



**PLANNING & DEVELOPMENT MEMORANDUM  
#30-2022**

**DATE:** Oct. 17, 2022

**TO:** Honorable Mayor Meredith Leighty & City Council Members

**THROUGH:** Heather Geyer, City Manager 

**FROM:** Brook Svoboda, Director of Planning & Development   
Becky Smith, Planning Manager  
Dan Wester, Chief Building Official (SAFEbuilt)

**SUBJECT:** 2021 International Building Code Adoption – Overview

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**PURPOSE**

To provide an overview for the adoption of the 2021 International Building Codes (IBCs) with amendments, and introduce a path to net zero standards for new construction by 2030.

**BACKGROUND**

The City adopted the 2018 International Building Codes<sup>1</sup> on Oct. 26, 2020. The adoption of the 2018 International Building Codes included the following:

- International Building Code (IBC)
- International Residential Code (IRC)
- International Fire Code (IFC)
- International Plumbing Code (IPC)
- International Mechanical Code (IMC)
- International Fuel Gas Code (IFGC)
- International Energy Conservation Code (IECC)
- International Existing Building Code (IEBC)
- International Property Maintenance Code (IPMC)
- International Swimming Pool and Spa Code (ISPSA)

The following codes were also re-adopted and amended:

- Uniform Building Code for Abatement of Dangerous Buildings (1997)
- The National Electric Code (2017)

The IBCs are published every three years; the current version is the 2021 IBCs. In the past, staff had recommended that City Council consider adopting every other edition – once every six years. However, moving forward, staff is recommending that Council consider adopting the current version of the IBCs approximately 12 months after the new edition is published. The main consideration for this is that the International Energy Conservation Codes (IECC) are projected to provide substantive jumps in the energy efficiency requirements between editions. By way of example, prior to 2020, the City was working under the 2009 IBCs (adopted in 2012), and the jump in energy efficiency requirements was approximately 25% when the City adopted the 2018 IBCs. The increase between 2018 and 2021 is estimated at approximately 8%. The projected increase between 2021 and 2024 is between 11% and 14%. Taking the approach of adopting the new edition of IBCs would reduce the impact on the construction community.

*Notes:*

- *The above-mentioned energy efficiency increases would only apply to new construction – residential and commercial.*

- *Commercial remodels, referred to under the IBCs as “Level 2,” would be required to bring only that area of remodel up to the new adopted code – i.e. a new mechanical system would be required to meet the adopted code, but the rest of the building would not be required to be brought up to adopted code.*
- *Commercial additions to existing buildings, referred to as “Level 3” remodel work, would be required to meet the current adopted code but it would not require the existing structure to be brought up to adopted code.*
- *The percent increase reflected is not proportional to increase in construction costs.*

### **Draft Code Amendment Document – Attachment 1:**

Attached is the draft of the proposed amendments. The following describes the annotations for the amendments:

- The draft provided is not in ordinance form. This is intentional so that Council can more readily differentiate the multiple efforts that were undertaken for specific amendments - Code Cohort, building and fire department.
- The City Attorney’s Office has not formally reviewed the draft document. This would be done following this study session. The proposed ordinance form would follow the City’s traditional code amendment format – new language would be in ALL CAPS.
- Amendments depicted in **green reflect energy efficiency and stretch code amendments** that were created out of the Code Cohort process, which will be discussed in more detail below.
- Amendments in **red reflect non-stretch code amendments** prepared by North Metro Fire Rescue (NMFR) and the Building Division, which is operated by SAFEbuilt.
- The balance of amendments in **bold black** is **carryover amendments** that have been adopted with previous versions.
- Three articles are being recommended for deletion:
  1. Article 9 – Elevator and Escalator Code
  2. Article 12 – Asbestos Control
  3. Article 14 – Emergency Radio Coverage

### **Framework for Discussion**

The following portion of the staff memo is broken into three parts:

- Energy Conservation Code Amendments and Stretch Building Code Amendments through the Code Cohort process
- Standard Amendments – Specific amendments proposed by the Building Division and NMFR, and carryover amendments that have been adopted year over year
- Path to the net zero regulations for new construction

### **Energy Conservation Code Amendments and Stretch Building Code Amendments:**

On Jan. 24, 2022, Council adopted Resolution 22-39, approving a Building Codes Cohort IGA with Boulder County and five other cities and counties to participate in a regional collaboration on reviewing and adopting the 2021 IECC strengthening amendments (i.e. stretch codes). The objective of the cohort is to develop a net-zero plan for new construction by the mid-2030s. The packet for the resolution is included as Attachment 2. This effort has been funded through a Department of Local Affairs (DOLA) Grant, with each community providing varied local matches. Northglenn’s match was \$1,000.

Christine Brinker of Southwest Energy Efficiency Project and Hope Medina of Shums Coda will present an overview of the proposed IECC amendments, including the stretch code amendments, which cover the following areas:

- Solar ready
- Electric vehicle ready

- Electric ready/electric preferred
- Additional items

Brinker and Medina will also provide insight on the cost implications for new construction and energy cost savings with the proposed amendments.

### **Standard Amendments**

As mentioned above, the text that is in **bold black** represents carry-over amendments year over year. Staff will not be providing a detailed overview of these amendments; however, staff will be prepared to address questions or comments during the study session.

The amendments in **red** reflect recommended new language that was forwarded by the Building Division and NMFR. Below is a more detailed explanation of these amendments:

- Article 1
  - Several minor amendments: These proposed changes reflect that SAFEbuilt is a third-party inspector on behalf of the City.
- Article 2
  - The first is for consistency, reaffirming third party status of SAFEbuilt.
  - Section 111.1 - Appeals Section, is amended to make the IBCs consistent with the City's appeals process under the Unified Development Ordinance (UDO).
- Article 4
  - Section 106.1 is recommended for deletion, as it is covered in current code.
  - Section 111.1 - Appeals Section, is to make the IBCs consistent with the City's appeals process under the UDO.
- Article 5
  - There are several minor amendments for purposes of correctly citing cross-referencing sections of the IBC for applicability.
  - Subsections 107.2, 107.4, and 107.6 – Temporary Special Event Structures, will have permitting requirements under NMFR.
  - Section 111.1 – Appeals Section, is amended to where the NMFR Chief would review appeals under the International Fire Code, whereas the City's Board of Adjustment would serve as second form of appeals – consistent with the City's appeals process under the UDO.
  - Subsection 903.2.6 – Group I, will require sprinkler systems that meet the Federal Fair Housing Act definition of senior housing or housing for older persons.
  - Exception 1 to Section 903.2.6 Group I provides exception language that except: An automatic sprinkler system installed in accordance with Section 903.1.2 shall be permitted in Group I-1 Condition 1 facilities that do not meet the Federal Fair Housing Act definition of senior housing or housing for older persons.
  - New subsection to 903.2.8 – Group R: An automatic sprinkler system installed in accordance with Section 903.3.1.1 shall be provided throughout all Group R-2 occupancies that meet the Federal Fair Housing Act definition of senior housing or housing for older persons.
  - Subsection 903.3.1.2.1 – Balconies and Decks, is amended to require that these areas now have sprinklers.
  - Subsection 905.2 – Installation Standard, is amended so fire department connections for standpipe systems shall be in accordance with Section 912.
  - Subsection 912.1 – Installation, is amended so fire department connections shall be installed in accordance with this section and the National Fire Protection Association (NFPA) standard applicable to the system design, and shall comply with Sections 912.2 through 912.7, unless the incorporation of the large diameter Storz-style connections is specifically approved by NMFR.

- The exception to Section 1011.12.2 – Stairway to Roof in the 2021 International Fire Code, is deleted in its entirety for consistency.
- Subsection 5704.2.9.6.1 – Locations Where Above-Ground Tanks are Prohibited, is amended to read 'Locations Where Above-Ground Tanks are Allowed.' Storage of Class I and II liquids in above-ground tanks outside of buildings is allowed when such storage complies with Sections 5704.2.9.6.1 through 5704.2.9.6.3.
- The NFPA standards in Chapter 80, Referenced Standards, are retained except as modified – please see table in the proposed amendment.
- Article 6
  - Section 103.2 - Appointment, is deleted in its entirety and hereby amended to read as follows: The Building Official shall be appointed by the Chief Appointing Authority of the jurisdiction.
  - Section 109.2 - Schedule of Permit Fees, is deleted in its entirety and hereby amended to read as follows: See IBC Amendment Section 109.2.
- Article 8
  - Section R105.2 - Work Exempt From Permit: storm shelters under 200 square feet shall be subject to permit.
  - The Manual J Design Criteria has been added to Table R301.2 (1). This is a significant change from past versions. Staff will discuss this at the meeting.
- Article 9
  - Article 9 is administered and regulated by the State and therefore is not required to be adopted. This was missed during the last code adoption.
- Article 10
  - Section R104.2 - Schedule of Permit Fees, will reference Section 109.2 for consistency.
  - Section R104.3 - Work Commencing Before Permit Issuance, is amended to include the doubling of permit fees.
  - Section R104.5 - Refunds, is amended by deleting the section in its entirety and replacing it with the following: See IBC Section 109.6 "Refunds" for consistency.
  - Section R109 "Stop Work Order" is amended to read as follows:
    - Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work. If no such person can be contacted at the property, it shall be posted in a conspicuous location on the property involved. Upon issuance of the stop work order, the cited work shall immediately cease. The stop work order shall cite the specific code section violated, state the reason for the order, and state the conditions under which the cited work will be permitted to resume.
  - Section 111.1 - Appeals Section, is amended to make the IBCs consistent with the City's appeals process under the UDO.
- Article 12
  - Article 12 is administered and regulated by the State and therefore is not required to be adopted – this was missed during the last code adoption.
- Article 14
  - Per NMFR, the as-published language of the 2021 IFC Section 510 - Emergency Responder Radio Coverage, has acceptably evolved and can now be retained without local amendment, effectively no longer requiring this article.
- Article 21
  - Section 101.3 - Purpose, is amended and adopted to read as follows:
    - This Code shall be construed to secure its expressed intent, which is to ensure public health, safety and welfare insofar as they are affected by the continued occupancy and maintenance of structures and premises. Repairs, alterations, additions to and changes to pool and spas shall comply with the 2021

- International Pool and Spa Code.
- Section 108.2 - Schedule of Permit Fees, see IBC Section 109.2 "Schedule of Permit Fees" for consistency.
- Section 113.4 - Violation Penalties, is amended to make this article consistent with the Municipal Code enforcement provisions.
- Section 112 – Appeals, is amended to make the IBCs consistent with the City's appeals process under the UDO.

