:

“~~[372—2010 Drinking Water Systems Components—Lead Content. . . . .P2906.2.1]~~”

102. The UL standards of Chapter 44, “Referenced Standards,” of the 2015 International Residential Code are amended by amending or deleting the following standards to read as follows:

- “~~174—04~~ Household Electric Storage Tank Water Heaters—  
with revisions through September 2012. . . . . M2005.1”
- “~~732—2010~~ Oil Fired Storage Tank Water Heaters— with revisions through April 2010. . . . . M2005.1”
- “2523—09 Standard for Solid Fuel-fired Hydronic Heating Appliances, Water Heaters and Boilers—  
with revisions through February 2013. . . . . [M2005.1,] M2001.1.1”

103. The 2015 International Residential Code is amended by adding a new Chapter 45, “Building Security,” to read as follows:

**“CHAPTER 45  
BUILDING SECURITY**

**SECTION S4510  
PURPOSE**

**S4510.1 General.** The purpose of this chapter is to establish minimum standards to make dwelling units resistant to unlawful entry.

**SECTION S4511  
SCOPE**

**S4511.1 General.** The provisions of this chapter apply to the following openings:

1. Openings into dwellings of townhouses and townhomes.
2. Openings into dwelling units.
3. Openings between attached garages and the dwelling units.
4. Openings into attached garages.

**Exceptions:**

1. An opening in an exterior wall when all portions of the opening are more than 12 feet (3656.6 mm) vertically or 6 feet (1826.8 mm) horizontally from an accessible surface of any adjoining yard, court, passageway, public way, walk, breezeway, patio, planter, porch or similar area.

2. All openings in an exterior wall when all portions of the opening are more than 12 feet (3656.6 mm) vertically or 6 feet (1826.8 mm) horizontally from the surface of any adjoining roof, balcony landing, stair tread, platform or similar structure, or when any portion of such surface is more than 12 feet (3656.6 mm) above an accessible surface.
3. All openings in a roof when all portions of such roof are more than 12 feet (3656.6 mm) above an accessible surface.
4. An opening where the smaller dimension is 6 inches (152.4 mm) or less, provided that the closest edge of the opening is at least 40 inches (1016 mm) from the locking device of a door.
5. An opening protected by required fire door assemblies having a fire-endurance rating of not less than 45 minutes.

## **SECTION S4512 OBSTRUCTING MEANS OF EGRESS**

**S4512.1 General.** Security methods shall not create a hazard to life by obstructing any means of egress or any opening that is classified as an emergency exiting facility. Security provisions contained in this chapter do not supersede or waive the safety provisions relative to latching or locking devices on means of egress doors or egress windows required by any other provision of this code.

**S4512.2 Emergency escape or rescue windows.** Bars, grilles, grates or similar security or secondary locking devices may be installed on emergency escape or rescue windows or doors required by Section R310 of this code, provided the following:

1. Such devices are equipped with approved release mechanisms that are operable from the inside without the use of a key or special knowledge or effort.
2. The building is equipped with smoke alarms installed in accordance with the *Dallas Fire Code* and Section R314 of this code.

## **SECTION S4513 ENTRY VISION**

**S4513.1 Vision required.** All main or front entry doors to dwelling units shall be arranged so that the occupant has a view of the area immediately outside the door without opening the door. The view may be provided by a door viewer having a field of view of not less than 180 degrees or through a window or view port.

**S4513.2 Glazing separation.** Breakable glass should not be installed within 40 inches (1016 mm) of a door-locking device.

**Exceptions:**

1. For required means of egress doors and emergency escape or rescue doors, glazing may be installed within 40 inches (1016 mm) of the locking device if the glass is laminated, patterned, wired, obscured or protected by approved bars, grilles or grates.
2. For other doors, glazing may be installed within 40 inches (1016 mm) of a locking device that is key-opened from both the inside and the outside.

**SECTION S4514  
SWINGING DOORS**

**S4514.1 General.** Swinging doors regulated by this chapter shall comply with the following:

1. Wood doors shall be solid core and not less than 1<sup>3</sup>/<sub>8</sub>-inches (34.92 mm) thick.
2. Double doors shall have the inactive leaf secured by header and threshold bolts that penetrate metal strike plates. The bolts shall be flush-mounted in the door edge whenever breakable glass is located within 40 inches (1016 mm) of the bolts.
3. Dutch doors shall have concealed flush-bolt locking devices to interlock the upper and lower halves.

**S4514.2 Strike plate installations.** In wood-frame construction, any open space between trimmers and wood doorjambs shall be solid-shimmed by a single piece extending not less than 6 inches (152.4 mm) above and below the strike plate.

Strike plates shall be attached to wood with not less than two No. 8 by 2-inch (50.8 mm) screws. Strike plates when attached to metal shall be attached with not less than two No. 8 machine screws.

**S4514.3 Hinges.** Hinges that are exposed to the exterior shall be equipped with nonremovable hinge pins or a mechanical interlock to preclude removal of the door from the exterior by removing the hinge pins.

**S4514.4 Locking hardware.** Single swinging doors and the active leaf of double doors shall be equipped with an approved exterior key-operated dead bolt which shall lock with a minimum bolt throw of 1 inch (25.4 mm) through a metal strike plate. When mounted on an exit door or a required emergency escape or rescue door, the dead bolt lock shall be operable from the inside without the use of a key or any special knowledge or effort. See Chapter 10 for other exit door requirements.

**SECTION S4515  
WINDOWS AND SLIDING DOORS**

**S4515.1 General requirements.** When regulated by this chapter, openable windows and sliding door assemblies shall be secured by a primary lock or sash operator and by either of the following:

1. A secondary locking device consisting of screws, dowels, pinning devices or key-operated locks designed to prevent opening by lifting or prying.
2. Approved bars, grilles or grates.

Jalousie or louvered windows do not comply with this section unless protected with approved bars, grilles or grates. Installation of secondary locking devices or bars, grilles or grates on required emergency escape windows or doors shall comply with Section 1003.

## **SECTION S4516 GARAGE DOORS**

**S4516.1 General requirements.** Vehicle access doors in enclosed attached garages shall be equipped with a security device or locking devices.

## **SECTION S4517 ALTERNATE MATERIALS OR METHODS**

**S4517.1 General.** The provisions of this chapter are not intended to prevent the use of any material, device, hardware or method not specifically prescribed in this chapter, when such alternate provides equivalent security and is approved by the *building official*.”

