9-16-13

ORDINANCE NO. 29163

An ordinance amending Chapter 55, "Dallas Mechanical Code," of the Dallas City Code, as amended; adopting with certain changes the 2012 Edition of the International Mechanical Code of the International Code Council, Inc.; regulating the design, construction, quality of materials, erection, installation, alteration, repair, location, relocation, replacement, addition to, use, and maintenance of mechanical work in the city; 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 55, "Dallas Mechanical Code," of the Dallas City Code, as amended, is amended by adopting the 2012 Edition of the International Mechanical 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 xi, "Legislation," is deleted.

2. Chapter 1, "Administration," of the 2012 International Mechanical Code is deleted and replaced with a new Chapter 1, "Administration," to read as follows:

"CHAPTER 1
ADMINISTRATION

SECTION 101
GENERAL

101.1 Title. These regulations are known as the *Dallas Mechanical Code*, hereinafter referred to as "this code."

101.2 Scope. This code regulates the design, installation, maintenance, alteration and inspection of mechanical systems that are permanently installed and utilized to provide control of environmental conditions and related processes within buildings. This code also regulates those mechanical systems, system components, equipment and appliances specifically addressed herein. The installation of fuel gas distribution piping and equipment, fuel gas-fired appliances and fuel gas-fired appliance venting systems are regulated by the *Dallas Fuel Gas Code.*

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures must comply with the *Dallas One- and Two-Family Dwelling Code.*

2. Mechanical systems in existing buildings undergoing repair, alterations, or additions, and change of occupancy may comply with the *Dallas Existing Building Code.*

101.3 Administrative procedures. Except as otherwise specified in this code, all provisions of Chapter 52, "Administrative Procedures for the Construction Codes," of the *Dallas City Code* apply to this code.

101.4 Referenced codes and standards. The codes and standards referenced in this code are considered part of the requirements of this code to the prescribed extent of each such reference only when such codes and standards have been specifically adopted by the city of Dallas. Whenever amendments have been adopted to the referenced codes and standards, each reference to the codes and standards is considered to reference the amendments as well. Any reference made to NFPA 70 or the *ICC Electrical Code* means the *Dallas Electrical Code*, as amended. References made to the *International Plumbing Code*, the *International Building Code*, the *International Fire Code*, the *International Energy Conservation Code*, the *International Fuel Gas Code*, the *International Existing Building Code*, and the *International Residential Code*, respectively mean the *Dallas Plumbing Code*, the *Dallas Building Code*, the *Dallas Fire Code*, the *Dallas Energy Conservation Code*, the *Dallas Fuel Gas Code*, the *Dallas Existing Building Code*, and the *Dallas One- and Two-Family Dwelling Code*, as amended.

Exception: Where enforcement of a code provision would violate the conditions of the listing of the equipment or appliance, the conditions of the listing and the manufacturer's instructions apply."

3. Subsection 304.3, "Elevation of Ignition Source," of Section 304, "Installation," of Chapter 3, "General Regulations," of the 2012 International Mechanical Code is amended to read as follows:

"**304.3 Elevation of ignition source.** Equipment and appliances having an *ignition source* and located in hazardous locations and public garages, private garages, repair garages, automotive motor fuel-dispensing facilities and parking garages shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the floor surface on which the *equipment* or *appliance* rests. 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.

304.3.1 Parking garages. Connection of a parking garage with any room in which there is a fuel-fired *appliance* shall be by means of a vestibule providing a two-doorway separation, except that a single door is permitted where the sources of ignition in the *appliance* are elevated in accordance with Section 304.3.

Exception: This section shall not apply to *appliance* installations complying with Section 304.6."

4. Subsection 304.7, "Private Garages," of Section 304, "Installation," of Chapter 3, "General Regulations," of the 2012 International Mechanical Code is deleted.

5. Subsection 306.3, "Appliances In Attics," of Section 306, "Access and Service Space," of Chapter 3, "General Regulations," of the 2012 International Mechanical Code is amended to read as follows:

"**306.3 Appliances in attics.** Attics containing appliances requiring access shall be provided with an opening and unobstructed passageway large enough to allow removal of the largest *appliance*. The passageway shall not be less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) in length measured along the centerline of the passageway from the opening to the *appliance*. The passageway shall have continuous solid flooring 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 at the front or service side of the *appliance*. 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 largest *appliance*. A walkway to an *appliance* must be rated as a floor as approved by the building official. At a minimum, one of the following must be provided 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 level.

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

Exceptions:

1. The passageway and level service space are not required where the *appliance* is capable of being 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 greater than 50 feet (15,250 mm) in length.

306.3.1 Electrical requirements. A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet shall be provided at or near the *appliance* location in accordance with the *Dallas Electric Code*. 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 [~~NFPA 70~~]."