### **Path to the Net Zero Regulations for New Construction**

Part of the Code Cohort process is an underlying commitment that participating municipalities will strive for net zero standards for new construction by 2030. At this time, it is unclear whether the IBCs will reach this goal with the next three editions or whether additional amendments will be required. Once the 2024 IBCs are published, it will become much clearer whether the IBCs themselves will be tracking towards net zero without additional amendments or not. Attached is a draft resolution, Attachment 4, drafted through the Code Cohort process, that the City may consider adopting at the time of adoption of the 2021 IBCs. The expressed intention of the draft resolution is that the City will attempt to accomplish net zero IBCs by 2030.

### **NEXT STEPS**

Based on Council consensus, staff would schedule this for first and second reading in December and January. Please note the adoption of codes by reference is governed by State statute, which requires notices to be published at least 15 days and at least 8 days prior to the public hearing.

### **BUDGET/TIME IMPLICATIONS**

There are no time or financial impacts to the City.

### **STAFF RECOMMENDATION**

Staff is seeking consensus from Council to proceed with adoption of the proposed IBC and amendments as well as the net zero resolution provided by the Code Cohort process.

The Sustainability Committee has also reviewed and considered the Code Cohort amendments and has made a recommendation, via a resolution, to Council to adopt the proposed amendments which are attached hereto as Attachment 5.

### **STAFF REFERENCE**

If Council members have any questions, please contact Brook Svoboda, Director of Planning & Development, at [bsvoboda@northglenn.org](mailto:bsvoboda@northglenn.org) or 303.450.8937.

### **ATTACHMENTS**

1. Draft 2021 IBC Code amendments
2. Matrix of energy code amendments
3. Fact sheets
4. Net Zero Code Cohort Draft Resolution
5. Sustainability Committee recommendation – resolution
6. Presentation

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<sup>i</sup> For purposes of this memo when "IBC" is referenced, it is intended to mean all codes unless otherwise specifically called out.

CHAPTER 10  
BUILDING REGULATIONS

ARTICLE 1  
BUILDING DEPARTMENT

**Section 10-1-1. Title.** This Article 1 of Chapter 10 of the Municipal Code shall be known and cited as the Northglenn Building Ordinance.

[Source: Ord. 254, 1973]

**Section 10-1-2. Definitions.** As used in this Article 1 and the provisions of this Chapter 10:

- (a) "Building department" means the Department of Community Development of the City of Northglenn.
- (b) "Director" means the Director of Community Development of the City of Northglenn.
- (c) "Building inspector" or "building official" means an officer of the City of Northglenn authorized by the Administrator or the building official to perform the duties of a building inspector.
- (d) "Chief building official" or "building official" means the Director of Community Development appointed by the Administrator as the head of the Department of Community Development of the City of Northglenn, and includes any regularly authorized deputy.
- (e) "Code enforcement officer" means an officer of the City of Northglenn authorized by the Administrator to enforce ordinances pursuant to Section 10-1-3 of this article and includes a building inspector, building official or chief building official.
- (f) "Department" or "Building Department" means the Department of Community Development.
- (g) "Administrator" means the City Administrator or the City Manager of the City of Northglenn.
- (h) "Chief of police" means the Director of Community Safety of the City of Northglenn.
- (i) "Chief" or "Chief of the fire department" means the fire chief of the North Metro Fire Rescue District and "fire department" means and refers to said district.
- (j) "Jurisdiction" or "jurisdictional area" means and includes the territorial jurisdiction of the City of Northglenn. As applied to parks, recreational facilities and municipal property, said term also includes the territorial jurisdiction of the Northglenn Metropolitan Recreation District.
- (k) "Administrative authority" means and includes the administrator and the building official.
- (l) "City," "municipality," or "authority exercising jurisdiction" means the City of Northglenn.

[Source: Ord. 254, 1973]

**Section 10-1-3. Building Department.** The Director of Community Development shall be the head of the Department of Community Development. Said director and the Department shall implement, and to the extent therein provided, shall enforce:

- (a) The building regulations and other municipal laws provided by Chapter 10 of the Municipal Code;
- (b) The zoning regulations and other municipal laws provided by Chapter 11 of the Municipal Code;
- (c) The subdivision regulations and municipal laws provided by Chapter 12 of the Municipal Code;
- (d) The animal control laws and regulations provided by Chapter 14 of the Municipal Code;
- (e) The provisions of any City ordinances which provide for inspections or enforcement by the building department, a building inspector, building official or code enforcement officer.
- (f) The provisions of City ordinances relating to parks, recreational facilities, park property and municipal property; and
- (g) The regulations promulgated by the Administrator, the Director, the Recreation Board, or any licensing authority of the City of Northglenn.

[Source: Ord. 254, 1973]

**Section 10-1-4. Code Enforcement Officers.**

(a) Whenever a code enforcement officer has probable cause to believe that any person, firm, corporation or association of persons has violated the provisions of any City ordinance provided by Section 10-1-3 to be enforced by the building department, he may, in his capacity as such officer, issue and serve a summons and complaint requiring such person to appear before the Municipal Court of the City of Northglenn to answer charges of such violation. A summons and complaint signed by a code enforcement officer may be served by another code enforcement officer or by a police officer or by any person authorized by law to serve process.

(b) A code enforcement officer is authorized to enter upon and inspect any public or private property in the City of Northglenn for the purpose of enforcement of any ordinance provided by Section 10-1-3 to be enforced by the building department, including determination of compliance with the provisions of such ordinance.

(c) A code enforcement officer shall have the power and authority to issue any notice, warning, order, citation or process authorized by any City ordinance or regulation provided by Section 10-1-3 to be enforced by the building department.

(d) A code enforcement officer is a peace officer within the meaning of and for the purposes of Rule 206(a)(2), Municipal Court Rules of Procedure, and a public inspector for the purposes of Rule 241, Municipal Court Rules of Procedure.

[Source: Ord. 254, 1973]

**Section 10-1-5. Search Warrants.** A search warrant may be issued by any judge of the Municipal Court of the City of Northglenn for the inspection of private premises by a code enforcement officer upon showing that:

(a) The premises are located within the City of Northglenn;

(b) The inspection is required or authorized by the organic law or ordinance of the City in the interest of public safety; and

(c) Either:

(1) That the owner or occupant of such premises has refused entry to the code enforcement officer; or

(2) That the premises are locked and the code enforcement officer has been unable to obtain permission of the owner or occupant to enter.

[Source: Ord. 254, 1973]

**Section 10-1-6. Execution of Search Warrant.** A search warrant provided by Section 10-1-5 shall be issued pursuant to the provisions of Rule 241, Rules of Municipal Court Procedure, and shall be directed to and executed by an officer of the Department of Community Safety.

[Source: Ord. 254, 1973]

**Section 10-1-7. Enforcement by Police Officers.** The enforcement powers and duties provided by this article are not exclusive and shall not be deemed or construed to limit or affect the authority of police officers to enforce any ordinances of the City of Northglenn.

[Source: Ord. 254, 1973]

**Section 10-1-8. Application of the Building Codes to Existing Permitted Work.** It shall be the policy of the City of Northglenn that it shall not require additional work be performed beyond that requested in an application for a building permit seeking approval for alterations, repairs, restoration and/or improvements to an existing building or structure unless one or more of the following conditions exist:

(a) Work related to the application on the building or structure was done without a duly issued building permit;

(b) The improvements being constructed constitute a change in use outside of the Occupancy Group Classification of the structure thereby necessitating additional work; or

(c) The Chief Building Official has determined that a specifically articulated life safety hazard exists that requires such additional work. For purposes of this subsection (c), it shall be the burden of the Chief Building Official to determine with specificity the life safety hazard that exists necessitating any such additional improvements.

[Source: Ord. 1532, 2008]

**ARTICLE 2  
INTERNATIONAL BUILDING CODE**

**Section 10-2-1. Title.** This ordinance shall be known and cited as the International Building Code.

[Source: Ord. 1799, 2020]

**Section 10-2-2. Adoption of the International Building Code.** The International Building Code, 2021 Edition, as published by the International Code Council, Inc., 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001, is adopted by reference as a primary code and amended as described below in Section 10-2-5.

[Source: Ord. 1799, 2020]

**Section 10-2-3. Copies on File.** At least one certified copy of the International Building Code, 2018 Edition, as adopted, is on file in the office of the City Clerk and may be inspected during regular business hours.

[Source: Ord. 1799, 2020]

**Section 10-2-4. Purpose.** The purpose of this Code is to provide minimum standards to safeguard life or limb, health, property and public welfare in the design, construction and use of all buildings and structures within the City of Northglenn, excluding detached one and two-family dwellings and single-family townhouses not more than 3 stories above grade, and existing buildings undergoing repair, alteration or additions and change of occupancy, which are covered in the other international codes.

[Source: Ord. 1799, 2020]

**Section 10-2-5. Amendments to the International Building Code, 2021 Edition.**

(a) Section 101.1 "Title" is amended by the addition of the term "City of Northglenn" where indicated.

(b) Section 101.4.3 "Plumbing" is amended by the deletion of the last sentence.

(-) Section 103 Code Compliance Agency is deleted in its entirety and hereby amended to read as follows:

**The Building Department shall be appointed by the Chief Appointing Authority of the jurisdiction.**

(c) Section 104.10.1 "Flood hazard areas." Building Official is amended to the term "City of Northglenn".

(d) Section 105.2 "Work exempt from permit" is amended as follows:

1. Delete Section 105.2, Buildings, Exception 1 in its entirety and amend to read: 105.2, Exception 1: Detached accessory structures, as defined in Chapter 11 of the Municipal Code provided that the floor area does not exceed 200 square feet (18.58 m<sup>2</sup>).

2. Delete Section 105.2, Buildings, Exception 2 in its entirety.

(e) Section 108.3 "Temporary power" is hereby amended to read as follows:

The Building Official is authorized to give permission to temporarily supply and use power in part of an electrical installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate of completion shall comply with the requirements specified for temporary lighting, heat and power in the currently adopted version of the National Electrical Code as adopted by the State of Colorado.