102. Appendix E, “Manufactured Housing Used as Dwellings,” of the 2015 International Residential Code is adopted with the following amendments:

A. Appendix E, “Manufacture Housing Used as Dwellings,” is retitled to read as follows:

### **“APPENDIX E PREFABRICATED [~~MANUFACTURED~~] HOUSING USED AS DWELLINGS**

~~[(The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.)]”~~

B. Section AE101, “Scope,” is amended to read as follows:

### **“SECTION AE101 SCOPE**

**AE101.1 Industrialized housing.** All industrialized housing is subject to the Texas Industrialized Housing and Building Act, Texas Civil Statutes, Article 5221f-1 and Texas Civil Statutes, Article 1900.



**AE101.2 Manufactured housing.** All *manufactured housing* is subject to the Texas Manufactured Housing Standards Act, Texas Revised Civil Statutes, Article 5221f.

**AE101.3 Prefabricated housing [General].** These provisions shall be applicable only to a prefabricated [~~manufactured~~] *home* used as a single or two-family dwelling unit [~~installed on privately owned (nonrental) lots~~] and shall apply to the following:

1. Construction, *alteration* and repair of any foundation system that is necessary to provide for the installation of an industrialized housing [~~a manufactured home~~] unit.
2. Construction, installation, *addition, alteration*, repair or maintenance of the building service *equipment* that is necessary for connecting prefabricated [~~manufactured~~] *homes* to water, fuel, or power supplies and sewage systems.
3. [~~Alterations, a~~]Additions [~~or repairs to~~] existing prefabricated [~~manufactured~~] *homes*. The construction, *alteration*, moving, demolition, repair and use of accessory buildings and structures, and their building service *equipment*, shall comply with the requirements of the codes adopted by this *jurisdiction*.

These provisions shall not be applicable to the design and construction of *manufactured homes* and shall not be deemed to authorize either modifications or *additions* to *manufactured homes* where otherwise prohibited.

**Exception:** In addition to these provisions, new and replacement prefabricated [~~manufactured~~] *homes* to be located in flood hazard areas as established in Table R301.2(1) of the Dallas One- and Two-Family Dwelling [~~International Residential~~] *Code* shall meet the applicable requirements of Section R322 of the Dallas One- and Two-Family Dwelling [~~International Residential~~] *Code* or the floodplain regulations of the Dallas Development Code.

#### **AE101.4 State mandatory codes.**

**AE101.4.1 Electrical code.** In addition to complying with Subsection AE 101.4.2, industrialized housing and buildings must be constructed to meet or exceed the requirements and standards of the *National Electrical Code*, published by the National Fire Protection Association, as that code existed on January 1, 1985.

**AE101.4.2 Other codes.** Industrialized housing and buildings erected or installed in a municipality must be constructed to meet or exceed the requirements and standards of the *Uniform Building Code*, *Uniform Plumbing Code*, and *Uniform Mechanical Code*, published by the International Conference of Building Officials, as those codes existed on January 1, 1985.

**AE101.5 Building code amendment.** If a code described by AE101.4 is amended by the council after January 1, 1985, the requirements and standards of the amended code shall be used in place of the January 1, 1985 editions.

**AE101.6 Local code amendment.** The building official may not require or enforce, as a prerequisite for granting or approving a building or construction permit or certificate of occupancy, an amendment to a code described by Section AE101.4.

**AE101.7 Effect of mandatory building code amendment.** Industrialized housing that bears an approved decal or insignia indicating that the building complies with the mandatory building codes and that has not been modified or altered is considered to be in compliance with a new mandatory building code adopted by the council or an amendment to a code approved by the council under Section AE101.5 or AE101.6.

**AE101.8 Alterations, additions or repairs to existing industrialized homes.** Alterations, additions or repairs to existing *industrialized homes* shall comply with the *Dallas One- and Two-Family Dwelling Code* and Section 103.1 of Chapter 52 of the *Dallas City Code*.

**AE101.9 Relocated industrialized housing.** Relocated *industrialized housing* is treated as moved buildings in accordance with Section 309 of the *Dallas Existing Building Code*.”

C. Section AE102, “Application to Existing Manufactured Homes and Building Service Equipment,” is deleted.

D. Subsection AE201.1, “General,” of Section AE201, “Definitions,” is amended to read as follows:

**AE201.1 General.** For the purpose of these provisions, certain abbreviations, terms, phrases, words and their derivatives shall be construed as defined or specified herein.

**ACCESSORY BUILDING.** Any building or structure or portion thereto, located on the same property as a prefabricated [~~manufactured~~] *home*, which does not qualify as a prefabricated [~~manufactured~~] *home* as defined herein.

**ALTERATION.** Any construction, other than ordinary repairs of the house or building, to an existing *industrialized house* or building after affixing of the *decal* by the *manufacturer*. *Industrialized housing* or buildings that have not been maintained are considered altered.

**ALTERATION DECAL.** The approved form of certification issued by the department to an *industrialized builder* to be permanently affixed to a *module* indicating that *alterations* to the industrialized building *module* have been constructed to meet or exceed the state model code requirements.

**BUILDING SERVICE EQUIPMENT.** Refers to the plumbing, mechanical and electrical *equipment*, including piping, wiring, fixtures and other accessories which provide sanitation, lighting, heating, ventilation, cooling, fire protection and facilities essential for the habitable

occupancy of a prefabricated [~~*manufactured*~~] *home* or accessory building or structure for its designated use and occupancy.

**BUILDING SYSTEM.** The design or method of assembly of *modules* or *modular components* represented in the plans, specifications and other documentation which may include structural, electrical, mechanical, plumbing, fire protection and other systems affecting health and safety.

**COMMISSION** means the Texas Commission of Licensing and Regulation.

**COMPONENT.** A sub-assembly, subsystem or combination of elements for use as a part of a building system or part of a *modular component* that is not structurally independent, but may be part of structural, plumbing, mechanical, electrical, fire protection or other systems affecting life safety.

**COUNCIL** means the Texas Industrialized Building Code Council.

**DECAL.** The approved form of certification issued by the department to the *manufacturer* to be permanently affixed to the *module* indicating that it has been constructed to meet or exceed the code requirements and in compliance with these sections.

**DEPARTMENT.** The Texas Department of Licensing and Regulation.

**DESIGN PACKAGE.** The aggregate of all plans, designs, specifications and documentation required by these sections to be submitted to the *design review agency*, or required by the *design review agency* for compliance review, including the compliance control manual and the *on-site construction* documentation. Unique or site specific foundation drawings and special *on-site construction* details prepared for specific projects are not a part of the design package except as approved by the Texas Industrialized Housing and Building Act.

