

ORDINANCE NO. _____

AN ORDINANCE AMENDING THE FORT WORTH MECHANICAL CODE, BY ADOPTING THE 2021 INTERNATIONAL MECHANICAL CODE, WITH LOCAL AMENDMENTS; AMENDING SECTIONS 7-166, 7-167, 7-168 AND 7-169 OF THE CODE OF THE CITY OF FORT WORTH (2015); REGULATING THE ERECTION, CONSTRUCTION, ENLARGEMENT, ALTERATION, REPAIR, MOVING, REMOVAL, DEMOLITION, CONVERSION, EQUIPMENT, DESIGN, QUALITY OF MATERIALS, USE AND MAINTENANCE OF HEATING, COMFORT COOLING AND VENTILATING SYSTEMS IN THE CITY OF FORT WORTH, TEXAS; DEFINING CERTAIN TERMS; ESTABLISHING MINIMUM REQUIREMENTS FOR THE INSTALLATION, ALTERATION OR REPAIR OF MECHANICAL SYSTEMS; PROVIDING FOR THE ISSUANCE OF PERMITS AND THE COLLECTION OF FEES THEREOF; PROVIDING FOR THE INSPECTION OF SUCH SYSTEMS; PROVIDING FOR A SEVERABILITY CLAUSE; PROVIDING FOR A SAVINGS CLAUSE; PROVIDING FOR A PENALTY CLAUSE; PROVIDING THAT THIS ORDINANCE SHALL BE CUMULATIVE; PROVIDING FOR PUBLICATION IN PAMPHLET FORM; PROVIDING FOR PUBLICATION IN THE OFFICIAL NEWSPAPER AND PROVIDING AN EFFECTIVE DATE.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FORT WORTH, TEXAS:

SECTION 1.

That Article V: International Mechanical Code, Section 7-166 of the Code of the City of Fort Worth (2015) is hereby amended to read as follows:

Sec. 7-166. THE 2021 EDITION OF THE INTERNATIONAL MECHANICAL CODE ADOPTED.

(a) The Mechanical Code of the City of Fort Worth is hereby revised and amended to conform, with certain exceptions as specified below, to the 2021 International Mechanical Code of the International Code Council (ICC), and the same as amended is hereby adopted as the City's Mechanical Code. One (1) copy of the 2021 International Mechanical Code marked Exhibit "A", is incorporated herein by reference and shall be filed in the Office of the City Secretary for permanent record and inspection.

(b) The mechanical provisions of the *International Residential Code*, as adopted elsewhere, shall be used as the mechanical provisions for buildings and structures applicable to that code except as provided for in that code.

(c) Any Errata corrections published by the International Code Council for the 2021 International Mechanical Code, as they are discovered, are considered as part of this code.

SECTION 2.

That Section 7-167 of the Code of the City of Fort Worth (2015) is hereby amended as follows:

Sec. 7-167. Amendments.

The 2021 edition of the International Mechanical Code is hereby amended to read as follows:

CHAPTER 1 – SCOPE AND ADMINISTRATION

**IMC Chapter 1; "SCOPE AND ADMINISTRATION" is hereby deleted and the Administrative and Enforcement provision of this Code shall be governed by the Fort Worth Building Administrative Code.*

CHAPTER 2 - DEFINITIONS

IMC SECTION 202 GENERAL DEFINITIONS

**IMC Section 202; the following definitions are changed and new definitions are added to read as follows:*

BUILDING CODE. Building Code shall mean the *International Building Code* as adopted by this jurisdiction.

CHANGE OF OCCUPANCY. Any of the following shall be considered as a change of occupancy where the current *International Building Code* requires a greater degree of safety, accessibility, structural strength, fire protection, means of egress, ventilation or sanitation than is existing in the current building or structure:

1. Any change in the occupancy classification of a building or structure.
2. Any change in the purpose of, or a change in the level of activity within, a building or structure.
3. A change of use.