6. Subsection 306.5, "Equipment and Appliances on Roofs or Elevated Structures," of

Section 306, "Access and Service Space," of Chapter 3, "General Regulations," of the 2012

International Mechanical Code is amended to read as follows:

"**306.5 Equipment and appliances on roofs or elevated structures.** Where *equipment* requiring access or appliances are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access a permanent [~~such equipment or appliances, an~~] interior or exterior means of access shall be provided. Permanent exterior ladders providing roof *access* need not extend closer than 12 feet (2438 mm) to the finish grade or floor level below and must extend to the equipment and appliances' level service space. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) in height or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). Such access shall not require the use of portable ladders. Where access involves climbing over parapet walls, the height shall be measured to the top of the parapet wall.

Permanent ladders installed to provide the required access shall comply with the following minimum design criteria:

1. The side railing shall extend above the parapet or roof edge not less than 30 inches (762 mm).

2. Ladders shall have rung spacing not to exceed 14 inches (356 mm) on center. The uppermost rung shall be a maximum of 24 inches (610 mm) below the upper edge of the roof hatch, roof or parapet, as applicable.

3. Ladders shall have a toe spacing not less than 6 inches (152 mm) deep.

4. There shall be a minimum of 18 inches (457 mm) between rails.

5. Rungs shall have a minimum 0.75-inch (19 mm) diameter and be capable of withstanding a 300-pound (136.1 kg) load.

6. Ladders over 30 feet (9144 mm) in height shall be provided with offset sections and landings capable of withstanding 100 pounds per square foot (488.2 kg/m^2). Landing dimensions shall be not less than 18 inches (457 mm) and not less than the width of the ladder served. A guard rail shall be provided on all open sides of the landing.

7. Climbing clearance. The distance from the centerline on the rungs to the nearest permanent object on the climbing side of the ladder shall be a minimum of 30 inches (762 mm) measured perpendicular to the rungs. This distance shall be maintained from the point of ladder access to the bottom of the roof hatch. A minimum clear width of 15-inches (381 mm) shall be provided on both sides of the ladder measured from midpoint of and parallel with the rungs except where cages or wells are installed.

8. Landing required. The ladder shall be provided with a clear and unobstructed bottom landing area having a minimum dimension of 30 inches (762 mm) by 30 inches (762 mm) centered in front of the ladder.

9. Ladders shall be protected against corrosion by *approved* means.

10. Access to ladders shall be provided at all times.

Catwalks installed to provide the required access shall be not less than 24 inches (610 mm) wide and shall have railings as required for service platforms.

Exception: This section shall not apply to Group R-3 occupancies.

306.5.1 Sloped roofs. Where appliances, *equipment*, fans or other components that require service are installed on [a] roofs having [a] slopes greater than four [~~of three~~] units vertical in 12 units horizontal (33[~~25~~]-percent slope) [~~or greater~~] and having an edge more than 30 inches (762 mm) above grade at such edge, a catwalk at least 16 inches (406.4 mm) in width with substantial cleats spaced not more than 16 inches (406.4 mm) apart must be provided from the roof access to a level platform at the appliance. The level platform shall be provided on each side of the *appliance* or *equipment* to which access is required for service, repair or maintenance. The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1067 mm)

above the platform, shall be constructed so as to prevent the passage of a 21-inch diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the *Dallas* [~~*International*~~] *Building Code*. Access shall not require walking on roofs having a slope greater than four units vertical in 12 units horizontal (33-percent slope). Where access involves obstructions greater than 30 inches (762 mm) in height, such obstructions shall be provided with ladders installed in accordance with Section 306.5 or stairs installed in accordance with the requirements specified in the *Dallas* [~~*International*~~] *Building Code* in the path of travel to and from appliances, fans or *equipment* requiring service.

306.5.2 Electrical requirements. A receptacle outlet shall be provided at or near the *equipment* location in accordance with the *Dallas Electrical Code* [~~NFPA 70~~]."

7. Section 306, "Access and Service Space," of Chapter 3, "General Regulations," of the 2012 International Mechanical Code is amended by adding a new Subsection 306.6, "Water Heaters Above Ground or Floor," to read as follows:

"**306.6 Water heaters above ground or floor.** When the attic, roof, mezzanine or platform in which a water heater is installed is more than 8 feet (2438 mm) above the ground or floor level, it must be made accessible by a stairway or permanent ladder fastened to the building.

Exception: A water heater may be reached by portable ladder if the water heater has a capacity of no more than 10 gallons (or larger with prior approval), it is capable of being accessed through a lay-in ceiling, and it is installed not more than 10 feet (3048 mm) above the ground or floor level.