**DESIGN REVIEW AGENCY.** An approved organization, private or public, determined by the *Texas Industrialized Building Code Council* to be qualified by reason of facilities, personnel, experience and demonstrated reliability to review designs, plans, specifications and building systems documentation, and to certify compliance to these sections evidenced by affixing the *Texas Industrialized Building Code Council's* stamp.

**EXECUTIVE DIRECTOR.** Executive director of the *department*.

**INDUSTRIALIZED BUILDER.** A person who is engaged in the assembly, connection and *on-site construction* and erection of *modules* or *modular components* at the building site or who is engaged in the purchase of *industrialized housing* or buildings or of *modules* or *modular components* from a *manufacturer* for sale or lease to the public; a subcontractor of an industrialized builder is not a builder for purposes of these sections.

**INDUSTRIALIZED HOUSING** is a residential structure that is:

1. designed for the occupancy of one or more families;

2. constructed in one or more modules or constructed using one or more modular components built at a location other than the permanent site; and
3. designed to be used as a permanent residential structure when the module or the modular component is transported to the permanent site and erected or installed on a permanent foundation system.

Industrialized housing includes the structure's plumbing, heating, air conditioning, and electrical systems. Industrialized housing does not include:

1. a residential structure that exceeds four stories or 60 feet in height;
2. housing constructed of a sectional or panelized system that does not use a modular component; or
3. a ready-built home constructed in a manner in which the entire living area is contained in a single unit or section at a temporary location for the purpose of selling and moving the home to another location.

**INSIGNIA.** The approved form of certification issued by the department to the *manufacturer* to be permanently affixed to the *modular component* indicating that it has been constructed to meet or exceed the code requirements and in compliance with the sections in this chapter.

**MANUFACTURED HOME.** A structure transportable in one or more sections which, in the traveling mode, is 8 body feet (2438 body mm) or more in width or 40 body feet (12 192 body mm) or more in length or, when erected on site, is 320 or more square feet (30 m<sup>2</sup>), and which is built on a permanent chassis and designed to be used as a *dwelling* with or without a permanent foundation when connected to the required utilities, and includes the plumbing, heating, air-conditioning and electrical systems contained therein; except that such term shall include any structure which meets all the requirements of this paragraph, except the size requirements and with respect to which the manufacturer voluntarily files a certification required by the Secretary of the U.S. Department of Housing and Urban Development (HUD) and complies with the standards established under this title.

For mobile homes built prior to June 15, 1976, a *label* certifying compliance with the *Standard for Mobile Homes*, NFPA 501, ANSI 119.1, in effect at the time of manufacture, is required. For the purpose of these provisions, a mobile home shall be considered a *manufactured home*.

**MANUFACTURED HOME INSTALLATION.** Construction which is required for the installation of a *manufactured home*, including the construction of the foundation system, required structural connections thereto and the installation of on-site water, gas, electrical and sewer systems and connections thereto which are necessary for the normal operation of the *manufactured home*.

**MANUFACTURED HOME STANDARDS.** The *Manufactured Home Construction and Safety Standards* as promulgated by the U.S. Department of Housing and Urban Development (HUD) or the Texas Department of Housing and Community Affairs.

**MANUFACTURER.** A person who constructs or assembles *modules* or *modular components* at a *manufacturing facility* which are offered for sale or lease, sold or leased, or otherwise used.

**MANUFACTURING FACILITY.** The place other than the building site, at which machinery, equipment and other capital goods are assembled and operated for the purpose of making, fabricating, constructing, forming or assembly of *industrialized housing*, buildings, *modules* or *modular components*.

**MOBILE HOME.** A factory-assembled *structure* or *structures* equipped with the necessary service connections and made to be readily movable as a unit or units on its (their) own running gear and designed to be used as a *dwelling unit(s)* without a permanent foundation.

**MODULAR COMPONENT.** A structural portion of any *dwelling* that is constructed at a location other than the homesite in such a manner that its construction cannot be adequately inspected for code compliance at a homesite without damage or without removal of a part thereof and reconstruction.

**MODULE.** A three dimensional section of *industrialized housing*, designed and approved to be transported as a single section independent of other sections, to a site for *on-site construction* with or without other modules or *modular components*.

**ON-SITE CONSTRUCTION.** Preparation of the site, foundation construction, assembly and connection of the *modules* or *modular components*, affixing the *structure* to the permanent foundation, connecting the *structures* together, completing all site-related construction in accordance with designs, plans, specifications and on-site construction documentation.

**PERMANENT FOUNDATION SYSTEM.** A foundation system for *industrialized housing* designed to meet the applicable requirements of the *Dallas Building Code* or the *Dallas One- and Two-Family Dwelling Code*.

**PREFABRICATED HOUSING.** Includes both *industrialized housing* and *manufactured homes*.

~~**[PRIVATELY OWNED (NONRENTAL) LOT.** A parcel of real estate outside of a *manufactured home* rental community (park) where the land and the *manufactured home* to be installed thereon are held in common ownership.]~~

**STATE MANDATORY CODES** means the State adopted codes listed in Sections AE101.4, AE101.5 and the Administrative Rules of the Texas Department of Licensing and Regulation, 16 Texas Administrative Code, Chapter 70.

**STRUCTURE.** *An industrialized house which results from the complete assemblage of the modules, modular components or components designed to be used together to form a completed unit.*

**TEXAS INDUSTRIALIZED BUILDING CODE COUNCIL.** *The state-appointed council having as its mission the assurance that the designs, plans and specifications of industrialized housing and buildings meet the mandatory state codes.”*

E. Section AE301, “Permits,” is deleted and replaced with a new Section AE301, “Permits,” to read as follows:

**“SECTION AE301  
PERMITS**

**AE301.1 Permit requirements.** This section is governed by Chapter 52 of the *Dallas City Code.*”

F Section AE302, “Application for Permit,” is deleted and replaced with a new Section AE302, “Application for Permit,” to read as follows:

**“SECTION AE302  
APPLICATION FOR PERMIT**

**AE302.1 Permit application requirements and procedures.** This section is governed by Chapter 52 of the *Dallas City Code.*”

G. Section AE303, “Permits Issuance,” is deleted and replaced with a new Section AE303, “Permits Issuance,” to read as follows:

**“SECTION AE303  
PERMITS ISSUANCE**

**AE303.1 Issuance, expiration, suspension, revocation and validity of permits.** Except as otherwise provided in Section AE303.2, this section is governed by Chapter 52 of the *Dallas City Code.*

**AE303.2 Other requirements and procedures for permit issuance.**

**AE303.2.1 Disputes over whether a design package and/or unique on-site documentation meets state code requirements.** Questions concerning the code compliance of an approved *design package* must be raised prior to the issuance of a building permit. The *building official* shall forward in writing to the *executive director* any instances where it is found that the approved *design package* does not meet the mandatory building codes adopted

in this chapter. The documentation must specify the code sections and the reasons why the design package fails to meet the mandatory building codes.