The definition shall also apply to the usage of the surrounding site and access to and from the building structure or site, as necessary to achieve the purpose of this code, and to obtain compliance with other codes and ordinances of this jurisdiction

~~**CHANGE OF OCCUPANCY.** A change in the purpose or level of activity within a building that involves a change in application of the requirements of this code. The definition shall also apply to the usage of the surrounding site and access to and from the building, structure or site, as necessary to achieve the purpose of this code, and to obtain compliance with other codes and ordinances of this jurisdiction.~~

CHANGE OF USE. A change in the use of a building or a portion of a building, within the same group classification, or from one zoning use category to another, for which there is a change in application of the code requirements.

ELECTRICAL CODE. Electrical Code shall mean the *National Electrical Code* as adopted by this jurisdiction. For the purpose of this code, all references to NFPA 70 and the *ICC Electrical Code* shall be assumed to mean the Electrical Code as defined herein.

ENERGY CODE. Energy Code shall mean the *International Energy Code* as adopted by this jurisdiction.

FIRE PREVENTION CODE (FIRE CODE). Fire Prevention Code, or Fire Code, shall mean the *International Fire Code* as adopted by this jurisdiction.

FORT WORTH BUILDING ADMINISTRATIVE CODE. The Fort Worth Administrative code containing the administrative, organizational, and enforcement rules and regulations for the Fort Worth Building, Residential, Plumbing, Fuel Gas, Mechanical, Electrical, Sign and Existing Building codes.

FUEL GAS CODE. Fuel Gas code shall mean the *International Fuel Gas Code* as adopted by this jurisdiction and shall be considered as part of the Plumbing Code. (See Plumbing Code.)

HAZARDOUS LOCATION. As used in this code, any location considered to be a fire hazard for flammable vapors, dust, combustible fibers or other highly combustible substances. The location is not necessarily categorized in the *International Building Code* as a high-hazard use group classification.

MECHANICAL CODE. Mechanical Code shall mean the *International Mechanical Code* as adopted by this jurisdiction.

PLUMBING CODE. Plumbing Code shall mean the *International Plumbing Code* and the *International Fuel Gas Code* as adopted by this jurisdiction. The term "Plumbing Code" applies to both codes as one combined code.

RESIDENTIAL CODE. Residential Code shall mean the *International Residential Code* as adopted by this jurisdiction.

TECHNICAL CODES. The Fort Worth Building, Residential, Plumbing, Fuel Gas, Mechanical, Electrical, Sign and Existing Building codes which regulate the construction, alteration, relocation,

enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

CHAPTER 3 – GENERAL REGULATIONS

IMC SECTION 303 EQUIPMENT AND APPLIANCE LOCATION

**IMC Section 303.1; add a second paragraph to read as follows:*

Access to *equipment* and appliances shall be provided through areas under the control of the tenant, room or dwelling unit served, or provided in common areas accessible without going through private tenant spaces, rooms or dwelling units. The location shall not be such that permission from one occupant must be obtained before another occupant can provide service to their equipment or appliances.

IMC SECTION 306 ACCESS AND SERVICE SPACE

**IMC Section 306.3; changed to read as follows:*

306.3 Appliances in attics. Attics containing appliances shall be provided . . . *{bulk of paragraph unchanged}* . . . front side of the *appliance*. The clear *access* opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), ~~and~~ or larger where such dimensions are not large enough to allow removal of the largest *appliance*. As a minimum, access to the attic space shall be provided by one of the following:

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.
4. An access panel, only when the equipment is within 24” of the panel opening.

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.

Solid flooring as specified for the passageway of this section shall be flooring that complies with the provisions as required for a floor or shall not be less than one layer of ¾" plywood.

Water heaters shall not be installed in residential attics.

Exception: Tankless water heaters.

**IMC Section 306.3.1; add a sentence to read as follows:*

Low voltage wiring of 50 Volts or less shall be installed in a manner to prevent physical damage.