(f) Section 109.2 Schedule of permit fees is amended as follows:

1997 UBC, Table 1-A

Building Permit Fee Schedule

Total Valuation

Fees



|                                |                                                                                                         |
|--------------------------------|---------------------------------------------------------------------------------------------------------|
| \$1.00 to \$500.00             | \$23.50                                                                                                 |
| \$500.01 to \$2,000.00         | \$23.50 for the first \$500.00 plus \$3.05 for each additional \$100.00 or fraction thereof.            |
| \$2,000.01 to \$25,000.00      | \$69.25 for the first \$2,000.00 plus \$14.00 for each additional \$1000.00 or fraction thereof.        |
| \$25,000.01 to \$50,000.00     | \$391.25 for the first \$25,000.00 plus \$10.10 for each additional \$1,000.00 or fraction thereof.     |
| \$50,000.01 to \$100,000.00    | \$643.75 for the first \$50,000.00 plus \$7.00 for each additional \$1,000.00 or fraction thereof.      |
| \$100,000.01 to \$500,000.00   | \$993.75 for the first \$100,000.00 plus \$5.60 for each additional \$1,000.00 or fraction thereof.     |
| \$500,000.01 to \$1,000,000.00 | \$3,233.75 for the first \$500,000.00 plus \$4.75 for each additional \$1,000.00 or fraction thereof.   |
| \$1,000,000.01 and up          | \$5,608.75 for the first \$1,000,000.00 plus \$3.65 for each additional \$1,000.00 or fraction thereof. |

Other inspection fees:

|                                                                                |                                                   |
|--------------------------------------------------------------------------------|---------------------------------------------------|
| 1. Inspections outside of normal business hours                                | \$100.00 per hour (minimum charge: two hours)     |
| 2. Reinspection fees                                                           | \$75.00 per hour                                  |
| 3. Inspections for which no fee is specifically indicated                      | \$100.00 per hour (minimum charge: one-half hour) |
| 4. Additional plan review required by changes, additions or revisions to plans | \$100.00 per hour                                 |

Other permit fees:

Plan check fee = 65% of building permit fee

Exemptions

The government of the United States of America, the State and its political subdivisions, the City, and all agencies and departments thereof shall be exempt from the payment of fees for work performed on buildings or structures owned wholly by such agencies or departments and devoted to government use.

(g) Section 109.4 "Work commencing before permit issuance" is amended by deleting the section in its entirety and hereby amended to read as follows:

Section 109.4 Double fee. Where a licensed contractor or an individual who starts or proceeds with work for which a permit is required by this Code prior to obtaining said permit, the fees specified in Section 109.2. "Schedule of permit fees" of the City of Northglenn Building Code shall be doubled. Such fee shall be paid whether or not such permit is obtained, but the payment of such fee shall not relieve any persons from fully complying with the requirements of this Code.

- (h) Section 109.6 "Refunds" is hereby amended to read as follows:

Section 109.6 Refunds

Section 109.6.1 A written request for a refund of the permit fee must be submitted to the Building Official within 90 days of the date the fee was paid.

Section 109.6.2 The written request must set forth the basis for the request for a refund, identify the project for which a refund is requested and the request must be from the same person or entity which paid the fee.

Section 109.6.3 If the foregoing provisions have been met, the Building Official may refund permit fees based upon the following criteria:

Section 109.6.3(a) If fees were paid or collected in error, the applicable fees paid will be refunded.

Section 109.6.3(b) If the project for which the permit fee has been paid is not constructed and no construction has commenced, or the request for plan review for such project is being withdrawn before review of the plans has occurred, the applicable fees paid, minus a 20% administrative fee, will be refunded.

Section 109.6.3(c) If the plans for the project have been reviewed to any extent at the time a request for refund is submitted, no refund of the plan review fees will be authorized.

Section 109.6.3(d) If permit fees are paid and any construction has been commenced, no refund will be authorized.

- (i) Section 113 "Means of Appeals" is amended by deleting the section in its entirety and replacing it with the following:

Section 113 "Means of Appeals"

113.1 General: Appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this Code may be made to the Northglenn Board of Adjustment. Appeals shall be in accordance with Chapter 11 of the Municipal Code.

- (j) Section 115.2 "Issuance" is hereby amended to read as follows:

Issuance: The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work. If no such person can be contacted at the property, it shall be posted in a conspicuous location on the property involved. Upon issuance of the stop work order, the cited work shall immediately cease. The stop work order shall cite the specific code section violated, state the reason for the order, and state the conditions under which the cited work will be permitted to resume.

- (k) Section 903.2.8.1 Group R3 Automatic Sprinkler Systems is deleted in its entirety.

- (l) Section 1612.3 is hereby amended to read as follows:

To establish flood hazard areas, the governing body shall adopt a flood hazard map and supporting data. The flood hazard map shall include, at a minimum, areas of special flood hazard as identified by the Federal Emergency Management Agency in the engineering report entitled the Flood Insurance Study for Adams County, Colorado and Incorporated Areas, dated January 20, 2016, with accompanying flood insurance rate maps and/or flood boundary floodway maps (FIRM and/or FBFM) in which the Federal Emergency

Management Agency has provided flood profiles, the Floodway Map, and the water surface elevation of the base flood, and any subsequent additions, updates, revisions or modifications to said study, as amended or revised with the accompanying Flood Insurance Rate Map (FIRM) and Flood Boundary and Floodway Map (FBFM) and related supporting data along with any revisions thereto.

[Source: Ord. 1799, 2020]

**Section 10-2-6. International Building Code Appendix.** The following appendices are herein adopted in their entirety:

Appendix E entitled "Supplementary Accessibility Requirements"  
Appendix F entitled "Rodent Proofing"  
Appendix I entitled "Patio Covers"

[Source: Ord. 1799, 2020]

**Section 10-2-7. Application.** The provisions of this article and the provisions of the International Building Code and appendices adopted by reference shall apply to every non-residential building or structure located either within or without the corporate limits of the City of Northglenn, the use of which the City has jurisdiction and authority to regulate.

[Source: Ord. 1799, 2020]

**Section 10-2-8. Violations -- Penalty.**

(a) It shall be unlawful for any person to violate any of the provisions of the International Building Code, 2021 Edition, as adopted, or the provisions of this ordinance.

(b) Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Building Code, 2021 Edition, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of this Code.

[Source: Ord. 1799, 2020]

**Section 10-2-9. Conflicts.** If the provisions of this article conflict with any other provisions of the Municipal Code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

[Source: Ord. 1799, 2020]

### **ARTICLE 3 NATIONAL ELECTRICAL CODE**

**Section 10-3-1. Title.** This ordinance shall be known and cited as the National Electrical Code.

[Source: Ord. 1799, 2020]

**Section 10-3-2. Adoption of the currently adopted National Electrical Code by the State of Colorado.** The City hereby determines to adopt the same version of the National Electrical Code, sponsored by the National Fire Protection Association, Quincy, Massachusetts, as adopted by the State of Colorado, and the same is hereby adopted by reference as a primary code to have the same force and effect as though set forth in this Chapter in every particular.

[Source: Ord. 1799, 2020]

**Section 10-3-3. Copies on File.** At least one certified copy of the currently adopted National Electrical Code by the State of Colorado, as adopted by the State of Colorado, is on file in the office of the City Clerk and may be inspected during regular business hours.

[Source: Ord. 1799, 2020]

**Section 10-3-4. Scope.** The purpose of the Code is not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of the Code.

[Source: Ord. 1799, 2020]

**Section 10-3-5. Adoption of Annex H.**

Annex H is hereby adopted with the following amendments:

- (a) Article 80.5 is hereby deleted in its entirety.
- (b) Article 80.13(13) is hereby amended by the insertion of "two (2) business days" in the blank space.
- (c) Article 80.15 is hereby amended in its entirety to read as follows:  
"Appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of this Code may be made to the Northglenn Board of Adjustment. Appeals shall be in accordance with 11 of the Northglenn Municipal Code."

- (d) Article 80.19(e) is hereby amended in its entirety to read as follows:  
The fee for each permit required under the National Electrical Code shall be as set forth below:  
Electrical permit fees.  
Residential: this includes single family dwellings, site-built and modular/factory-built homes, duplexes, condominiums, and townhomes.

|    |                                                    |          |
|----|----------------------------------------------------|----------|
| 1) | Not more than 1,000 sq. ft.                        | \$115.00 |
| 2) | Over 1,001 sq. ft. and not more than 1,500 sq. ft. | \$172.50 |
| 3) | Over 1,501 sq. ft. and not more than 2,000 sq. ft. | \$230.00 |
| 4) | Per 100 sq. ft. in excess of 2000 sq. ft.          | \$11.50  |

All other electrical fees: except as provided above, electrical fees shall be computed on the dollar value of the electrical installations including time, material, and contractor profit. Such fees shall be calculated as follows:

|    |                                                     |                                                     |
|----|-----------------------------------------------------|-----------------------------------------------------|
| 1) | Projects under \$500 (including material and labor) | \$50.00                                             |
| 2) | Not more than \$2,000.00                            | \$115.00                                            |
| 3) | \$2,001 and above                                   | \$115.00 + \$11.50 per thousand or fraction thereof |

Miscellaneous electrical fees:

|    |                                                         |          |
|----|---------------------------------------------------------|----------|
| 1) | Mobile/modular home and travel trailer parks, per space | \$115.00 |
| 2) | Re-inspection fee for all of the above                  | \$57.50  |
| 3) | Add fee for temporary heat release                      | \$50.00  |

- (e) Article 80.19(f)(3) is hereby amended by the insertion of "two (2) business days" in the blank space.
- (f) Article 80.23 is hereby amended in its entirety to read as follows:  
It shall be unlawful for any person to violate any of the provisions of the National Electrical Code.

Any violation of the provisions of this ordinance and any violation of any of the provisions of the National Electrical Code, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of the Northglenn Municipal Code.

(g) Article 80.25(c) is hereby amended by the insertion of "two (2) business days" in the blank space.

(h) Article 80.27(a) is hereby amended by the insertion of "City of Northglenn" in the blank space.

(i) Article 80.27(b)(3) is hereby amended by the insertion of "Colorado" in the blank space.

(j) Article 80.27(b)(4) is hereby amended to read as follows:

Shall comply with the State of Colorado Electrical Board requirements.

(k) Article 80.29 is hereby amended by the insertion of "City" in the blank space.

(l) Article 80.33 is hereby deleted in its entirety.

(m) Article 80.35 is hereby deleted in its entirety.

[Source: Ord. 1799, 2020]

**Section 10-3-6. Application.** The provisions of this article and the provisions of the National Electrical Code adopted by reference shall apply to every building or structure located either within or without the corporate limits of the City of Northglenn, the use of which the City has jurisdiction and authority to regulate.

[Source: Ord. 1799, 2020]

**Section 10-3-7. Violations -- Penalty.** It shall be unlawful for any person to violate any of the provisions of the National Electrical Code, as adopted, or the provisions of this ordinance. Any violation of the provisions of this ordinance and any violation of any of the provisions of the National Electrical Code, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of this Code.

[Source: Ord. 1799, 2020]

**Section 10-3-8. Conflicts.** If the provisions of this Code, as adopted in this article, conflict with any other provisions of the Northglenn Municipal Code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

[Source: Ord. 1799, 2020]

## **ARTICLE 4 INTERNATIONAL PLUMBING CODE**

**Section 10-4-1. Title.** This ordinance shall be known and cited as the International Plumbing Code ordinance.

[Source: Ord. 1799, 2020]

**Section 10-4-2. Adoption of the International Plumbing Code.** The International Plumbing Code, **2021** Edition, as published by the International Code Council, Inc., 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001 is adopted by reference as a primary code and amended as described in Section 10-4-5 below.