**AE303.2.1.1 In compliance.** If the approved *design package* is found to be in compliance, the *executive director* shall notify all concerned parties and the *building official* shall issue a building permit.

**AE303.2.1.2 Not in compliance.** If the approved *design package* is not in compliance, the *executive director* shall notify all concerned parties and the *industrialized builder* or *manufacturer* shall bring the building into compliance with the mandatory building codes.

**AE303.2.1.3 Disagreements.** If the *building official*, *industrialized builder*, or *manufacturer* disagrees with the *executive director*, an appeal may be made to the *Texas Industrialized Building Code Council* for a determination of whether the *design package* complies with the mandatory building codes. The decision of the council is binding on all parties.

**AE303.2.2 Dispute over whether on-site construction complies with approved design package and/or unique on-site construction documentation.** If a dispute or difference of opinion arises between the *industrialized builder* and the *building official* as to whether the *on-site construction* meets or exceeds the approved *design package* or unique *on-site construction* documentation, the dispute or difference of opinion must be resolved by the commissioner. If the commissioner is unable to resolve the dispute, then he will forward it to the *Texas Industrialized Building Code Council* for resolution.

**AE303.2.3 Correction of deviations.** If an inspector finds a *structure*, or any part thereof, at the building site to be in violation of the approved *design package* and/or the unique on-site plans and specifications, the inspector shall immediately post a deviation notice and notify the *industrialized builder*. The *industrialized builder* is responsible for assuring that all deviations are corrected and inspected prior to occupation of the building.

**AE303.2.4 Unique on-site details.** If the typical foundation drawing in the *on-site construction* documentation is not suitable for a specific site, or if the *structure* is only partially constructed of *modular components*, or if the *industrialized builder* will add unique on-site details, a registered Texas professional engineer (or architect for one and two-family dwellings or buildings having one story and total floor area or 5,000 square feet or less) shall design and stamp the unique foundation drawings or on-site details. Review by a *design review* agency is not needed or required.”

H. Section AE304, “Fees,” is deleted and replaced with a new Section AE304, “Fees,” to read as follows:

**“SECTION AE304  
FEES**

**AE304.1 Permit fees.** This section is governed by Chapter 52 of the *Dallas City Code*.”

I. Section AE305, “Inspections,” is deleted and replaced with a new Section AE305, “Inspections,” to read as follows:

**“SECTION AE305  
INSPECTIONS**

**AE305.1 General.** Except as otherwise provided in this section, inspections are governed by Chapter 52 of the *Dallas City Code*.

**AE305.2 Inspection procedures.** The council issues instructions establishing procedures for inspecting the construction and installation of industrialized housing and buildings to ensure compliance with approved designs, plans, and specifications.

**AE305.3 Department inspections.** To ensure compliance with the mandatory building codes or approved designs, plans, and specifications, the department inspects the construction of industrialized housing and buildings. The executive director may designate approved third-party inspectors to perform the inspections subject to the rules of the commission.

**AE305.4 On-site inspections.** The building official must inspect all construction involving industrialized housing to be located in the municipality to ensure compliance with designs, plans, and specifications, including inspection of:

1. the construction of the foundation system; and
2. the erection and installation of the modules or modular components on the foundation.

**AE305.5 Rules providing for decals or insignia.** The commission by rule provides for the placement of decals or insignia on each transportable modular section or modular component to indicate compliance with the mandatory building codes.

**AE305.6 Reservation of building official authority.** Authority is specifically and entirely reserved to the building official, including, as applicable:

1. land use and zoning requirements;
2. building setback requirements;
3. side and rear yard requirements;
4. site planning and development and property line requirements;
5. subdivision control; and



6. landscape architectural requirements.

**AE305.7 Local regulation of industrialized housing.**

**AE305.7.1 General.** The building official must:

1. require and review, for compliance with mandatory building codes, a complete set of designs, plans, and specifications bearing the council's stamp of approval for each installation of industrialized housing in the municipality;
2. require that all applicable local permits and licenses be obtained before construction begins on a building site;
3. require, in accordance with commission rules, that all modules or modular components bear an approved decal or insignia indicating inspection by the department; and
4. establish procedures for the inspection of:
  - 4.1. the erection and installation of industrialized housing to be located in the municipality, to ensure compliance with mandatory building codes and commission rules; and
  - 4.2. all foundation and other on-site construction, to ensure compliance with approved designs, plans, and specifications.

**AE305.7.2 Other approvals.** Procedures described by Subsection AE305.7.1(4) may require:

1. before occupancy, a final inspection or test in accordance with mandatory building codes; and
2. correction of any deficiency identified by the test or discovered in the final inspection.”

J. Subsection AE306.1, “General,” of Section AE306, “Special Inspections,” is amended to read as follows:

“**AE306.1 General.** In addition to the inspections required by Section AE305, the *building official* may require the owner to employ a special inspector during construction of specific types of work as described in this code. Special inspections, when required, shall be governed by Chapter 17 of the *Dallas Building Code*.”

K. Subsection AE307.1, “General,” of Section AE307, “Utility Service,” is amended to read as follows:

“**AE307.1 General.** Utility service shall not be provided to any building service *equipment* which is regulated by these provisions or other applicable codes, and for which a prefabricated [manufactured] home installation permit is required by these provisions, until *approved* by the *building official*.”

L. Subsection AE401.1, “Manufactured Homes,” of Section AE401, “Occupancy Classification,” is amended to read as follows:

“**AE401.1 Industrial [Manufactured] homes.** An industrial [manufactured] home shall be limited in use to a single *dwelling unit* or its components for living, sleeping, eating, cooking, sanitation and accessory use.

**Exception:** Industrialized homes converted and in compliance with Chapters 51, 51A, and 53, as well as other applicable ordinances of the *Dallas City Code*.”