306.6.1. Illumination and convenience outlet. Whenever the attic, roof, mezzanine or platform is not adequately lighted or access to a receptacle outlet is not obtainable from the main level, lighting and a receptacle outlet must be provided in accordance with Section 306.3.1."

8. Subsection 307.2, "Evaporators and Cooling Coils," of Section 307, "Condensate Disposal," of Chapter 3, "General Regulations," of the 2012 International Mechanical Code is amended to read as follows:

"**307.2 Evaporators and cooling coils.** Condensate drain systems shall be provided for *equipment* and appliances containing evaporators or cooling coils. Condensate drain systems shall be designed, constructed and installed in accordance with Sections 307.2.1 through 307.2.4.

307.2.1 Condensate disposal. Condensate from all cooling coils and 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 one-eighth 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 cause a nuisance.

307.2.2 Drain pipe materials and sizes. Components of the condensate disposal system shall be cast iron, galvanized steel, copper, cross-linked polyethylene, [~~polybutylene,~~] polyethylene, ABS, CPVC or PVC pipe or tubing. When exposed to ultra violet light, schedule 80 PVC pipe or tubing is required. All 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 7 of the *Dallas* [~~*International*~~] *Plumbing Code* relative to the material type. Condensate waste and drain line size shall be not be less than ¾-inch (19 mm) internal 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.

307.2.3 Auxiliary and secondary drain systems. In addition to the requirements of Section 307.2.1, where damage to any building components could occur as a result of overflow from the *equipment* primary condensate removal system, one of the following auxiliary protection methods shall be provided for each cooling coil or fuel-fired *appliance* that produces condensate:

1. An auxiliary drain pan with a separate drain shall be provided 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 ½ 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 provided with the *equipment*. Such 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 hazard such as dripping over a street, alley, sidewalk, rooftop or other areas so as to create a nuisance.

3. An auxiliary drain pan without a separate drain line shall be provided under the coils on which condensate will occur. Such 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 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 provided 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 in 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.

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

307.2.3.1 Water-level monitoring devices. On down-flow units and all other coils that do not have a 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 installed in the drain line shall not be permitted. A water level detection device may be installed only with prior approval of the building official.

307.2.3.2 Appliances, equipment and insulation in pans. Where appliances, *equipment* or insulation are subject to water damage when auxiliary drain pans fill, that portion of the *appliance*, *equipment* and insulation shall be installed above the rim of the pan. Supports located inside of the pan to support the *appliance* or *equipment* shall be water resistant and *approved*.

307.2.4 Traps. Condensate drains shall be trapped as required by the *equipment* or *appliance* manufacturer."

9. Paragraph 403.2.1, "Recirculation of Air," of Subsection 403.2, "Outdoor Air Required," of Section 403, "Mechanical Ventilation," of Chapter 4, "Ventilation," of the 2012 International Mechanical Code is amended to read as follows:

"**403.2.1 Recirculation of air.** The outdoor air required by Section 403.3 shall not be recirculated. Air in excess of that required by Section 403.3 shall not be prohibited from being recirculated as a component of supply air to building spaces, except that:

1. Ventilation air shall not be recirculated from one *dwelling* to another or to dissimilar occupancies.

2. Supply air to a swimming pool and associated deck areas shall not be recirculated unless such air is dehumidified to maintain the relative humidity of the area at 60 percent or less. Air from this area shall not be recirculated to other spaces where more than 10 percent of the resulting supply airstream consists of air recirculated from these spaces.

3. Where mechanical exhaust is required by Note b in Table 403.3, recirculation of air from such spaces shall be prohibited. All air supplied to such spaces shall be exhausted, including any air in excess of that required by Table 403.3.

4. Where mechanical exhaust is required by Note g in Table 403.3, mechanical exhaust is required and recirculation is prohibited where more than10 percent of the resulting supply airstream consists of air recirculated from these spaces.

5. 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."

10. Subsection 501.3, "Exhaust Discharge," of Section 501, "General," of Chapter 5, "Exhaust Systems," of the 2012 International Mechanical Code is amended to read as follows:

"**501.3 Exhaust discharge.** The air removed by every mechanical exhaust system shall be discharged outdoors at a point where it will not cause a nuisance and not less than the distances specified in Section 501.3.1. The air shall be discharged to a location from which it cannot again be readily drawn in by a ventilating system. Air shall not be exhausted into an attic or crawl space.

Exceptions:

1. Whole-house ventilation-type attic fans shall be permitted to discharge into the attic space of *dwelling units* having private attics.