[Source: Ord. 1799, 2020]

**Section 10-4-3. Copies on File.** At least one certified copy of the International Plumbing Code, **2021** Edition, as adopted, is on file in the office of the City Clerk and may be inspected during regular business hours.

[Source: Ord. 1799, 2020]

**Section 10-4-4. Purpose.** The purpose of this code is to provide minimum standards to safeguard life or limb, health, property and public welfare by regulating plumbing installations within the City.

[Source: Ord. 1799, 2020]

**Section 10-4-5. Amendments to the International Plumbing Code, **2021** Edition.**

- (a) Section 101.1 "Title" is amended by the addition of the term "City of Northglenn" where indicated.
- (-) Section 103 Code Compliance Agency is deleted in its entirety and hereby amended to read as follows:  
The Building Department shall be appointed by the Chief Appointing Authority of the jurisdiction.
- ~~(b) Section 106.1 is hereby amended by adding an exception.  
Exception: Separate plumbing permits shall not be required where plumbing work is included within the general permit for a building or structure. RECOMMEND REMOVAL, COVERED IN CURRENT CODE~~
- (c) Section **109.3** "Work Commencing before Permit Issuance" is amended by deleting the section in its entirety and hereby amended to read as follows:  
Section **109.3.1** Double Fee. Where a licensed contractor or an individual who starts or proceeds with work for which a permit is required by this Code prior to obtaining said permit, the fees specified in Section 109.2 "Schedule of Permit Fees" of the City of Northglenn Building Code shall be doubled. Such fee shall be paid whether or not such permit is obtained, but the payment of such fee shall not relieve any persons from fully complying with the requirements of this Code.
- (d) Section **109.2 "Schedule of Permit Fees."**  
See IBC **Amendment** Section 109.2 "Schedule of Permit Fees"
- (e) Section **109.2 "Refunds"** is amended by deleting the section in its entirety and replacing it with the following:  
See IBC **Amendment** Section 109.6 "Refunds"
- (f) Section **115.4 "Violations and Penalties"** is deleted in its entirety and hereby amended to read as follows:
1. It shall be unlawful for any person to violate any of the provisions of the International Plumbing Code, **2021** Edition, as adopted, or the provisions of this ordinance.
  2. Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Plumbing Code, **2021** Edition, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of the Northglenn Municipal Code.
  3. Each and every day, on which any violation of the ordinances of the City, or the rules and regulations adopted pursuant to such ordinances, is committed, exists or continues shall be deemed a separate offense.
- (g) Section **116 "Stop Work Orders"** is deleted in its entirety and hereby amended to read as follows:  
Upon notice from the Code Official, work on any plumbing system that is being done contrary to the provisions of this Code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work, or posted in a conspicuous location on the property involved. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the Code Official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be punishable as provided in Section 1-1-10(a)(2) of the Northglenn Municipal Code.

(h) Section 114 "Board of Adjustments" is amended by deleting the section in its entirety and replacing it with the following:

IPC Section 114 "Board of Adjustment"

114.1 General: Appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this Code may be made to the Northglenn Board of Adjustment. Appeals shall be in accordance with Chapter 11 of the Northglenn Municipal Code.

(i) Section 305.4.1 "Sewer Depth" is amended by filling in both areas where indicated to read "36 inches (914mm)."

(j) Section 605.3 "Water Service Pipe" is hereby amended to read as follows:

Reference: Chapter 16 of the City of Northglenn's Public Right-of-Way Standards and Specifications for allowable materials for water service pipe.

(k) Section 904.1 "Required vent extension" is amended to read as follows:

All open vent pipes that extend through a roof shall be terminated at least 12 inches (305mm) above the roof, except where a roof is used for any purpose other than weather protection, the vent extensions shall be run at least 7 feet (2134mm) above the roof.

(l) The following chapters of the appendix are herein adopted in their entirety:

Appendix B. Rates of Rainfall for Various Cities

Appendix D. Degree Day and Design Temperatures

Appendix E. Sizing of Water Piping System

[Source: Ord. 1799, 2020]

**Section 10-4-6. Application.** The provisions of this article and the provisions of the International Plumbing Code and Appendices, 2021 Edition, adopted by reference shall apply to every non-residential building or structure located either within or without the corporate limits of the City of Northglenn, the use of which the City has jurisdiction and authority to regulate.

[Source: Ord. 1799, 2020]

**Section 10-4-7. Violations--Penalty.**

(a) It shall be unlawful for any person to violate any of the provisions of the International Plumbing Code, 2021 Edition, as adopted, or the provisions of this ordinance.

(b) Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Plumbing Code, 2021 Edition, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of the Northglenn Municipal Code.

[Source: Ord. 1799, 2020]

**Section 10-4-8. Conflicts.** If the provisions of this code, as adopted in this Article, conflict with any other provisions of the Municipal Code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

[Source: Ord. 1799, 2020]

**ARTICLE 5**

**INTERNATIONAL FIRE CODE**

**Section 10-5-1. Title.** This ordinance shall be known and cited as the International Fire Code.

[Source: Ord. 1799, 2020]

Section 10-5-2. Adoption of the International Fire Code. The International Fire Code, 2021 Edition, of the International Code Council, Inc., 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001, is adopted by reference as a primary code, including the following appendices: Appendix B, Fire-flow Requirements for Buildings; Appendix C, Fire Hydrant Locations and Distribution; Appendix E, Hazard Categories; Appendix F, Hazard Ranking; and Appendix G, Cryogenic Fluid--Weight and Volume Equivalents, to have the same force and effect as though set forth in this chapter in every particular, as amended by Section 10-5-5 below.

[Source: Ord. 1799, 2020]

**Section 10-5-3. Copies on File.** At least one certified copy of the International Fire Code, 2021 Edition as adopted, is on file in the office of the City Clerk and may be inspected during regular business hours.

[Source: Ord. 1799, 2020]

**Section 10-5-4. Purpose.** The purpose of the code is not to recreate or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of the Code.

(a) The purpose of this Chapter is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises and to provide safety to fire fighters and emergency responders during emergency operations.

(b) Provisions in the appendices shall not apply unless specifically adopted.

[Source: Ord. 1799, 2020]

**Section 10-5-5. Amendments to the International Fire Code, 2021 Edition.**

(a) Subsection 101.1, Title, in the 2021 International Fire Code® is amended to read as follows:  
101.1 Title. These regulations shall be known as the Fire Code of the City of Northglenn, hereinafter referred to as "this Code."

(b) Subsection 102.5, Application of Residential Code, in the 2021 International Fire Code® is amended by the addition of an exception, to Item 1 only, to read as follows:

Exception: Dwelling unit fire sprinkler systems, or portions thereof, installed in accordance with Section P2904 in the 2021 International Fire Code® do not require a permit.

Nevertheless, dwelling unit fire sprinkler systems, or portions thereof, installed in accordance with NFPA 13D require a permit pursuant to Section 105.6.1 of this Code.

(c) Subsection 102.7, Referenced Codes and Standards, in the 2021 International Fire Code® is amended by adding the following sentence:

"Where this Code refers to the ICC Electrical Code it means the latest edition of the National Electrical Code® adopted by the State of Colorado."

(d) Section 103.2, Appointment, is deleted in its entirety and is amended as follows:

The Fire Code Official shall be appointed by the chief appointing authority of the jurisdiction.

(e) Subsection 106.1, Submittals, in the 2021 International Fire Code® is amended to read as follows:

**106.1** Submittals. Construction documents shall be submitted in one or more sets and in such form and detail as required by the Fire Code Official. The construction documents shall be prepared by a registered design professional when said documents are submitted in support of an application for a construction permit required by Sections **105.6.1, 105.6.2, 105.6.4, 105.6.5, 105.6.6, 105.6.7, 105.6.9, 105.6.10, 105.6.12, 105.6.19, 105.6.20, 105.6.21, 105.6.23, or 105.6.25.** When requested, qualification statements shall be submitted to the Fire Code Official for the registered design professional to demonstrate compliance with the professional qualifications defined in Section 202.

(f) A new Subsection **106.2.5**, Fire Protection and Life Safety Analysis, in the 2021 International Fire Code® is added to read as follows:

**106.2.5** Fire Protection and Life Safety Analysis. The Fire Code Official may require the owner or agent to provide, without charge to the jurisdiction, a fire protection and life safety analysis prior to submitting construction drawings for high-rise buildings; covered mall buildings; buildings containing atriums connecting more than two stories; buildings



containing high-piled combustible storage; Group A occupancies with an occupant load of 300 or more; Group H occupancies requiring a hazardous materials management plan and/or a hazardous materials inventory statement in accordance with Chapter 50; Groups I-2 and I-3 occupancies; any building, structure, or facility utilizing a performance-based approach to design in accordance with Sections 104.9 or 104.10; and other structures or facilities as required by the Fire Code Official. A fire protection and life safety analysis shall provide a description of the fire protection and life safety systems design for the proposed building and/or facility. This description shall include the basic concepts used for suppression, alarm, notification, egress, fire-resistive assemblies, smoke control, stair pressurization, and other related systems; as well as the coordination of those systems. Upon completion of the project, a copy of the approved documentation shall be maintained at the site and by the Fire Code Official until demolition of the building and/or facility. The fire protection and life safety analysis shall:

1. Be prepared by a qualified engineer, specialist, laboratory, or fire safety specialty organization acceptable to the Fire Code Official;
2. Bear the seal of a registered design professional;
3. Include a preliminary plan of the building, facility, or structure, drawn to scale upon suitable material;
4. Provide an analysis of fire protection water supplies for the building, facility, or structure, in accordance with Section 507;
5. Explain the intended use of the building, facility, or structure, or the applicable portions thereof, including special processes, the materials within the building, and the maximum height of any storage;
6. Describe all active and passive fire protection features of a specific facility, including, but not limited to, the basic concepts used for fire suppression, alarm, notification, egress, fire-resistive assemblies, smoke control, stair pressurization, and other related systems, as well as the coordination and integration of those systems with one another; and
7. Analyze the design, operation, use, coordination, and interaction of the fire-protection and life-safety systems.

Prior to issuing operational or construction permits required by this Code, the Fire Code Official must determine, with reasonable certainty, that the fire protection and life safety features as documented in the fire protection and life safety analysis achieve minimum code compliance and provide the level of protection intended by this Code.

The Fire Code Official shall specify the required organization, content categories, and format of the fire protection and life safety analysis.

(g) Subsection 105.5.29(1), LP-gas, in the 2021 International Fire Code® is amended to read as follows:

**105.5.29(1)** An operational permit is required for: Storage and use of the LP-gas in capacities exceeding 125 gallons (474 L) water capacity.

(h) Subsection 105.5.49, Temporary membrane structures and tents, in the 2021 International Fire Code® is amended to read as follows:

**105.6.49** Temporary membrane structures and tents. An operational permit is required to operate an air-supported temporary membrane structure, a temporary special event structure or a tent having an area in excess of 400 square feet (37 m<sup>2</sup>).