M. Subsection AE402.1, “General,” of Section AE402, “Location on Property,” is amended to read as follows:

“**AE402.1 General.** Prefabricated [Manufactured] homes and accessory buildings shall be located on the property in accordance with applicable codes and ordinances of this *jurisdiction*.”

N. Section AE501, “Design,” is amended to read as follows:

#### “SECTION AE501 DESIGN

**AE501.1 General.** An industrial [manufactured] home shall be installed on a foundation system which is designed and constructed to sustain within the stress limitations specified in this code and all loads specified in this code. Industrialized housing may not be installed on a temporary foundation system.

~~[**Exception:** When specifically authorized by the *building official*, foundation and anchorage systems which are constructed in accordance with the methods specified in Section AE600 of these provisions, or in the HUD, *Permanent Foundations for Manufactured Housing*, 1984 Edition, Draft, shall be deemed to meet the requirements of this appendix.]~~

**AE501.2 Manufacturer’s installation instructions.** The installation instructions as provided by the manufacturer of the industrialized [manufactured] home shall be used to determine permissible points of support for vertical loads and points of attachment for anchorage systems used to resist horizontal and uplift forces.

**AE501.3 Rationality.** Any system or method of construction to be used shall submit to a rational analysis in accordance with well-established principles of mechanics.”

O. Section AE502, “Foundation Systems,” is amended to read as follows:

**“SECTION AE502  
FOUNDATION SYSTEMS**

**AE502.1 General.** Foundation systems designed and constructed in accordance with this section shall shall ~~may~~ be considered a permanent installation.

**AE502.2 Soil classification.** The classification of the soil at each industrial ~~manufactured~~ home site shall be determined when required by the *building official*. The *building official* may require that the determination be made by an engineer or architect licensed by the state to conduct soil investigations.

The classification shall be based on observation and any necessary tests of the materials disclosed by borings or excavations made in appropriate locations. Additional studies may be necessary to evaluate soil strength, the effect of moisture variation on soil-bearing capacity, compressibility and expansiveness.

When required by the *building official*, the soil classification design-bearing capacity and lateral pressure shall be shown on the plans.

**AE502.3 Footings and foundations.** Footings and foundations, unless otherwise specifically provided, shall be constructed of materials specified by this code for the intended use and in all cases shall extend below the frost line. Footings of concrete and masonry shall be of solid material. Foundations supporting untreated wood shall extend at least 8 inches (203 mm) above the adjacent finish *grade*. Footings shall have a minimum depth below finished *grade* of 12 inches (305 mm) unless a greater depth is recommended by a foundation investigation.

Piers and bearing walls shall be supported on masonry or concrete foundations or piles, or other *approved* foundation systems which shall be of sufficient capacity to support all loads.

**AE502.4 Foundation design.** A licensed professional engineer (or architect for one and two family dwellings or buildings having one story and total floor area of 5,000 square feet or less) shall design and seal the foundation systems for each industrialized house or building. Review by a design review agency is not needed or required. The foundation system design must be reviewed for compliance with the mandatory building code. Foundation system designs shall comply with the mandatory building code and shall contain complete details for the construction and attachment of the house or building on the foundation, including, but not limited to the following:

1. address or area for which the foundation is suitable;

2. minimum load specifications, including wind loads, seismic design loads, soil bearing capacity, and if the foundation is designed for expansive soils;
3. site preparation details;
4. material specifications;
5. requirements for corrosion resistance, protection against decay, and termite resistance;
6. size, configuration and depth below grade of all footings, piers and slabs including, but not limited to, details of concrete reinforcement, spacing of footings and piers, capping of piers, and mortar or concrete fill requirements for piers;
7. fastening requirements, including, but not limited to, size, spacing and corrosion resistance;
8. requirements for surface drainage; and
9. details for enclosure of the crawl space, including details for ventilation and access.

~~[When a design is provided, the foundation system shall be designed in accordance with the applicable structural provisions of this code and shall be designed to minimize differential settlement. Where a design is not provided, the minimum foundation requirements shall be as set forth in this code.]~~

**AE502.5 Drainage.** Drainage p[P]rovisions shall be in accordance with Chapter 4 of this code ~~[made for the control and drainage of surface water away from the *manufactured home*].~~

**AE502.6 Under-floor clearances—ventilation and access.** A minimum clearance of 12 inches (305 mm) shall be maintained beneath the lowest member of the floor support framing system. Clearances from the bottom of wood floor joists or perimeter joists shall be as specified in this code.

Under-floor spaces shall be ventilated with openings as specified in this code. If combustion air for one or more heat-producing *appliance* is taken from within the under-floor spaces, ventilation shall be adequate for proper *appliance* operation.

Under-floor access openings shall be provided. Such openings shall be not less than 18 inches (457 mm) in any dimension and not less than 3 square feet (0.279 m<sup>2</sup>) in area, and shall be located so that any water supply and sewer drain connections located under the industrialized ~~[*manufactured*]~~ *home* are accessible.”

P. Subsection AE503.2, “Retaining Walls,” of Section AE503, “Skirting and Perimeter Enclosures,” is amended to read as follows:

**“AE503.2 Retaining walls.** Where retaining walls are used as a permanent perimeter enclosure, they shall resist the lateral displacements of soil or other materials and shall conform to this code as specified for foundation walls. Retaining walls and foundation walls shall be constructed of *approved* [~~treated wood, concrete, masonry or other approved~~] materials or combination of materials as for foundations as specified in this code. Siding materials shall extend below the top of the exterior of the retaining or foundation wall, or the joint between the siding and enclosure wall shall be flashed in accordance with this code.”

Q. Subsection AE504.1, “General,” of Section AE504, “Structural Additions,” is amended to read as follows:

**AE504.1 General.** Accessory buildings shall not be structurally supported by or attached to a prefabricated [~~manufactured~~] *home* unless engineering calculations are submitted to substantiate any proposed structural connection.

**Exception:** The *building official* may approve an alternate method of compliance or waive the submission of engineering calculations if it is found that the nature of the work applied for is such that engineering calculations are not necessary to show conformance to these provisions.”

R. Subsection AE505.1, “General,” of Section AE505, “Building Service Equipment,” is amended to read as follows:

**“AE505.1 General.** The installation, *alteration*, repair, replacement, *addition* to or maintenance of the building service *equipment* within the industrialized [~~manufactured~~] *home* shall conform to regulations set forth in this code [~~the Manufactured Home Standards~~]. Such work which is located outside prefabricated [~~the manufactured~~] *home* shall comply with this code and other [~~the~~] applicable city ordinances [~~codes adopted by this jurisdiction~~].”

