

ORDINANCE NO. 027, 2022
OF THE COUNCIL OF THE CITY OF FORT COLLINS
AMENDING CHAPTER 5, ARTICLE IV OF THE CODE OF THE
CITY OF FORT COLLINS FOR THE PURPOSE OF REPEALING THE
2018 INTERNATIONAL MECHANICAL CODE AND ADOPTING THE
2021 INTERNATIONAL MECHANICAL CODE, WITH AMENDMENTS

WHEREAS, since 1924, the City has reviewed, amended and adopted the latest nationally recognized building standards available for the times; and

WHEREAS, upon recommendation of City staff, the City Council has determined that it is in the best interests of the City to align nine interconnected basic construction codes under one publication year; and

WHEREAS, the nine interconnected basic construction codes are the *International Building Code*, *International Residential Code*, *International Mechanical Code*, *International Fuel Gas Code*, *International Energy Conservation Code*, *International Property Maintenance Code*, *International Swimming Pool and Spa Code*, *International Existing Building Code*, and the *International Plumbing Code* to the extent adopted by the Colorado Plumbing Code; and

WHEREAS, the City Council has determined that the 2021 publication year of the nine interconnected basic construction codes should be adopted and that any counterpart *International* codes previously adopted should be repealed, both in order to align the publication years of the codes and because the 2021 publications contain improvements in construction code regulation; and

WHEREAS, City staff has conducted a significant public outreach program, working with the regulated construction industry and building professionals; and

WHEREAS, the adoption of the nine interconnected basic construction codes has been presented to community groups and feedback has been received from the Water Commission, Energy Board, Commission on Disability, Natural Resource Advisory Board, Poudre Fire Authority Board, Building Review Commission, Affordable Housing Board, and Air Quality Advisory Board; and

WHEREAS, the City Council has determined that it is in the best interest of the health, safety and welfare of the City and its residents that the *2021 International Mechanical Code* be adopted, with local amendments as set forth in this Ordinance; and

WHEREAS, pursuant to the City Charter, Article II, Section 7, City Council may enact any ordinance which adopts a code by reference in whole or in part provided that before adoption of such ordinance the Council hold a public hearing thereon and that notice of the hearing shall be published twice in a newspaper of general circulation published in the City, with one of such publications occurring at least eight (8) days preceding the hearing and the other publication occurring at least fifteen (15) days preceding the hearing; and

WHEREAS, in compliance with City Charter, Article II, Section 7, the City Clerk published in the Fort Collins *Coloradoan* such notice of hearing concerning adoption of the 2021 International Codes on January 30, 2022, and February 6, 2022; and

WHEREAS, attached as Exhibit "A" and incorporated herein by reference is the Notice of Public Hearing dated January 24, 2022, that was so published and which the Council hereby finds meets the requirements of Article II, Section 7 of the City Charter.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNCIL OF THE CITY OF FORT COLLINS as follows:

Section 1. That the City Council hereby makes and adopts the determinations and findings contained in the recitals set forth above.

Section 2. The City Council hereby repeals the 2018 *International Mechanical Code* ("IMC") and hereby adopts 2021 IMC as amended by this Ordinance.

Section 3. That Section 5-106 of the Code of the City of Fort Collins is hereby amended to read as follows:

Sec. 5-106. – Adoption of standards.

Pursuant to the power and authority conferred on the City Council by C.R.S. § 31-16-202 and Article II, Section 7 of the Charter, the City Council has adopted the *2021 International Mechanical Code*, published by the International Code Council, as amended by the City, which shall have the same force and effect as though set forth in full herein. The subject matter of the *2021 International Mechanical Code* adopted herein includes comprehensive provisions and standards regulating and controlling the design, construction, installation, quality of materials, location, operation and maintenance of heating, ventilating, cooling and refrigeration systems, incinerators, miscellaneous heat-producing appliances for the purposes of protecting public health, safety and general welfare. None of the *2021 International Mechanical Code* Appendices are adopted.