**IMC Section 306.4.1; add a sentence to read as follows:*

Low voltage wiring of 50 Volts or less shall be installed in a manner to prevent physical damage.

**IMC Section 306.5; changed 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 such equipment or appliance, an interior or exterior means of access shall be provided. Permanent exterior ladders providing roof access need not extend closer than 12 feet (3658 mm) to the finish grade or floor level below and shall extend to the *equipment* or appliances' level service space. Such *access* shall . . . *{bulk of section to read the same}*. . . ~~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.

Where an equipment or appliance has a serviceable area located at a height exceeding 16 feet (4877 mm) above the access level, a permanent approved means of access and a catwalk or working deck shall be provided on at least one side. Such permanent exterior ladder need not extend closer than 12 feet (2438 mm) to the access level below.

{Remainder of section unchanged}

**IMC Section 306.5.1.1; added to read as follows:*

306.5.1.1 Catwalk. On roofs having slopes greater than 4 in 12, a catwalk at least 24 inches in width with substantial cleats spaced not more than 16 inches apart shall be provided from the roof access to the working platform at the appliance.

*IMC Section 306.5.2; add a sentence to read as follows:

Low voltage wiring of 50 Volts or less shall be installed in a manner to prevent physical damage.

IMC SECTION 307 CONDENSATE DISPOSAL

*IMC Section 307.2.1; change to read as follows:

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 walking surface such as a street, alley, sidewalk, or other areas so as to cause a nuisance. Rooftop units may be piped to discharge into roof drains when such drains do not discharge onto a walking surface as listed above.

*IMC Section 307.2.2; change to read and add a second paragraph to read as follows:

307.2.2 Drain pipe materials and sizes. Components of the condensate disposal system shall be ABS, cast iron, copper and copper alloy, CPVC, cross-linked polyethylene, galvanized steel, PE-RT, polyethylene, polypropylene, PVC or PVDF pipe or tubing. 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 *International Plumbing Code* relative to the material type. Condensate waste and drain line size shall be not less than the discharge size of the pan but not less than 3/4-inch (19 mm) internal diameter and shall not . . . {bulk of paragraph unchanged} . . . in accordance with Table 307.2.2. All horizontal sections of drain piping shall be installed in uniform alignment at a uniform slope.

*IMC Section 307.2.3, item #2; add a sentence to read as follows:

The conspicuous point of disposal shall not create a hazard such as dripping over a walking surface or other areas so as to create a nuisance.

*IMC Section 307.2.3, Add item #5; to read as follows:

5. A listed and labeled water detecting device shall be provided that will shut off up-flow equipment in the event the primary drain is blocked. The device shall be installed on all up

flow equipment above the first floor and shall be installed beneath and on the floor of the up-flow equipment it serves.

CHAPTER 4 – VENTILATION

IMC SECTION 403 MECHANICAL VENTILATION

*IMC Section 403.2; add an exception #2 to read as follows:

2. Where the design professional demonstrates that an engineered ventilation system is designed in accordance with ASHRAE 62.1, the minimum required rate of outdoor air shall be permitted to be as specified in such engineered system design.

*IMC Section 403.2.1; change item 1 and add an item #5 to read as follows:

1. Ventilation air shall not be recirculated from one dwelling unit to another or to dissimilar occupancies. See also Table 403.3, footnote b. When dissimilar occupancies produce odors or smells that may infiltrate neighboring tenant spaces through wall or ceiling openings, during positive or negative pressures, efforts shall be taken to seal such openings and/or provide supply air in a method that would prevent such infiltration.
2. *{unchanged}*
3. *{unchanged}*
4. *{unchanged}*
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.

CHAPTER 5 – EXHAUST SYSTEMS

IMC SECTION 501 GENERAL

*IMC Section 501.3; add a fourth exception to read as follows:

Exceptions:

1. {unchanged}
2. {unchanged}
3. {unchanged}
4. Toilet room exhaust ducts may terminate in a warehouse or shop area when infiltration of outside air is present.