S. Subsection AE507.1, “General,” of Section AE507, “Occupancy, Fire Safety and Energy Conservation Standards,” is amended to read as follows:

**“AE507.1 General.** *Alterations* made to an industrialized [~~manufactured~~] *home* subsequent to its initial installation shall conform to the occupancy, fire safety and energy conservation requirements set forth in this code [~~the Manufactured Home Standards~~].”

T. Sections AE600, “Special Requirements for Alternate Foundation Systems”; AE601, “Footings and Foundations”; AE602, “Pier Construction”; AE603, “Height of Piers”; AE604, “Anchorage Installations”; AE605, “Ties, Materials and Installation”; and AE606, “Referenced Standards”; of the 2015 International Residential Code are deleted.

104. Appendix H, “Patio Covers,” of the 2015 International Residential Code is adopted.

105. Appendix I, “Private Sewage Disposal,” of the 2015 International Residential Code is adopted with the following amendment:

A. Subsection AI101.1, “Scope,” of Section AI101, “General,” is amended to read as follows:

“**AI101.1 Scope.** Private sewage disposal systems shall conform to the Dallas Plumbing [International Private Sewage Disposal] Code.”

106. Appendix J, “Existing Buildings and Structures,” of the 2015 International Residential Code is adopted with the following amendments:

A. Subsection AJ102.5, “Flood Hazard Areas,” of Section AJ102, “Compliance,” is amended to read as follows:

“**AJ102.5 Flood hazard areas.** Work performed in existing buildings located in a flood hazard area as established by Table R301.2(1) shall be subject to the provisions of Section 51A-5.104 of the Dallas Development Code [R405.3.1.1].”

B. Subsection AJ102.7, “Other Alternatives,” of Section AJ102, “Compliance,” is deleted.

C. Subsection AJ103.1, “General,” of Section AJ103, “Preliminary Meeting,” is amended to read as follows:

“**AJ103.1 General.** If a building *permit* is required at the request of the prospective *permit* applicant, the *building official* or his or her designee shall meet with the prospective applicant to discuss plans for any proposed work under these provisions prior to the application for the *permit*. The purpose of this preliminary meeting is for the *building official* to gain an understanding of the prospective applicant’s intentions for the proposed work, and to determine, together with the prospective applicant, the specific applicability of these provisions.

**Exception:** The *building official* may substitute a project information sheet indicating the categories of proposed work in lieu of a meeting.”

D. Subsection AJ201.1, “General,” of Section AJ201, “Definitions,” is amended

to read as follows:

“**AJ201.1 General.** For the purposes of this appendix, the terms used are defined as follows:

**ALTERATION.** The rearrangement or reconfiguration of any space by the construction of walls or partitions or by a change in ceiling height; the addition or elimination of any door or window; the [reconfiguration or] extension or arrangement of any system; [or] the installation of any additional equipment or fixtures and any work which reduces the loadbearing capacity of, or which imposes additional loads on, a primary structural component.

**CATEGORIES OF WORK.** The nature and extent of construction work undertaken in an existing building. The categories of work covered in this appendix, listed in increasing order of stringency of requirements, are repair, renovation, *alteration* and reconstruction.

**DANGEROUS.** Where the stresses in any member; the condition of the building, or any of its components or elements or attachments; or other condition that results in an overload exceeding 150 percent of the stress allowed for the member or material in this code.

**EQUIPMENT OR FIXTURE.** Any plumbing, heating, electrical, ventilating, air-conditioning, refrigerating and fire protection *equipment*; and elevators, dumb waiters, boilers, pressure vessels, and other mechanical facilities or installations that are related to building services.

**LOAD-BEARING ELEMENT.** Any column, girder, beam, joist, truss, rafter, wall, floor or roof sheathing that supports any vertical load in addition to its own weight, or any lateral load.

**MATERIALS AND METHODS REQUIREMENTS.** Those requirements in this code that specify material standards; details of installation and connection; joints; penetrations; and continuity of any element, component or system in the building. The required quantity, fire resistance, flame spread, acoustic or thermal performance, or other performance attribute is specifically excluded from materials and methods requirements.

**RECONSTRUCTION.** The reconfiguration of a space that affects an exit, a renovation or *alteration* when the work area is not permitted to be occupied because existing means-of-egress and fire protection systems, or their equivalent, are not in place or continuously maintained; or there are extensive *alterations* as defined in Section AJ501.3. Reconstruction does not include projects comprised only of floor finish replacement, painting or wallpapering, or the replacement of equipment or furnishings. Asbestos hazard abatement and lead hazard abatement projects shall not be classified as reconstruction solely because occupancy of the work area is not permitted.

**REHABILITATION.** Any repair, renovation, *alteration* or reconstruction work undertaken in an existing building.

**RENOVATION.** The removal [~~change, strengthening or addition~~ of load-bearing elements;] and [~~or the refinishing,~~] replacement, [~~bracing, strengthening, upgrading or extensive repair of existing materials, elements, components, equipment~~] or covering of existing interior or exterior trim, finish, doors, windows, or other materials with new materials that serve the same purpose and do not change the configuration of space [~~fixtures~~]. Renovation shall include the replacement of equipment or fixtures, the change, strengthening, bracing, or addition of load bearing elements, or extensive replacement of existing materials [~~does not involve reconfiguration of spaces. Interior and exterior painting are not considered refinishing for purposes of this definition, and are not renovation~~].

**REPAIR.** The patching, restoration or minor replacement of materials, elements, components, *equipment* or fixtures for the purposes of maintaining those materials, elements, components, *equipment* or fixtures in good or sound condition.

**WORK.** That scope of activities affected by any repair, *renovation, alteration* or *reconstruction* work and indicted as such in the permit.

**WORK AREA.** That portion of a building affected by any renovation, *alteration* or reconstruction work as initially intended by the owner and indicated as such in the *permit*. Work area excludes other portions of the building where incidental work entailed by the intended work must be performed, and portions of the building where work not initially intended by the owner is specifically required by these provisions for a renovation, *alteration* or reconstruction.”

E. Subsection AJ301.3, “Electrical,” of Section AJ301, “Repairs,” is amended to read as follows:

“**AJ301.3 Electrical.** [~~Repair or replacement of e~~]Existing electrical wiring and *equipment* undergoing repair [~~with like material~~] shall be permitted to be repaired or replaced in accordance with the *Dallas Electrical Code*.