Exceptions:

1. Tents used exclusively for recreational camping purposes.
2. Funeral tents and curtains, or extensions attached thereto, when used for funeral services.
3. Tents and awnings open on all sides, which comply with the following:
  - (3.1) Individual tents shall have a maximum size of 700 square feet (65 m<sup>2</sup>).

(3.2) The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m2) total.

(3.3) A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be maintained.

4. Temporary special event structures in excess of 700 square feet (65 m2).

(i) Subsection **105.6.6**, Fire Alarm and Detection Systems and Related Equipment, in the **2021 International Fire Code®** is amended to read as follows:

**105.6.6** Fire Alarm and Detection Systems and Related Equipment. A construction permit is required for installation of or modification to fire alarm and detection systems and related equipment, including Emergency Alarm Systems (Section 908) and Smoke Control Systems (Section 909). Maintenance performed in accordance with this Code is not considered a modification and does not require a permit.

(j) A new Subsection **105.6.25**, Explosion Control, in the **2021 International Fire Code®** is added to read as follows:

**105.6.25** Explosion Control. A construction permit is required to install or modify explosion control provided as required in Section 911.

(k) Subsection **105.6.15**, LP-Gas, in the **2021 International Fire Code®** is amended to read as follows:

**105.6.15** LP-Gas. A construction permit is required for the installation or modification to an LP-gas system incorporating an individual container that exceeds a 125-gallon (474 L) water capacity. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit.

[Source: Ord. 1799, 2020]

(l) Subsection **105.6.20**, Solar Photovoltaic Power Systems, in the **2021 International Fire Code®** is amended by the addition of the following exception:

Exception: Photovoltaic power systems installed on detached, non-habitable Group U structures including, but not limited to, parking shade structures, carports, solar trellises, and similar structures shall not require the issuance of a construction permit by the District.

(m) Subsection **105.6.24**, Temporary membrane structures and tents, in the **2021 International Fire Code®** is amended to read as follows:

**105.7.25** Temporary membrane structures and tents. A construction permit is required to erect an air-supported temporary membrane structure, a temporary special event structure or a tent having an area in excess of 400 square feet (37 m2).

Exceptions.

1. Tents used exclusively for recreational camping purposes.
2. Funeral tents and curtains, or extensions attached thereto, when used for funeral services.
3. Tents and awnings open on all sides, which comply with the following:

(3.1) Individual tents shall have a maximum size of 700 square feet (65 m2).

(3.2) The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m2) total.

(3.3) A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be maintained.

4. Temporary special event structures of 700 square feet (65 m2) or less.

**Subsections 107.2, 107.4, and 107.6 are amended by substituting the words "applicable governing authority" with "North Metro Fire Rescue District".**

(n) Subsection **108.2.1**, Inspection Requests, in the **2021 International Fire Code®** is amended by adding the following sentence: "Whenever any installation subject to inspection prior to use is required, the Fire Code Official is authorized to require that every such request for inspection be filed not less than two **business** days before such inspection is desired."

(o) Section 111, Board of Appeals, in the 2021 International Fire Code® is repealed in its entirety and re-enacted to read as follows:

Section 111, Appeals.

Section 111.1 Appeals procedure – general. Any person, firm, or corporation aggrieved by any application, interpretation, or order made by fire district personnel pursuant to any provision of this code or the standards adopted herein may appeal such decision, interpretation, or order to the fire chief. The decision of the fire chief shall be considered a final administrative decision.

Justification: North Metro recommends that, before an appeal goes to the Northglenn Board of Adjustment, that the appeal should be heard by the fire chief. Only after that step should appeals be brought to the Northglenn Board of Adjustment. This is how the appeals procedure was locally adopted prior to the 2018 IFC adoption.

Section 111.2 Appeals procedure – administrative decisions. Appeals of administrative decisions made by the fire chief relative to the application and interpretation of this Code may be made to the Northglenn Board of Adjustment. Such appeals shall be in accordance with Chapter 11 of the Northglenn Municipal Code.

(p) Subsection 112.4, Violation Penalties, of 2021 International Fire Code® is amended to read as follows:

112.4, Violation Penalties. Persons who shall violate a provision of this Code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair, or do work in violation of the approved construction documents or directive of the Fire Code Official, of a permit or certificate used under provisions of this Code, shall be punishable as prescribed in Section 1-1-10(a)(2) of the Northglenn Municipal Code. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

(q) Subsection 113.4, Failure to Comply, in the 2021 International Fire Code® is amended to read as follows:

113.4 Failure to Comply. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable for such penalties as prescribed in Section 1-1-10(a)(2) of the Northglenn Municipal Code.

(r) Section 202, General Definitions, in the 2021 International Fire Code® is amended by defining "registered design professional" to read as follows:

Registered design professional. An engineer, licensed to practice professional engineering, as defined by the statutory requirements of the professional licensure laws of the State of Colorado, who shall be responsible and accountable to possess the required knowledge and skills to perform design, analysis, and verification in accordance with the provisions of this code and applicable professional standards of practice.

(s) Subsection 308.1.4, Open-flame Cooking Devices, in the 2021 International Fire Code® is repealed in its entirety and reenacted to read as follows:

308.1.4 Open-flame devices. No gas-fired grills, charcoal grills, or other similar devices used for cooking, heating, or any other purpose, shall be used or kindled on any balcony or under any overhanging portion or within 10 feet (3 m) of any structure.

Exceptions:

1. One- and two-family dwellings, townhomes, and other structures built under the International Residential Code.
2. Where buildings, balconies and decks are protected by an automatic sprinkler system.
3. LP-gas burners having an LP-gas container with a water capacity not greater than 2.5 pounds [nominal 1 pound (0.454 kg) LP-gas capacity]. Two extra 1 pound LP-gas containers may be stored on the balcony.

4. Listed natural gas appliances shall be permitted on balconies when installed in accordance with the International Fuel Gas Code and supplied by the building's natural gas system.
  5. Listed electric ranges, grills, or similar electrical apparatus shall be permitted.
- (t) Subsection 311.5, Placards, in the 2021 International Fire Code® is deleted in its entirety.
- (u) Subsection 504.3, Stairway Access to Roof, in the 2021 International Fire Code® is amended to read as follows:
- 504.3 Stairway Access to Roof. New buildings four or more stories above grade plane, except those with a roof slope greater than four units vertical in 12 units horizontal (33.3-percent slope), shall be provided with a stairway to the roof. When an exit enclosure is required by Section 1023, the stairway to the roof shall be located within an exit enclosure. Stairway access to the roof shall be in accordance with Section 1011.12. Such stairway shall be marked at street and floor levels with a sign indicating that the stairway continues to the roof. Where roofs are used for **landscaped roofs** or for other purposes, stairways shall be provided as required for such occupancy classification.
- (v) Section 509.1, Identification, in the 2021 International Fire Code is amended by adding the following sentence: "Letters, numbers, and directional arrows shall be white text on a red background."
- (w) A new Section 509.1.2, Fire Protection Equipment Identification, in the 2021 International Fire Code is added to read as follows:
- 509.1.2 Fire protection equipment identification. Access to the fire sprinkler valve riser room and/or fire alarm control panel (FACP) shall be identified on the outside of the building with a minimum of 4" high letters or numbers with a 1/2" width stroke. Interior doors that access fire sprinkler valve rooms and/or FACPs shall utilize a minimum of 2" high letters with a 1/4" stroke width.
- (x) **DELETED ENTIRELY**
- (y) A new Section 511, Fire Protection in Recreational Vehicle, Mobile Home, and Manufactured Housing Parks, Sales Lots, and Storage Lots, in the 2021 International Fire Code® is added to read as follows:
- 511 Recreational Vehicle, Mobile Home, and Manufactured Housing Parks, Sales Lots, and Storage Lots. Recreational vehicle, mobile home, and manufactured housing parks, sales lots, and storage lots shall provide and maintain fire hydrants and access roads in accordance with Sections 503 and 507.
- Exception: Recreational vehicle parks located in remote areas shall be provided with protection and access roadways as required by the Fire Code Official.
- (z) A new Section **605.10**, Carbon Monoxide Alarm and Detector Maintenance, Inspection, and Testing, in the 2021 International Fire Code® is added to read as follows:
- 605.10** Carbon Monoxide Alarm and Detector Maintenance, Inspection, and Testing. The building owner shall be responsible to maintain all carbon monoxide alarms and detectors in an operable condition at all times. Maintenance, inspection, and testing shall be performed in accordance with the manufacturer's instructions or nationally recognized standards. A written record shall be maintained and shall be made available to the Fire Code Official **upon request**.
- (aa) Subsection 903.2.6, Group I, in the 2021 International Fire Code® is amended **by the addition of Exception 4:**
- Exception 4: An automatic sprinkler system installed in accordance with Section 903.3.1.1 shall be provided throughout all Group I-1 facilities that meet the federal Fair Housing Act definition of senior housing or housing for older persons.**
- (bb) **Exception 1 to Section 903.2.6 Group I in the 2021 International Fire Code® is amended to read as follows:**

EXCEPTION 1: An automatic sprinkler system installed in accordance with Section 903.1.2 shall be permitted in Group I-1 Condition 1 facilities that do not meet the federal Fair Housing Act definition of senior housing or housing for older persons.

Section 903.2.8.1 Group R3 Automatic Sprinkler Systems is deleted in its entirety.

(cc) A new subsection to 903.2.8, Group R, in the 2021 International Fire Code® is added to read as follows:

903.2.8.5 Group R-2. An automatic sprinkler system installed in accordance with Section 903.3.1.1 shall be provided throughout all Group R-2 occupancies that meet the federal Fair Housing Act definition of senior housing or housing for older persons.

(dd) Subsection 903.2.11.1.3, Basements, in the 2021 International Fire Code® is amended to read as follows:

903.2.11.1.3 Basements. Where any portion of a basement is located more than 75 feet (22860 mm) from openings required by Section 903.2.11.1, the basement shall be equipped throughout with an approved automatic sprinkler system.

Subsection 903.3.1.2.1, Balconies and decks, is amended to read as follows:

903.3.1.2.1 Balconies and decks. Sprinkler protection shall be provided for exterior balconies, decks, and ground floor patios including all closets and usable storage spaces located thereon and accessed therefrom where either of the following conditions exist:

1. The building is of Type V construction, provided that there is a roof or deck above.
2. Exterior balconies, decks and ground floor patios of dwelling units and sleeping units are constructed in accordance with Section 705.2.3.1, Exception 3 of the International Building Code.

Sidewall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch (25 mm) to 6 inches (152 mm) below the structural members and a maximum distance of 14 inches (356 mm) below the deck of the exterior balconies and decks that are constructed of open wood joist construction.