Section 4. That Section 5-107 of the Code of the City of Fort Collins is hereby repealed and re-enacted to read as follows:

Sec. 5-107. - Amendments and deletions to the 2021 International Mechanical Code.

The *2021 International Mechanical Code* adopted in § 5-106 is hereby amended to read as follows:

1. **Section 101.1 Title** is hereby amended to read as follows:

101.1 Title. These regulations shall be known as the *Mechanical Code* of the City of Fort Collins, hereinafter referred to as "this code."

2. **Section 102.8 Referenced codes and standards** is amended to read as follows:

Section 102.8 reference codes and standards. The codes and standards referenced herein shall be those that are listed in Section 101.4 of the adopted *International Building Code*, entitled “Referenced Codes,” and shall be considered as part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections 102.8.1 and 102.8.2.

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 installation instructions shall apply.

3. **Section 103 Code Compliance Agency** is hereby deleted in its entirety and replaced with the following:

SECTION 103 – CODE ADMINISTRATION

103.1 Entity charged with code administration shall be as determined in accordance with Section 103 of the adopted *International Building Code*, entitled “CODE ADMINISTRATION.”

4. **Section 106.1.1 Annual permit** and **Section 106.1.2 Annual permit records** are deleted in their entirety.

5. **Section 108.3 Testing** is hereby deleted in its entirety and replaced with the following:

108.3 Testing. Installed heating, cooling and *ventilation systems* shall be performance-tested by an *approved agency* and adjusted to operate within design specifications, in accordance with ANSI/ACCA QI 5-2010 *HVAC Quality Installation Specification*. Documentation of results shall be submitted to the *building official* prior to approval.

Exception: *Buildings* subject to commissioning requirements in SECTION C408 of the 2021 *International Energy Conservation Code*, as amended.

6. **Section 109 Fees** is hereby deleted in its entirety and replaced with the following:

SECTION 109 FEES

109.1 Fees. All items relating to fees shall be as specified in Section 109 of the adopted *International Building Code*, entitled “FEES.”

7. **SECTION 114 MEANS OF APPEAL** is hereby deleted in its entirety and replaced with the following:

**SECTION 114
MEANS OF APPEALS**

114.1 General. Appeals of decisions, determinations and interpretations of this code shall be made pursuant to the applicable provisions of Section 113 of the adopted *International Building Code*, entitled “MEANS OF APPEALS.”

8. **Section 115.4 Violation Penalties** is hereby deleted in its entirety and replaced with the following:

115.4 Violation penalties. All items related to violation penalties shall be made pursuant to the applicable provisions of Section 114.4 of the adopted *International Building Code*.

9. A new **Section 115.4.1 Work Commencing before permit issuance** is hereby added to read as follows:

115.4.1 Work commencing before permit issuance. All items related to work commencing before permit issuance shall be made pursuant to the applicable provisions of Section 109.2 of the adopted *International Building Code*.

10. **SECTION 202 GENERAL DEFINITIONS** is hereby amended to add the following definitions in alphabetical sequence as follows:

MULTIFAMILY. Any *building* housing group R-1, R-2 or R-4 occupancies.

WHOLE-DWELLING UNIT MECHANICAL VENTILATION SYSTEM. An exhaust system, supply system, or combination thereof that is designed to mechanically exchange indoor air for outdoor air when operating continuously or through a programmed intermittent schedule to satisfy the whole-dwelling ventilation rate.

11. **Section 403.3.2 Group R-2, R-3 and R-4 occupancies, three stories and less** is hereby amended to read as follows:

403.3.2 Group R-2, R-3 and R-4 occupancies, ~~three stories and less~~. The design of local exhaust systems for outdoor air in Group R-2, R-3 and R-4 *occupancies* shall comply with Sections 403.3.2.1 through 403.3.2.7.