**[Exceptions:**

1. ~~Replacement of electrical receptacles shall comply with the requirements of Chapters 34 through 43.~~
2. ~~Plug fuses of the Edison base type shall be used for replacements only where there is not evidence of overfusing or tampering in accordance with the applicable requirements of Chapters 34 through 43.~~
3. ~~For replacement of nongrounding type receptacles with grounding type receptacles and for branch circuits that do not have an *equipment* grounding conductor in the branch circuitry, the grounding conductor in the branch circuitry, the grounding conductor of a grounding type receptacle outlet shall be permitted to be grounded to any accessible point on the grounding electrode system, or to any accessible point on~~



~~the grounding electrode conductor, as allowed and described in Chapters 34 through 43.]”~~

F. Subsection AJ501.5, “Electrical Equipment and Wiring,” of Section AJ501,

“Alterations,” is amended to read as follows:

**“AJ501.5 Electrical equipment and wiring.**

**AJ501.5.1 Materials and methods.** All n[N]ewly installed electrical *equipment* and wiring relating to work done in any work area shall comply with the materials and methods requirements of Chapter[s] 34 [~~through 43~~].

**Exception:** Electrical *equipment* and wiring in newly installed partitions and ceilings shall comply with all the applicable requirements of Chapter[s] 34 [~~through 43~~].

**AJ501.5.2 Electrical service.** Service to the *dwelling unit* shall be not less than 100 ampere, three-wire capacity and service *equipment* shall be dead front having no live parts exposed that could allow accidental contact. [~~Type “S” fuses shall be installed when fused *equipment* is used.~~]

**Exception.** Existing service of 60 ampere, three-wire capacity, and feeders of 30 ampere or larger two- or three-wire capacity shall be accepted if adequate for the electrical load being served.

**AJ501.5.3 Additional electrical requirements.** When the work area includes any of the following areas within a *dwelling unit*, the requirements of Sections AJ501.5.3.1 through AJ501.5.3.5 shall apply.

**AJ501.5.3.1 Enclosed areas.** Enclosed areas other than closets, kitchens, *basements*, garages, hallways, laundry areas and bathrooms shall have not less than two duplex receptacle outlets, or one duplex receptacle outlet and one ceiling- or wall-type lighting outlet.

**AJ501.5.3.2 Kitchen and laundry areas.** Kitchen areas shall have not less than two duplex receptacle outlets. Laundry areas shall have not less than one duplex receptacle outlet located near the laundry *equipment* and installed on an independent circuit.

**AJ501.5.3.3 Ground-fault circuit-interruption.** Ground-fault circuit-interruption shall be provided on newly installed receptacle outlets if required by Chapter[s] 34 [~~through 43~~].

**AJ501.5.3.4 Lighting outlets.** Not less than one lighting outlet shall be provided in every bathroom, hallway, stairway, attached garage and detached garage with electric power to illuminate outdoor entrances and exits, and in utility rooms and *basements* where these spaces are used for storage or contain *equipment* requiring service.

**AJ501.5.3.5 Clearance.** Clearance for electrical service *equipment* shall be provided in accordance with Chapter[s] 34 [~~through 43~~].”

107. Appendix K, “Sound Transmission,” of the 2015 International Residential Code is adopted.

108. Appendix O, “Automatic Vehicular Gates,” of the 2015 International Residential Code is adopted.

109. Appendix Q of the 2015 International Residential Code is adopted and amended to read as follows:

**“APPENDIX Q  
SWIMMING POOLS, SPAS AND HOT TUBS [~~RESERVED~~]**

**SECTION AQ 101  
GENERAL**

**AQ101.1 General.** The provisions of this appendix and the provisions of Chapter 43A, “Swimming Pools,” of the *Dallas City Code* 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. To the extent of any conflict between Chapter 57, “*Dallas One- And Two-Family Dwelling Code*,” of the *Dallas City Code*, hereafter referred to as “this code”; and other city ordinances, this code shall prevail.

**AQ101.1.1 Location of pool adjacent to structural footings.** The provisions of Section R403.1.7 shall control the location of pools adjacent to building and other structural footings.

**AQ 101.2 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 placement of fill, shall comply with Section AV101.2.1 or AV101.2.2.

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

**AQ 101.2.1 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 design flood elevation at any point within the *jurisdiction*.

**Exception:** Projects complying with Section 51A-5.104 of the *Dallas Development Code* are deemed compliant with this section.

**AQ101.2.2 Pools located where floodways have not been designated.** Where pools are located where design flood elevations are specified but floodways have not been designated, the applicant shall provide a floodway analysis that demonstrates that the proposed pool will not increase the design flood elevation more than 1 foot (305 mm) at any point within the *jurisdiction*.

**Exception:** Projects complying with Section 51A-5.104 of the *Dallas Development Code* are deemed compliant with this section.

## **SECTION AQ102** **DEFINITIONS**

**AQ102.1 General.** For the purposes of these requirements, the terms used shall be defined as follows and as set forth in Chapter 2 and Chapter 52, “Administrative Procedures for the Construction Codes,” of the Dallas City Code.

**ABOVE-GROUND/ON-GROUND 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 premises 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-circulating equipment are an integral part of the product.

**SWIMMING POOL.** Any structure intended for swimming or recreational bathing that contains water more than 24 inches (610 mm) 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 the walls of the enclosing structure.

**SWIMMING POOL, OUTDOOR.** Any swimming pool which is not an indoor pool.

## **SECTION AQ103** **SWIMMING POOLS**

**AQ103.1 In-ground pools.** In-ground pools shall be designed and constructed in compliance with ANSI/NSPI-5.

**AQ103.2 Above-ground and on-ground pools.** Above-ground and on-ground pools shall be designed and constructed in compliance with ANSI/NSPI-4.

**AQ103.3 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 ASCE 24.

## **SECTION AQ104** **SPAS AND HOT TUBS**

**AQ104.1 Permanently installed spas and hot tubs.** Permanently installed spas and hot tubs shall be designed and constructed in compliance with ANSI/NSPI-3.

**AQ104.2 Portable spas and hot tubs.** Portable spas and hot tubs shall be designed and constructed in compliance with ANSI/NSPI-6.

## **SECTION AQ105** **BARRIER REQUIREMENTS**

**AQ105.1 Application.** The provisions of this appendix shall control the design of barriers for residential swimming pools, spas and hot tubs. These design controls are intended to provide protection against potential drownings and near-drownings by restricting access to swimming pools, spas and hot tubs.