(ee) Subsection 905.2, Installation Standard, in the 2021 International Fire Code® is amended to read as follows:

905.2 Installation Standard. Standpipe systems shall be installed in accordance with this Section and NFPA 14. Fire department connections for standpipe systems shall be in accordance with Section 912. Fire hose is not required for any class of standpipe system.

(ff) Subsection 907.4.2.4, Signs, in the 2021 International Fire Code® is amended to read as follows:

907.4.2.4 Signs. Where fire alarm systems are not monitored by a supervising station, an approved permanent sign shall be installed adjacent to each manual fire alarm box that reads: WHEN ALARM SOUNDS -- DIAL 9-1-1.

(gg) Subsection 907.5.2.1.1, Average Sound Pressure, in the 2021 International Fire Code® is amended by adding the following sentence:

"The minimum sound pressure levels shall be: 75 dBA in occupancies in Groups R and I; 90 dBA in mechanical equipment rooms; and 60 dBA in other occupancies."

(hh) Subsection 912.1, Installation, in the 2021 International Fire Code® is amended to read as follows:

912.1 Installation. Fire department connections shall be installed in accordance with this Section and the NFPA standard applicable to the system design and shall comply with Sections 912.2 through 912.7. **Unless the incorporation of the large diameter Storz-style connections is specifically approved by the Fire District,** the number of 2.5-inch inlets provided shall not be less than one for each 250 gallons per minute of system demand or major fraction thereof, to a maximum of six 2.5-inch inlets. Each inlet shall be equipped with a clapper valve to allow each hose to be connected and charged before the addition of more hoses.

(ii) **1010.2.4(3)(3.1)**, Locks and Latches, in the **2021 International Fire Code®** is amended to read as follows.

**3.1** The locking device is readily distinguished as locked by the incorporation of a visual indicator (e.g., "locked," "closed," or other wording approved by the code official) on the egress side of the door.

(jj) The Exception to Section 1011.12, Roof Access in the **2021 International Fire Code** is deleted in its entirety.

**The Exception to Section 1011.12.2, Stairway to Roof in the 2021 International Fire Code is deleted in its entirety.**

(kk) Subsection 1101.1, Scope, in the **2021 International Fire Code®** is amended to read as follows:

1101.1 Scope. The provisions of this Chapter shall apply to existing buildings constructed prior to the adoption of this Code.

Exception: Buildings, portions of buildings, and life safety components therein, including the means of egress, that currently comply with the code under which constructed.

(ll) Subsection 3105.2, Approval, in the **2021 International Fire Code** is amended to read as follows:

3105.2 Approval. Temporary special event structures in excess of 700 square feet (65 m<sup>2</sup>) shall not be erected, operated or maintained for any purpose without first obtaining approval and a permit from the fire code official.

(mm) Subsection 3107.8, Clearance, of the **2021 International Fire Code** is deleted in its entirety.

(nn) Subsection 3401.1, Scope, in the **2021 International Fire Code®** is amended to read as follows:

3401.1 Scope. Tire rebuilding plants, tire storage in excess of 6 feet (1829 mm) in height or in excess of 1000 square feet (93 m<sup>2</sup>) in area and tire byproduct facilities shall comply with this chapter, other applicable requirements of this code and NFPA 13. Tire storage in buildings shall also comply with Chapter 32.

(oo) Section 5601.1.3, Fireworks, in the **2021 International Fire Code®** is amended by deleting Exception 4.

(pp) Subsection 5704.2.9.6.1, Locations Where Above-Ground Tanks are Prohibited, in the **2021 International Fire Code®** is amended to read as follows:

**5704.2.9.6.1 Locations Where Above-Ground Tanks are allowed. Storage of Class I and II liquids in aboveground tanks outside of buildings is allowed when such storage complies with Sections 5704.2.9.6.1 through 5704.2.9.6.3.**

(qq) Subsection 5706.2.4.4, Locations Where Above-Ground Tanks are Prohibited, in the **2021 International Fire Code®** is amended to read as follows:

5706.2.4.4 Locations where above-ground tanks are allowed. Storage of Class I and II liquids in above-ground tanks outside of buildings is allowed when such storage complies with Sections 5704.2.9.6 through 5704.2.9.6.3.

Exception: When approved by the Fire Code Official.

(rr) Subsection 6104.2, Maximum Capacity within Established Limits, in the 2021 International Fire Code® retaining the exception as printed, is amended to read as follows:

6104.2 Maximum Capacity within Established Limits. Within the City of Northglenn, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons (7570 L).

(ss) The NFPA standards in Chapter 80, Referenced Standards, in the 2021 International Fire Code® are retained except as modified in the following table:

| <b>Standard reference number:</b> | <b>Change to:</b> |
|-----------------------------------|-------------------|
| 02-19                             | 02-20             |
| 11-16                             | 11-21             |
| 12-18                             | 12-22             |
| 12A-18                            | 12A-22            |
| 13-19                             | 13-22             |
| 13D-19                            | 13D-22            |
| 13R-19                            | 13R-22            |
| 15-17                             | 15-22             |
| 17-20                             | 17-21             |
| 17A-20                            | 17A-21            |
| 20-19                             | 20-22             |
| 24-19                             | 24-22             |
| 32-16                             | 32-21             |
| 33-18                             | 33-21             |

|        |        |
|--------|--------|
| 34-18  | 34-21  |
| 35-16  | 35-21  |
| 40-19  | 40-22  |
| 55-19  | 55-20  |
| 68-13  | 68-18  |
| 72-19  | 72-22  |
| 76-16  | 76-20  |
| 77-14  | 77-19  |
| 80-19  | 80-22  |
| 92-18  | 92-21  |
| 96-20  | 96-21  |
| 105-19 | 105-22 |
| 110-19 | 110-22 |
| 111-19 | 111-22 |
| 170-18 | 170-21 |
| 204-18 | 204-21 |
| 232-17 | 232-22 |
| 241-19 | 241-22 |
| 318-18 | 318-22 |
| 385-17 | 385-22 |



|         |         |
|---------|---------|
| 400-19  | 400-22  |
| 407-17  | 407-22  |
| 409-16  | 409-22  |
| 484-19  | 484-22  |
| 704-17  | 704-22  |
| 780-17  | 780-20  |
| 1123-18 | 1123-22 |
| 1124-17 | 1124-22 |
| 1125-17 | 1125-22 |
| 1142-17 | 1142-22 |
| 2001-18 | 2001-22 |

[Source: Ord. 1799, 2020]

**Section 10-5-6. Application.** The provisions of this Article and the provisions of the International Fire Code and Appendices adopted by reference shall apply to every building or structure located either within or without the corporate limits of the City of Northglenn, the use of which the city has jurisdiction and authority to regulate.

[Source: Ord. 1799, 2020]

**Section 10-5-7. Violations--Penalty.**

(a) It shall be unlawful for any person to violate any of the provisions of the International Fire Code, 2021 Edition, as adopted, or the provisions of this ordinance.

(b) Any violation of the provisions of this ordinance, and any violation of any of the provisions of the International Fire Code, 2021 edition, as adopted, shall upon conviction, be punishable as provided in Section 1-1-10(a)(2) of this Code.

[Source: Ord. 1590, 2011]

**Section 10-5-8. Conflicts.** If the provisions of this Code, as adopted in this Article, conflict with any other provisions of the Municipal Code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

[Source: Ord. 1590, 2011]

## ARTICLE 6 INTERNATIONAL MECHANICAL CODE

**Section 10-6-1. Title.** This ordinance shall be known and cited as the International Mechanical Code ordinance.

[Source: Ord. 1799, 2020]

**Section 10-6-2. Adoption of the International Mechanical Code.** The International Mechanical Code, 2021 Edition of the International Code Council, Inc., 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001, is adopted by reference as a primary code and amended as described in Section 10-6-5 below.

[Source: Ord. 1799, 2020]

**Section 10-6-3. Copies on File.** At least one certified copy of the International Mechanical Code, 2021 Edition, as adopted is on file in the office of the City Clerk and may be inspected during regular business hours.

[Source: Ord. 1799, 2020]

**Section 10-6-4. Purpose.** The purpose of this Code is to provide minimum standards to safeguard life or limb, health, property and public welfare by regulating mechanical installations within the City.

[Source: Ord. 1799, 2020]

**Section 10-6-5. Amendments to the International Mechanical Code, 2021 Edition.**

(a) Section 101.1 is deleted in its entirety and hereby amended to read as follows:

These regulations shall be known as the International Mechanical Code of the City of Northglenn, hereinafter referred to as "This Code."

(b) Section 103.2 "Appointment" is deleted in its entirety and hereby amended to read as follows:

**The Building Official shall be appointed by the Chief Appointing Authority of the jurisdiction.**

(c) Section 106.1 "Where required" is deleted in its entirety and hereby amended to read as follows:

Any owner, authorized agent or contractor who desires to construct, enlarge, alter, repair, move, demolish or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any mechanical system, the installation of which is regulated by this Code, or to cause any such work to be done, shall first make application to the Code Official and obtain the required permit for the work.

Exception 1: Where equipment and appliance replacements or repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day of the department of mechanical inspection.

Exception 2: Separate mechanical permits shall not be required where mechanical work is included within a general permit for a building or structure.

(d) Section 109.2 "Schedule of Permit Fees" is deleted in its entirety and hereby amended to read as follows:

**See IBC Amendment Section 109.2**

(e) Section 109.4 "Work commencing before permit issuance" is deleted in its entirety and hereby amended to read as follows:

Double fee: Where a licensed contractor or an individual who starts or proceeds with work for which a permit is required by this Code prior to obtaining said permit, the fees specified in section 109.2 "Schedule of Permit Fees" of the City of Northglenn Building Code shall be doubled. Such fee shall be paid whether or not such permit is obtained, but the payment of such fee shall not relieve any persons from fully complying with the requirements of this Code.

(f) Section 109.6 "Refunds" is deleted in its entirety and hereby amended to read as follows:

See IBC **Amendment** Section 109.6 "Refunds"

(g) Section 114 " Board of Adjustment " is deleted in its entirety and hereby amended to read as follows:

**IMC Section 114 "Board of Adjustment"**

**114.1 General: Appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this Code may be made to the Northglenn Board of Adjustment. Appeals shall be in accordance with Chapter 11 of the Northglenn Municipal Code.**

(h) Section 115.4 "Violation penalties" is deleted in its entirety and hereby amended to read as follows:

1. It shall be unlawful for any person to violate any of the provisions of the International Mechanical Code, 2021 Edition, as adopted, or the provisions of this ordinance.
2. Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Mechanical Code, 2021 Edition, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of Northglenn Municipal Code.
3. Each and every day on which any violation of the ordinances of the City, or the rules and regulations adopted pursuant to such ordinances, is committed, exists or continues shall be deemed a separate offense.