12. **Section 403.3.2.1 Outdoor air for dwelling units** is amended to read as follows:

403.3.2.1 Outdoor air for dwelling units. An outdoor air ventilation system consisting of a mechanical exhaust system, supply system or combination thereof shall be installed for each *dwelling unit*. Local exhaust or supply systems, including outdoor air ducts connected to the return side of an air handler, are permitted to serve as such system. The outdoor air ventilation system shall be designed to provide the required rate of outdoor air continuously during the period the building is occupied, and the system design documents shall be submitted, as required by the *building official*, at the time of application for a building *permit*. The minimum continuous outdoor airflow rate shall be determined in accordance with Equation 4-9.

$$Q_{OA} = 0.01A_{floor} + 7.5(N_{br} + 1) \quad \text{(Equation 4-9)}$$

where:

Q_{OA} = outdoor airflow rate, cfm

A_{floor} = floor area, ft²

Nbr = number of bedrooms; not to be less than one

Exceptions:

1. The outdoor air ventilation system is not required to operate continuously where the system has controls that enable operation for not less than 1 hour of each 4-hour period. The average outdoor airflow rate over the 4-hour period shall be not less than that prescribed by Equation 4-9.
2. The minimum mechanical ventilation rate determined in accordance with Equation 4-9 shall be reduced by 30 percent provided that both of the following conditions apply:
 - 2.1. A ducted system supplies ventilation air directly to each bedroom and to one or more of the following rooms:
 - 2.1.1. Living room.
 - 2.1.2. Dining room.
 - 2.1.3. Kitchen.
 - 2.2. The whole-house ventilation system is a *balanced ventilation* system.

13. A new **Section 403.3.2.6 Sound ratings for fans** is added to read as follows:

403.3.2.6 Sound ratings for fans. Whole-dwelling unit *ventilation* fans shall be rated for sound at maximum of 1.5 sones, in accordance with the procedures of the Home Ventilating Institute (*HVI 915, Procedure for Loudness Rating of Residential Fan Products*). Heating, ventilating and air conditioning air handlers and remote-mounted fans need not meet sound requirements.

14. A new **Section 403.3.2.7 Performance verification** is hereby added to read as follows:

403.3.2.7 Performance verification. Performance of installed mechanical *ventilation* systems shall be verified in accordance with The City of Fort Collins Residential New Construction Mechanical Systems Testing Guide as part of the Multifamily Residential Mechanical Systems Performance Report provided to the *building official*.

15. **Section 504.1 Installation** is hereby amended to read as follows:

504.1 Installation. Clothes dryers shall be exhausted in accordance with the manufacturer's instructions. Dryer exhaust systems shall be independent of all other systems and shall convey the moisture and any products of combustion to the outside of the building. Dryer exhaust duct terminations shall not be located within 36 inches (914 mm) of exterior openings into *conditioned spaces*, crawl spaces, and attic spaces.

16. **Section 506.3.11 Grease duct enclosures** is hereby amended to read as follows.

506.3.11 Grease duct enclosures. A commercial kitchen grease duct serving a Type I hood that penetrates a ceiling, wall, floor or any concealed space shall be enclosed from the point of penetration to the outlet terminal. In-line exhaust fans not located outdoors shall be enclosed as required for grease ducts. A duct shall penetrate exterior walls only at locations where unprotected openings are permitted by the *International Building Code*. The duct enclosure shall serve a single grease duct and shall not contain other

ducts, piping or wiring systems. Duct enclosures shall be a shaft enclosure in accordance with Section 506.3.11.1, a field-applied enclosure assembly in accordance with Section 506.3.11.2 or a factory-built enclosure assembly in accordance with Section 506.3.11.3. Duct enclosures shall have a fire-resistance rating of not less than that of the assembly penetrated and not less than 1 hour. Fire dampers and smoke dampers shall not be installed in grease ducts.

17. **Section 512.1 General** is hereby amended to read as follows:

512.1 General. Where a subslab soil exhaust system is provided, the duct for such system shall conform to the requirements of the *2021 International Residential Code*, Appendix AF, entitled "Radon Control Methods," as adopted.