**AQ105.1.1 All other pool yard enclosures.** Swimming pools existing before June 1, 1988, may continue to be enclosed by fences, walls or barriers not less than 3 feet (1066.8 mm) in height, provided the fence, wall or barrier is kept in repair and otherwise maintained in compliance with all other provisions of this code.

**AQ105.1.2 Additional provisions.** All gates and doors into swimming pool enclosures that lawfully existed before June 1, 1988 must fully comply with the self-closing and self-latching provisions of this section.

**AQ105.2 Outdoor swimming pool.** An outdoor swimming pool, including an in-ground, above-ground or on-ground pool, hot tub or spa, shall be surrounded by a barrier 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 (51 mm) 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 as the pool structure, or mounted on top of the pool

structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).

2. Openings in the barrier shall not allow the passage of a 4-inch-diameter (102 mm) sphere.
3. Solid barriers which do not have openings, such as a masonry or stone wall, 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 (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1 3/4 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 3/4 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). Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1 3/4 inches (44 mm) in width.
6. Maximum mesh size for chain link fences shall be a 2 1/4-inch (57 mm) square, unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1 3/4 inches (44 mm).
7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1 3/4 inches (44 mm).
8. Access gates shall comply with the requirements 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 openings 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 1/2 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 that wall shall be equipped with an alarm which produces an audible warning 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 switch(es) shall be located at least 54 inches (1372 mm) above the threshold of the door; or
  - 9.3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the governing body, shall be acceptable 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 prevent 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 removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.

**AQ105.3 Indoor swimming pool.** Walls surrounding an indoor swimming pool shall comply with Item 9 of Section AQ105.2.

**AQ105.4 Prohibited locations.** Barriers shall be located to prohibit permanent structures, equipment or similar objects from being used to climb them.

**AQ105.5 Barrier exceptions.** Spas or hot tubs with a safety cover which comply with ASTM F 1346 shall be exempt from the provisions of this appendix.

## **SECTION AQ106** **ENTRAPMENT PROTECTION FOR SWIMMING POOL AND SPA SUCTION** **OUTLETS**

**AQ106.1 General.** Suction outlets shall be designed and installed in accordance with ANSI/APSP-7.

## **SECTION AQ107** **ABBREVIATIONS**

**AQ107.1 General.**

ANSI—American National Standards Institute  
11 West 42nd Street  
New York, NY 10036

APSP—Association of Pool and Spa Professionals  
NSPI—National Spa and Pool Institute  
2111 Eisenhower Avenue  
Alexandria, VA 22314

ASCE—American Society of Civil Engineers  
1801 Alexander Bell Drive  
Reston, VA 98411-0700  
ASTM—ASTM International  
100 Barr Harbor Drive  
West Conshohocken, PA 19428

UL—Underwriters Laboratories, Inc.  
333 Pfingsten Road  
Northbrook, IL 60062-2096

**SECTION AQ108**  
**REFERENCED STANDARDS**

**AQ108.1 General.**

**ANSI/NSP**

<u>ANSI/NSPI-3—99</u>	<u>Standard for Permanently Installed Residential Spas.....AQ104.1</u>
<u>ANSI/NSPI-4—99</u>	<u>Standard for Above-ground/On-ground Residential Swimming Pools.....AQ103.2</u>
<u>ANSI/NSPI-5—03</u>	<u>Standard for Residential In-ground Swimming Pools.....AQ103.1</u>
<u>ANSI/NSPI-6—99</u>	<u>Standard for Residential Portable Spas.....AQ104.2</u>

**ANSI/APSP**

<u>ANSI/APSP-7—06</u>	<u>Standard for Suction Entrapment Avoidance in Swimming Pools, Wading Pools, Spas, Hot Tubs and Catch Basins.....AQ106.1</u>
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**ASCE**

<u>ASCE/SEI-24—05</u>	<u>Flood-resistant Design and Construction.....AQ103.3</u>
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**ASTM**

<u>ASTM F 1346—91 (2003)</u>	<u>Performance Specification for Safety Covers and Labeling Requirements for All Covers for Swimming Pools Spas and Hot Tubs.....AQ105.2, AQ105.5</u>
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**UL**

<u>UL 2017—2000</u>	<u>Standard for General-Purpose Signaling Devices and Systems—with revisions through June 2004.....AQ105.2”</u>
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110. Appendices A, B, C, D, F, G, L, M, N, P, R, S, T, and U of the 2015 International Residential Code are not adopted.

111. All chapters of the 2015 International Residential Code adopted by this ordinance are subchapters of Chapter 57 of the Dallas City Code, as amended.

112. Any errata corrections published by the International Code Council for the 2015 International Residential Code, as they are discovered, are considered as part of this code.

113. All references in the 2015 International Residential Code to the fire code, building code, plumbing code, mechanical code, electrical code, existing building code, energy conservation code, fuel gas code, and green construction code refer, respectively, to Chapters 16, 53, 54, 55, 56, 58, 59, 60, and 61 of the Dallas City Code.

SECTION 2. That a person violating a provision of this ordinance, upon conviction, is punishable by a fine not to exceed \$2,000. No offense committed and no liability, penalty, or forfeiture, either civil or criminal, incurred prior to the effective date of this ordinance will be discharged or affected by this ordinance. Prosecutions and suits for such offenses, liabilities, penalties, and forfeitures may be instituted, and causes of action pending on the effective date of this ordinance may proceed, as if the former laws applicable at the time the offense, liability, penalty, or forfeiture was committed or incurred had not been amended, repealed, reenacted, or superseded, and all former laws will continue in effect for these purposes.

SECTION 3. That Chapter 57 of the Dallas City Code, as amended, will remain in full force and effect, save and except as amended by this ordinance. Any existing structure, system, development project, or registration that is not required to come into compliance with a requirement of this ordinance will be governed by the requirement as it existed in the former law



last applicable to the structure, system, development project, or registration, and all former laws will continue in effect for this purpose.

SECTION 4. That the terms and provisions of this ordinance are severable and are governed by Section 1-4 of Chapter 1 of the Dallas City Code, as amended.

SECTION 5. That this ordinance will take effect on March 1, 2017, and it is accordingly so ordained.

APPROVED AS TO FORM:

LARRY E. CASTO, City Attorney

By \_\_\_\_\_  
Assistant City Attorney

Passed \_\_\_\_\_