**IMC SECTION 504
CLOTHES DRYER EXHAUST**

*IMC Section 504.5; changed to read as follows:

504.5 Dryer exhaust power ventilators. Domestic dryer exhaust duct ventilators shall be listed and labeled to UL 705 for use in dryer exhaust duct systems. The dryer exhaust duct power ventilator (DEDPV) shall be installed in accordance with the manufacturer's instructions and interlocked to prevent the clothes dryer from being energized if the DEDPV fails to operate as intended.

*IMC Section 504.9.1; changed to read as follows:

504.9.1 Material and Size. Exhaust ducts shall have a smooth interior finish and shall be construed of metal not less than 0.016-inch (0.4 mm) in thickness. The exhaust duct size shall be 4 inches (102 mm) nominal in diameter. The size of duct shall not be reduced along its developed length nor at the point of termination.

*IMC Section 504.9.2; changed to read as follows:

504.9.2 Duct Installation. Exhaust ducts shall be support 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. Where dryer exhaust ducts are enclosed in wall or ceiling cavities, such cavities shall allow the installation of the duct without deformation.

**IMC SECTION 506
COMMERCIAL KITCHEN HOOD VENTILATION
SYSTEM DUCTS AND EXHAUST EQUIPMENT**

*IMC Section 506.3.2.5; first paragraph changed and third paragraph added to read as follows:

506.3.2.5 Grease duct test. Prior to the use or concealment of any portion of a grease duct system a leakage test shall be performed . . . *{bulk of paragraph unchanged}* . . . A light test or smoke test shall be performed to determine that all welded and brazed joints are liquid tight.

{Second paragraph unchanged}

A smoke test shall be performed through the use of a commercial smoke machine intended for the purpose, smoke emitting cartridges, or smoke candles. For smoke candles and cartridges, the top and bottom of the duct shall be sealed with a suitable material. The bottom seal shall have a sealable opening to permit the insertion of the smoke cartridge or candle and low volume low pressure fan or other approved pressurization device. Duct pressurization shall not exceed the rating of the ducts. Smoke candle duration shall be 30 seconds for each 1000 cubic feet of duct. Smoke emitting cartridges shall provide twice the volume of smoke of the duct being tested.

IMC SECTION 510 HAZARDOUS EXHAUST SYSTEMS

**Section 510.2.1.1; added to read as follows:*

510.2.1.1 Woodworking (or cabinet) shop. Where more than three fixed or table mounted pieces of dust producing equipment exists, each fixed or table mounted piece shall be connected to a dust collection system, in accordance with this section and Section 511, and interconnected such that the dust collection is automatically activated whenever the equipment is on.

CHAPTER 6 – DUCT SYSTEMS

IMC SECTION 607 DUCT AND TRANSFER OPENINGS

**IMC Section 607.1; add a sentence to read as follows:*

For outdoor air intakes and exhaust openings, dampers shall also comply with the Energy Code.

**IMC Section 607.2.2; changed to read as follows:*

607.2.2 Hazardous exhaust ducts. Hazardous exhaust duct systems shall extend directly to the exterior of the building and shall not extend into or through ducts and plenums. Fire dampers are not required at penetration of fire-rated elements for hazardous exhaust duct

systems. Penetration of fire-rated elements shall comply with Section 510 and the Building Code.

**IMC Section 607.5.5.3; added to read as follows:*

607.5.5.3 Installation requirements. Exhaust systems for Group B and R kitchen, clothes dryer, bathroom and toilet room exhausts shall comply with the following:

1. Kitchen systems, clothes dryer systems, and bathroom and toilet room systems may share the same shaft but not the same duct. When multiple ducts are in the same shaft, each system shall have its own fan providing continuous upward flow.
2. Dryer ducts shall have a cleanout located near the shaft penetration to permit cleaning of the 22” subduct. The subduct shall be considered in the calculation of allowable duct length reduction.
3. Kitchen ducts shall be provided with some method for preventing grease buildup and cleaning of the duct.
4. A secondary power source is required for the fan under both Section 504.10 and 513.11.