(i) Section 116 "Stop work orders" is deleted in its entirety and hereby amended to read as follows:

Upon notice from the Code Official, work on any mechanical system that is being done contrary to the provisions of this Code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work, or if no such person can be contacted at the property, posted in a conspicuous location on the property involved. The notice shall cite the specific code section violated, and shall state the conditions under which work is authorized to resume. Where an emergency exists, the Code Official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be punishable as provided in Section 1-1-10(a)(2) of Northglenn Municipal Code.

[Source: Ord. 1799, 2020]

**Section 10-6-6. Application.** The provisions of this article and the provisions of the International Mechanical Code and Appendices, 2021 Edition, adopted by reference shall apply to every building or structure located either within or without the corporate limits of the City of Northglenn, the use of which the City has jurisdiction and authority to regulate.

[Source: Ord. 1799, 2020]

**Section 10-6-7. Violations--Penalty.**

(a) It shall be unlawful for any person to violate any of the provisions of the International Mechanical Code, 2021 Edition, as adopted, or the provisions of this ordinance.

(b) Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Mechanical Code, 2021 Edition, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of this Code.

[Source: Ord. 1799, 2020]

**Section 10-6-8. Conflicts.** If the provisions of this Code, as adopted in this Article, conflict with any other provisions of the Municipal Code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

[Source: Ord. 1799, 2020]

**ARTICLE 7**  
**INTERNATIONAL FUEL GAS CODE**

**Section 10-7-1. Title.** This ordinance shall be known and cited as the International Fuel Gas Code ordinance.

[Source: Ord. 1799, 2020]

**Section 10-7-2. Adoption of the International Fuel Gas Code.** The International Fuel Gas Code, 2021 Edition of the International Code Council, Inc., 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001, is adopted by reference as a primary code and amended as described in Section 10-7-5 below.

[Source: Ord. 1799, 2020]

**Section 10-7-3. Copies on File.** At least one certified copy of the International Fuel Gas Code, 2021 Edition, as adopted, is on file in the office of the City Clerk and may be inspected during regular business hours.

[Source: Ord. 1799, 2020]

**Section 10-7-4. Purpose.** The purpose of this Code is to provide minimum standards to safeguard life or limb, health, property and public welfare by regulating fuel gas installations within the City.

[Source: Ord. 1799, 2020]

**Section 10-7-5. Amendments to the International Fuel Gas Code, 2021 Edition.**

(a) Section 101.1 "Title" is amended by the addition of the term "City of Northglenn" where indicated.

(b) Section 106.1 "Where required" is hereby amended to add the following exception:

Exemption 1: Where appliance and equipment replacements and repairs are required to be performed in an emergency situation, the permit application shall be submitted within the next working business day of the Department of Inspection.

Exception 2: Separate fuel gas permits shall not be required where fuel gas work is included within a general permit for a building or structure.

(c) Section 109.4 "Work Commencing before Permit Issuance" is amended by deleting the section in its entirety and hereby amended to read as follows:

Section 109.4.1 Double Fee. Where a licensed contractor or an individual who starts or proceeds with work for which a permit is required by this Code prior to obtaining said permit, the fees specified in section 109.2 "Schedule of Permit Fees" of the City of Northglenn Building Code shall be doubled. Such fee shall be paid whether or not such permit is obtained, but the payment of such fee shall not relieve any persons from fully complying with the requirements of this Code.

(d) Section 109.2 "Schedule of Permit Fee"

See IBC Amendment Section 109.2. "Schedule of Permit Fees"

(e) Section 109.6 "Refunds" is amended by deleting the section in its entirety and hereby amended to read as follows:

See IBC Section Amendment 109.6. "Refunds"

(f) Section 115.4 "Violation Penalties" is deleted in its entirety and hereby amended to read as follows:

1. It shall be unlawful for any person to violate any of the provisions of the International Fuel Gas Code, 2021 Edition, as adopted, or the provisions of this ordinance.
2. Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Fuel Gas Code, 2021 Edition, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of the Northglenn Municipal Code.

3. Each and every day on which any violation of the ordinances of the City, or the rules and regulations adopted pursuant to such ordinances, is committed, exists or continues shall be deemed a separate offense.

(g) Section 116 "Stop Work Orders" is deleted in its entirety and hereby amended to read as follows:

Upon notice from the Code Official, work on any fuel gas system that is being done contrary to the provisions of this Code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work, or posted in a conspicuous location on the property involved. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the Code Official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be punishable as provided in Section 1-1-10(a)(2) of the Northglenn Municipal Code.

(h) Section 114 "Board of Appeal" is amended by deleting the section in its entirety and replacing it with the following:

Section 114 "Board of Adjustment"

114.1 General: Appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this code may be made to the Northglenn Board of Adjustment. Appeals shall be in accordance with Chapter 11 of the Northglenn Municipal Code.

(i) Section 406.4.1. "Test Pressure" is amended by changing 3 PSIG to 10 PSIG.

[Source: Ord. 1799, 2020]

**Section 10-7-6. Violations--Penalty.**

(a) It shall be unlawful for any person to violate any of the provisions of the International Fuel Gas Code, 2021 Edition, as adopted, or the provisions of this ordinance.

(b) Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Fuel Gas Code, 2021 Edition, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of the Northglenn Municipal Code.

[Source: Ord. 1799, 2020]

**Section 10-7-7. Conflicts.** If the provisions of this Code, as adopted in this Article, conflict with any other provisions of the Municipal Code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

[Source: Ord. 1799, 2020]

## **ARTICLE 8 INTERNATIONAL RESIDENTIAL CODE**

**Section 10-8-1. Title.** This ordinance shall be known and cited as the International Residential Code.

[Source: Ord. 1799, 2020]

**Section 10-8-2. Adoption of the International Residential Code.** The International Residential Code, 2021 Edition, as published by the International Code Council, Inc., 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001, is adopted by reference as a primary code and amended as described in Section 10-8-5 below.

[Source: Ord. 1799, 2020]

**Section 10-8-3. Copies on File.** At least one certified copy of the International Residential Code, 2021 Edition, as adopted, is on file in the office of the City Clerk and may be inspected during regular business hours.

[Source: Ord. 1799, 2020]

**Section 10-8-4. Purpose.** The purpose of this Code is to provide minimum standards to safeguard life or limb, health, property and public welfare by regulating the design, construction and use of all detached one and two-family dwellings and single family townhouses not more than 3 stories above grade, and existing buildings undergoing repair, alteration or additions within the City of Northglenn.

[Source: Ord. 1799, 2020]

**Section 10-8-5. Amendments to the International Residential Code, 2021 Edition.**

(a) Section R101.1 "Title" is amended by the addition of the term "City of Northglenn" where indicated.

(b) Section R104.10.1 "Flood hazard areas." Building Official is amended to the term "City of Northglenn".

(c) Section R105.2 "Work exempt from permit"

1. Delete Section 105.2, Buildings, Exception 1 in its entirety and amend to read: 105.2, Exception 1: **Other than storm shelters**; Detached accessory structures, as defined in Chapter 11 of the Northglenn Municipal Code, provided that the floor area does not exceed 200 square feet (18.58 m<sup>2</sup>).
2. Delete Section 105.2, Buildings, Exception 2 in its entirety.

(d) Section R108.2 "Schedule of permit fees"

See IBC Section 109.2 "Schedule of permit fees"

(e) Section R108.5 "Refunds"

See IBC Section 109.6 "Refunds"

(f) Section R108.6 "Work commencing before permit issuance" is hereby amended to read as follows:

Section 108.6 Double fee.

Where a licensed contractor or an individual who starts or proceeds with work for which a permit is required by this code prior to obtaining said permit, the fees specified in section 109.2 "Schedule of permit fees" of the City of Northglenn Building Code shall be doubled. Such fee shall be paid whether or not such permit is obtained, but the payment of such fee shall not relieve any persons from fully complying with the requirements of this code.

(g) Section R112 General. "Board of Appeals" is amended by deleting the section in its entirety and replacing it with the following:

Section 112 "Board of Adjustment"

112.1 General: Appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this code may be made to the Northglenn Board of Adjustment. Appeals shall be in accordance with Chapter 11 of the Northglenn Municipal Code.

(h) Section R313.2 One – Two-family dwelling automatic Fire Sprinkler Systems is deleted in its entirety. **Move this to the correct place numerically**

(i) Section **R114.2 "Issuance"** is hereby amended to read as follows:

The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent or to the person doing the work or posted in a conspicuous location on the property involved. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order, and the conditions under which work will be permitted to resume.

(j) Section R202 "Definitions" is amended by the addition of the following:  
 "Sleeping room" (bedroom) any enclosed habitable space within a dwelling unit, which complies with the minimum room dimension requirements of IRC Sections R304 and R305 and contains a closet, an area that is useable as a closet, or an area that is readily convertible for use as a closet. Living rooms, family rooms and other similar habitable areas that are so situated and designed so as to clearly indicate these intended uses, shall not be interpreted as sleeping rooms.

(k) Table R301.2 (1). IRC Table R301.2 (1) is filled to provide the following:

**TABLE R301.2  
 CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA**

| GROUND<br>SNOW<br>LOAD<br>s                 | WIND DESIGN                 |                                                               |                                                        |                                                    | SEISMIC<br>DESIGN<br>CATEGO<br>RY <sup>f</sup>         | SUBJECT TO<br>DAMAGE FROM                               |                                      |                              | ICE<br>BARRIE<br>R<br>UNDERL<br>AYMENT<br>REQUIR<br>ED <sup>h</sup> | FLOOD<br>HAZAR<br>DS <sup>g</sup> | AIR<br>FREE<br>ZING<br>INDE<br>XI <sup>i</sup> | MEAN<br>ANNUAL<br>TEMP <sup>j</sup> |
|---------------------------------------------|-----------------------------|---------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------|--------------------------------------|------------------------------|---------------------------------------------------------------------|-----------------------------------|------------------------------------------------|-------------------------------------|
|                                             | Speed <sup>d</sup><br>(mph) | Topogr<br>aphic<br>effects<br>k                               | Spec<br>ial<br>wind<br>regio<br>n <sup>l</sup>         | Wind-<br>borne<br>debris<br>zone <sup>m</sup>      |                                                        | Weathe<br>ring <sup>a</sup>                             | Frost<br>line<br>depth <sup>b</sup>  | Ter<br>mite <sup>c</sup>     |                                                                     |                                   |                                                |                                     |
| 30                                          | 130                         | NO                                                            | B                                                      | NO                                                 | B                                                      | SEVER<br>E                                              | 36"                                  | SLIGHT<br>TO<br>MODER<br>ATE | NO                                                                  | 12/2/202<br>1                     | 1500                                           | 45° F                               |
| <b>MANUAL J DESIGN CRITERIA<sup>n</sup></b> |                             |                                                               |                                                        |                                                    |                                                        |                                                         |                                      |                              |                                                                     |                                   |                                                |                                     |
| Elevation                                   |                             | Altitu<br>de<br>corr<br>ectio<br>n<br>facto<br>r <sup>e</sup> | Coinciden<br>t<br>wet bulb                             | Indoor<br>winter<br>design<br>relative<br>humidity | Indoor winter<br>design dry-<br>bulb<br>temperature    | Outdoor<br>winter design<br>dry-bulb<br>temperature     | Heating<br>temperature<br>difference |                              |                                                                     |                                   |                                                |                                     |
| 5377                                        |                             | 0.84                                                          | 59° F                                                  | 64° F                                              | 72° F                                                  | 6° F                                                    | 69° F                                |                              |                                                                     |                                   |                                                |                                     |
| Latitude                                    |                             | Daily<br>range                                                | Indoor<br>summer<br>design<br>relative<br>humidit<br>y | Indoor<br>summer<br>design<br>relative<br>humidity | Indoor<br>summer<br>design dry-<br>bulb<br>temperature | Outdoor<br>summer<br>design dry-<br>bulb<br>temperature | Cooling<br>temperature<br>difference |                              |                                                                     |                                   |                                                |                                     |
| 39.8962°                                    |                             | HIGH<br>(H)                                                   | 50° F                                                  | 30° F                                              | 75° F                                                  | 91° F                                                   | 16° F                                |                              |                                                                     |                                   |                                                |                                     |

(l) Section R310.4.2 "Ladder and steps" is amended by the addition of the following exception to read as follows:

Exception: Only one window well ladder shall be required in an unfinished basement.