18. **Section 601.5 Return air openings** is hereby amended to read as follows:

601.5 Return air openings. Return air openings for heating, ventilation and air-conditioning systems shall comply with all of the following:

1. Openings shall not be located less than 10 feet (3048 mm) measured in any direction from an open combustion chamber or draft hood of another *appliance* located in the same room or space.
2. Return air shall not be taken from a hazardous or insanitary location or a refrigeration room as defined in this code.
3. The amount of return air taken from any room or space shall be not greater than the flow rate of supply air delivered to such room or space.
4. Return and transfer openings shall be sized in accordance with the *appliance* or *equipment* manufacturer's installation instructions, ACCA Manual D or the design of the registered design professional.
5. Return air taken from one *dwelling unit* shall not be discharged into another *dwelling unit*.
6. Taking return air from a crawl space shall not be accomplished through a direct connection to the return side of a forced air furnace. Transfer openings in the crawl space enclosure shall not be prohibited.
7. Return air shall not be taken from a closet, bathroom, toilet room, kitchen, garage, boiler room, furnace room or unconditioned attic.
8. Return air shall not be taken from indoor swimming pool enclosures and associated deck areas.

Exceptions:

1. Where the air from such spaces is dehumidified in accordance with Section 403.2.1, Item 2.
 2. Dedicated HVAC systems serving only such spaces.
9. Return air for a *dwelling* shall be taken from inside the *dwelling*. Dilution of return air with *outdoor air* is permitted. A return air path shall be provided in all habitable rooms by means of ducts or transfer grills.

Exceptions:

1. Taking return air from a kitchen is not prohibited where such return air openings serve the kitchen and are located not less than 10 feet (3048 mm) from the cooking *appliances*.
2. Taking return air from a kitchen is not prohibited in a *dwelling unit* where the kitchen and living spaces are in a single room and the cooking *appliance* is electric and located not less than 5 feet (1524 mm) in any direction from the return air intake opening.
3. Dedicated forced air systems serving only the garage shall not be prohibited from obtaining return air from the garage.

19. **Section 602.3 Stud cavity and joist space plenums** is hereby deleted in its entirety and replaced with the following:

602.3 Stud cavity and joist space plenums. *Building* framing cavities shall not be used as ducts or plenums.

20. A new **Section 603.18.3 Construction debris and contamination** is hereby added to read as follows:

603.18.3 Construction debris and contamination. Mechanical air-handling systems and their related ducts shall be protected from the entrance of dirt, debris, and dust during the construction and installation process. Prior to passing final inspection or issuance of a Certificate of Occupancy, such systems shall be substantially free of construction-related contaminants.

21. **Section 801.19 Multistory prohibited** is hereby amended to read as follows:

801.19 Multistory prohibited. Common venting systems for *appliances* located on more than one floor level shall be prohibited, except engineered systems where all of the *appliances* served by the common vent are located in rooms or spaces that are accessed only from the outdoors. The *appliance* enclosures shall not communicate with the occupiable areas of the building.

22. A new **Section 903.1.1 Solid fuel fireplaces and appliances** is added to read as follows:

903.1.1 Solid fuel fireplaces and appliances. Solid fuel fireplaces, fireplace stoves and solid-fuel-type room heaters shall comply with Section 5-110 of the City Code.

23. **Section 903.3 Unvented gas logs heaters** is deleted in its entirety.

24. A new **Section 918.1.2 Total Electric Heating** is added to read as follows:

918.1.2 Total Electric Heating. Primary indoor central heating systems utilizing only electric heat shall utilize a ground source heat pump system(s) or cold climate heat pump system(s) specifically designed to heat in cold climates and at the Winter Outdoor, Design Dry-Bulb temp defined in IECC Section C301.5. The heat pump

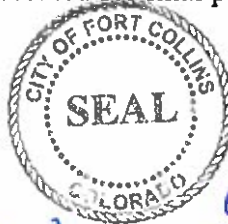
system shall not be gas or propane fuel fired. Electric resistance strip heat shall serve only as emergency backup heat or supplemental heat at outdoor temperatures below 15°F as necessary.