SECTION 3.

That Section 7-168 of the Code of the City of Fort Worth (2015), as amended, is hereby amended to read as follows:

Sec. 7-168 Effect of Conflict with Other Ordinances.

This article shall be cumulative of all provisions of ordinances of the Code of the City of Fort Worth, Texas (2015), affecting Mechanical Code provisions, as amended, and shall not repeal any of the provisions of such ordinances, except in those instances where provisions of such ordinances are in direct conflict with the provisions of this ordinance.

SECTION 4.

That Section 7-169 of the Code of the City of Fort Worth (2015), as amended, is hereby amended to read as follows:

Sec. 7-169 Penalty for violation.

Any person, firm, or corporation violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punishable by a fine not to exceed Two Thousand Dollars (\$2,000.00) for all violations involving fire safety, or public health and sanitation and shall be fined not more than Five Hundred Dollars (\$500.00) for all other

violations of this ordinance. Each day or any portion thereof during which any violation of this ordinance occurs or continues shall be deemed a separate offense and upon conviction thereof shall be punishable as herein provided.

SECTION 5.

This article shall be cumulative of all provisions of ordinances of the Code of the City of Fort Worth, Texas (2015), affecting Mechanical Code provisions, as amended, and shall not repeal any of the provisions of such ordinances, except in those instances where provisions of such ordinances are in direct conflict with the provisions of this ordinance.

SECTION 6.

It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses, and phrases of this ordinance are severable, and, if any phrase, clause, sentence, paragraph, or section of this ordinance shall be declared void, ineffective, or unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such voidness, ineffectiveness, or unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this ordinance, since the same would have been enacted by the City Council without the incorporation in this ordinance of any such void, ineffective, or unconstitutional phrase, clause, sentence, paragraph, or section.

SECTION 7.

Any person, firm, or corporation violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punishable by a fine not to exceed Two Thousand Dollars (\$2,000.00) for all violations involving fire safety, or public health and sanitation and shall be fined not more than Five Hundred Dollars (\$500.00) for all other violations of this ordinance. Each day or any portion thereof during which any violation of this ordinance occurs or continues shall be deemed a separate offense and upon conviction thereof shall be punishable as herein provided.

SECTION 8.

All rights and remedies of the City of Fort Worth, Texas are expressly saved as to any and all violations of the previous Mechanical Code, or any other ordinances affecting construction and fire safety, which have accrued at the time of the effective date of this ordinance: and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such ordinances, same shall not be affected by this ordinance but may be prosecuted until final disposition by the courts.

SECTION 9.

A copy of the 2021 International Mechanical Code, together with the local amendments contained in this ordinance, shall be filed in the office of the City Secretary for permanent record and inspection.

SECTION 10.

The Development Services Department of the City of Fort Worth, Texas, is hereby authorized to publish this ordinance in pamphlet form for general distribution among the public, and the operative provisions of this ordinance as so published shall be admissible in evidence in all courts without further proof than the production thereof, as provided in Chapter XXV, Section 3, of the Charter of the City of Fort Worth, Texas.

SECTION 11.

The City Secretary of the City of Fort Worth, is hereby directed to publish the caption and Sections 1, 7, 9, 11 and 12 of this ordinance for two (2) days in the official newspaper of the City of Fort Worth, Texas as authorized by Section 2, Chapter XXV of the Charter of the City of Fort Worth, Texas and by Section 52.013 (a) of the Texas Local Government Code.

SECTION 12.

This ordinance shall take effect upon April 1, 2022.

APPROVED AS TO FORM AND LEGALITY:

ATTEST:

By: _____
Melinda Ramos, Assistant City Attorney

By: _____
Jannette S. Goodall, City Secretary

Adopted: _____

Effective: _____