2. Commercial cooking recirculating systems.

3. Toilet room exhaust ducts may terminate in a warehouse or shop area when infiltration of outside air is present.

501.3.1 Location of exhaust outlets. The termination point of exhaust outlets and ducts discharging to the outdoors shall be located with the following minimum distances:

1. For ducts conveying explosive or flammable vapors, fumes or dusts; 30 feet (9144 mm) from property lines; 10 feet (3048 mm) from operable openings into buildings; 6 feet (1829 mm) from exterior walls and roofs; 30 feet (9144 mm) from combustible walls and operanle openings into buildings which are in the direction of the exhaust discharge; 10 feet (3048 mm) above adjoining grade.

2. For other product-conveying outlets: 10 feet (3048 mm) from the property lines; 3 feet (914 mm) from exterior walls and roofs; 10 feet (3048 mm) from operable openings into buildings; 10 feet (3048 mm) above adjoining grade.

3. For all *environmental air* exhaust: 3 feet (914 mm) from property lines; 3 feet (914 mm) from operable openings into buildings for all occupancies other than Group U, and 10 feet (3048 mm) from mechanical air intakes. Such exhaust shall not be considered hazardous or noxious.

4. Exhaust outlets serving structures in flood hazard areas shall be installed at or above the elevation required by Section 1612 of the Dallas [~~International~~] *Building Code* for utilities and attendant equipment.

5. For specific systems see the following sections:

   5.1. Clothes dryer exhaust, Section 504.4.

   5.2. Kitchen hoods and other kitchen exhaust *equipment*, Section 506.3.13, 506.4 and 506.5.

   5.3. Dust stock and refuse conveying systems, Section 511.2.

   5.4. Subslab soil exhaust systems, Section 512.4.

   5.5. Smoke control systems, Section 513.10.3.

   5.6. Refrigerant discharge, Section 1105.7.

   5.7. Machinery room discharge, Section 1105.6.1.

501.3.1.1 Exhaust discharge. *Exhaust air* shall not be directed onto walkways.

501.3.2 Exhaust opening protection. Exhaust openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers or grilles. Openings in screens, louvers and grills shall be sized not less than ¼ inch (6 mm) and not larger than ½ inch (13 mm). Openings shall be protected against local weather conditions. Louvers that protect exhaust openings in structures located in hurricane-prone regions, as defined in the Dallas [~~International~~] *Building Code*, shall comply with AMCA Standard 550. Outdoor openings located in exterior walls shall meet the provisions for exterior wall opening protectives in accordance with the Dallas [~~International~~] *Building Code*."

11. Paragraph 607.5.1, "Fire Walls," of Subsection 607.5, "Where Required," of Section 607, "Duct and Transfer Openings," of Chapter 6, "Duct Systems," of the 2012 International Mechanical Code is amended to read as follows:

"**607.5.1 Fire walls.** Ducts and air transfer openings permitted in fire walls in accordance with Section 706.11of the *Dallas* [~~*International*~~] *Building Code* shall be protected with *listed* fire dampers installed in accordance with their listing. For hazardous exhaust systems see Section 510.

607.5.1.1 Horizontal exits. A *listed smoke damper* designed to resist the passage of smoke shall be provided at each point that a duct or air transfer opening penetrates a *fire wall* that serves as a horizontal *exit*."

12. The ASHRAE standards of Chapter 15, "Referenced Standards," of the 2012 International Mechanical Code are amended to read as follows:

"**ASHRAE** American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.
1791 Tullie Circle, NE
Atlanta, GA 30329

Standard reference number	Title	Referenced in code section number
ASHRAE—2009	ASHRAE Fundamental Handbook	603.2
15—2010	Safety Standard for Refrigeration Systems	1101.6, 1105.8, 1108.1
34—2010	Designation and Safety Classification of Refrigerants	202, 1102.2.1, 1103.1
62.1—2010	Ventilation for Acceptable Indoor Air Quality	403.3.2.3.2
[~~180—2008~~	~~Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems~~	~~102.3~~]"

13. Appendix A of the 2012 International Mechanical Code is adopted.

14. Appendix B of the 2012 International Mechanical Code is not adopted.

15. All chapters of the 2012 International Mechanical Code adopted by this ordinance are subchapters of Chapter 55 of the Dallas City Code, as amended.

16. All references in the 2012 International Mechanical Code to the fire code, building code, plumbing code, electrical code, residential code, existing building code, energy conservation code, and fuel gas code refer, respectively to Chapters 16, 53, 54, 56, 57, 58, 59, and 60 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 55 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 November 1, 2013, and it is accordingly so ordained.

APPROVED AS TO FORM:

WARREN M. S. ERNST, Interim City Attorney

By Cadey Burgess
Assistant City Attorney

Passed SEP 25 2013

For a Copy of the exhibit
Please contact
The City Secretary's Office