Exceptions:

1. Where the heating load is less than or equal to 6.0 Btu/h/ft² at design temperature, electric resistance heating shall be permitted.
2. Where conduit w/ pull string sized to accommodate future heating electrical requirements is installed.

Section 5. The City Attorney and the City Clerk are authorized to modify the formatting and to make such other amendments to this Ordinance as necessary to facilitate publication in the Fort Collins Municipal Code; provided, however, that such modifications and amendments shall not change the substance of the Code provisions.

Introduced, considered favorably on first reading, and ordered published this 15th day of February, A.D. 2022, and to be presented for final passage on the 5th day of April, A.D. 2022.



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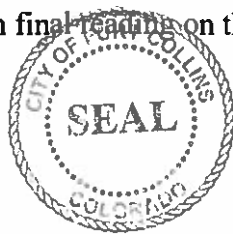
Mayor

ATTEST:

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City Clerk

Passed and adopted on final reading on this 5th day of April, A.D. 2022.



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Mayor

ATTEST:

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City Clerk

NOTICE OF PUBLIC HEARING

EXHIBIT A

NOTICE is hereby given of a public hearing to be held before the Council of the City of Fort Collins, Colorado, on the 15th day of February, A.D., 2022 at 6:00 p.m., or as soon thereafter as the matter may come on for hearing, in the Council Chambers at the City Hall, 300 LaPorte Avenue, Fort Collins, Colorado for the purpose of considering the adoption of ordinances that adopt by reference the *2021 International Building Code*, *2021 International Residential Code*, *2021 International Energy Conservation Code*, *2021 International Mechanical Code*, *2021 International Fuel Gas Code*, *2021 International Existing Building Code*, *2021 International Swimming Pool and Spa Code*, *2021 International Property Maintenance Code* and the *International Plumbing Code*, each promulgated by the International Code Council, and the *Colorado Plumbing Code*, together with local amendments.

Not less than one (1) copy of said Codes has been, and now is on file in the Office of the City Clerk of the City of Fort Collins and is available for public inspection.

The purpose of adopting the *International Building Code*, *International Residential Code*, *International Energy Conservation Code*, *International Mechanical Code*, *International Fuel Gas Code*, *International Existing Building Code*, *International Swimming Pool and Spa Code*, the *International Property Maintenance Code*, and the *Colorado Plumbing Code*, with local amendments by said ordinances is to provide for protection of public health, safety and welfare of the City and its residents.

Individuals who wish to address Council via remote public participation can do so through Zoom at <https://zoom.us/j/98241416497>. (The link and instructions are also posted at www.fcgov.com/councilcomments.) Individuals participating in the Zoom session should watch the meeting through that site, and not via FCTV, due to the streaming delay and possible audio interference.

The City of Fort Collins will make reasonable accommodations for access to City services, programs and activities, and will make special communication arrangements for persons with disabilities. Please call (970) 221-6515 (V/TDD: Dial 711 for Relay Colorado) for assistance.

This notice is given and published by order of the City of Fort Collins, Colorado.

Dated this 24th day of January, A.D. 2022.


City Clerk

Upon request, the City of Fort Collins will provide language access services for individuals who have limited English proficiency, or auxiliary aids and services for individuals with disabilities, to access City services, programs and activities. Contact (970) 221-6515 (V/TDD: Dial 711 for Relay Colorado) for assistance. Please provide 48 hours advance notice when possible.

A petición, la Ciudad de Fort Collins proporcionará servicios de acceso a idiomas para personas que no dominan el idioma inglés, o ayudas y servicios auxiliares para personas con discapacidad, para que puedan acceder a los servicios, programas y actividades de la Ciudad. Para asistencia, llame al 970.221.6515 (V/TDD: Marque 711 para Relay Colorado). Por favor proporcione 48 horas de aviso previo cuando sea posible.