(p) Section R401.2 "Requirements" is amended by the addition of the following:

Where soils reports show the need for it, foundations shall be designed and the construction drawings stamped by a Colorado registered design professional. The foundation design must be based on an engineer's soils report. The drawings must be noted with the engineering firm name, specific location for design and soils report number.

A site certification prepared by a State of Colorado registered design professional is required for setback verification on all new occupancies.

(q) Chapter 11 [RE] ENERGY EFFICIENCY is hereby deleted in its entirety and all provisions for energy efficiency shall comply with the currently adopted International Energy Conservation Code, residential provisions, and its local amendments because the language of this chapter is duplicated therein.

(r) Section G2417.4.1 "Test pressure" is amended by the addition of "10 PSIG."

(s) Section P2603.5.1 "Sewer depth" is amended by filling in both areas where indicated to read "12 inches (305 mm)."

[Source: Ord. 1799, 2020]

**Section 10-8-6. International Residential Code Appendices.** The following chapters of the appendices are herein adopted in their entirety:

- (a) Appendix **AF** - Radon Control Methods
- (b) Appendix **AH** - Patio Covers
- (c) Appendix **AK** - Sound Transmission
- (d) Appendix **AO** - Automatic Vehicular Gates
- (e) Appendix **AQ** - Tiny Houses
- (f) Appending **AR** - Light Straw Clay Construction
- (g) Appendix **AS** - Strawbale Construction

[Source: Ord. 1799, 2020]

**Section 10-8-7. Application.** The provisions of this article and the provisions of the International Residential Code, **2021** Edition, and appendices adopted by reference shall apply to every residential building or structure located either within or without the corporate limits of the City of Northglenn, the use of which the City has jurisdiction and authority to regulate.

[Source: Ord. 1799, 2020]

**Section 10-8-8. Violations--Penalty.**

(a) It shall be unlawful for any person to violate any of the provisions of the International Residential Code, **2021** Edition, as adopted, or the provisions of this ordinance.

(b) Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Residential Code, **2021** Edition, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of Northglenn Municipal Code.

[Source: Ord. 1799, 2020]

**Section 10-8-9. Conflicts.** If the provisions of this article conflict with any other provisions of the Municipal Code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

[Source: Ord. 1799, 2020]

## **ARTICLE 9 ELEVATOR AND ESCALATOR CODE**

~~of Northglenn Elevator and Escalator Code.~~

[Source: Ord. 1517, 2008]

~~**Section 10-9-2. Purpose and Scope.**~~

~~(a) The purpose of this Article is to safeguard life, limb, property and public welfare by establishing minimum requirements regulating the design, construction, alteration, operation and maintenance of elevators, dumbwaiters, escalators, moving walks, platform lifts and chair lifts by establishing procedures by which these requirements may be enforced. The purpose of this Chapter is not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of the City of Northglenn Elevator and Escalator Code.~~



~~(b) This Article shall apply to all conveyances within the City, except that this Article shall not apply to:~~

- ~~1. Materials hoists;~~
- ~~2. Manlifts;~~
- ~~3. Mobile scaffolds, towers and platforms;~~
- ~~4. Powered platforms and equipment for exterior and interior maintenance;~~
- ~~5. Conveyors and related equipment;~~
- ~~6. Cranes, derricks, hoists, hooks, jacks, and slings;~~
- ~~7. Industrial trucks within the scope of ASME publication B56;~~
- ~~8. Items of portable equipment that are not portable escalators;~~
- ~~9. Tying or piling machines used to move materials between storage locations that operate entirely within one story;~~
- ~~10. Equipment for feeding or positioning materials at machine tools, printing presses, and other similar equipment;~~
- ~~11. Skip or furnace hoists;~~
- ~~12. Wharf Ramps;~~
- ~~13. Railroad car lifts or dumpers;~~
- ~~14. Line jacks, false cars, shafters, moving platforms, and similar equipment used by a certified conveyance contractor for installing a conveyance;~~
- ~~15. Conveyances at facilities regulated by the mine safety and health administration of the United States Department of Labor, or its successor, pursuant to the "Federal Mine Safety and Health Act of 1977", Pub. L. 91-173, Codified at 30 U.S.C. § 801, et seq., as amended;~~
- ~~16. Elevators within the facilities of gas or electric utilities that are not accessible to the public;~~
- ~~17. A passenger tramway defined in C.R.S. § 25-5-702; and~~
- ~~18. Any conveyance located within a single family residence.~~

[Source: Ord. 1517, 2008]

#### Section 10-9-3. Definitions.

For purposes of this Article, the following terms shall have the following meanings:

1. "Conveyance" means:
  - ~~(a) A hoisting and lowering mechanism equipped with a car or platform that moves between two or more landings. Such equipment includes, but is not limited to, elevators and platform lifts, personnel hoists, stairway chair lifts and dumbwaiters;~~
  - ~~(b) Power driven stairways and walkways for carrying persons between landings. Such equipment includes, but is not limited to, escalators and moving walks; or~~
  - ~~(c) Automated people movers as defined in ASCE 21 (2005 Edition). ? still correct edition?~~
2. "Single family residence" means a private residence that is a separate building or an individual residence that is part of a row of residences joined by common sidewalks.

[Source: Ord. 1517, 2008]

#### Section 10-9-4. Adoption of Standards.

(a) Standards. The following standards of American Society of Mechanical Engineers ("ASME") of Three Park Avenue, New York, NY 10016-5990 and the American Society of Civil Engineers ("ASCE") of 1801 Alexander Bell Drive, Reston, Virginia 20191-4400 are adopted by reference and amended as described herein:

1. ASME A17.1 (2007 Edition);
2. ASME A17.3 (2005 Edition);
3. ASME A18.1 (2005 Edition); and
4. ASCE 21 (2005 Edition).

~~(b) Exemptions. Those conveyances installed before July 1, 2008, shall be exempt from compliance with ASME A17.3 (2005 Edition) unless such conveyance is altered or remodeled or compliance is otherwise necessary in order to protect against a material risk to the public safety.~~

~~(c) Copies. At least one (1) certified copy of all standards adopted pursuant to this Section shall be held on file in the office of the City Clerk and may be inspected during regular business hours.~~

~~(d) Amendments. ASME A17.1 (2007 Edition) is amended by the addition of new Sections 8.13 and 8.14 of Part VIII to read as follows:~~

### **Section 8.13**

#### **Permits and Certificates of Operation**

~~Rule 8.13.1 Permits.~~

~~It shall be unlawful to hereafter install any new elevator, moving walk, escalator or dumbwaiter, to make major alternations to any existing elevator, dumbwaiter, escalator, or moving walk without first having obtained a permit for such installation from the Building Official. Permits shall not be required for maintenance or minor alterations. Incorrect, permitting is through the State~~

~~Rule 8.13.2 Certificates of Operation.~~

~~Rule 8.13.2.1 Unlawful Operation.~~

~~It shall be unlawful to operate any elevator, dumbwaiter, escalator, or moving walk without a current certificate of operation issued by the Building Official. Such certificate shall be issued annually upon payment of prescribed fees and the presentation of a valid inspection report indicating that the conveyance is safe and that the inspection was made within the previous six (6) months. Certificates shall not be issued when the correspondence is posted as unsafe pursuant to Rule 1004.2.~~

~~Rule 8.13.2.2 Fees.~~

~~The fee for the annual certificate of operation for existing installations shall be as established by the City Council from time to time.~~

~~Rule 8.13.2.3 Application for permits.~~

~~Application for a permit to install shall be made on forms provided by the Building Official, and the permit shall be issued to an owner upon payment of the permit fee.~~

~~Rule 8.13.2.4 Application for certificates of operation.~~

~~Application for a certificate of operation shall be made by the owner of an elevator, dumbwaiter, escalator, or moving walk. Applications shall be accompanied by an inspection report approved by the Building Official. Fees as specified in this section shall be paid at the time of application.~~

### **Section 8.14**

#### **Owner Responsibility and Unsafe Conditions**

~~Rule 8.14.1 General.~~

~~The owner shall be responsible for the safe operation and maintenance of each elevator, dumbwaiter, escalator, or moving walk installation and shall cause periodic inspection, tests, and maintenance to be made on such conveyances as required in the ASME A17.1 (2007 Edition) Safety Code for Elevators and Escalators.~~

~~Rule 8.14.2 Unsafe Conditions.~~

~~When an inspection reveals an unsafe condition, the inspector shall immediately file with the owner and the Building Official a full and true report of such inspection and such unsafe condition. If the Building Official finds that the unsafe condition endangers human life, he shall cause to be placed on such elevator, escalator, or moving walk in a conspicuous place, a notice stating that such conveyance is unsafe. The owner shall see to it that such notice of unsafe condition is legibly maintained where placed by the Building Official. The Building Official shall also issue an order in writing to the owner requiring the repairs or alterations to be made to such conveyance as are necessary to render it safe and may order the operation thereof discontinued until the repairs or alterations are made or the unsafe conditions are removed. A~~

~~posted notice of unsafe conditions shall be removed only by the Building Official when he is satisfied that the unsafe conditions have been corrected.~~

~~[Source: Ord. 1517, 2008]~~

~~**Section 10-9-5. Violations - Penalty.**~~

~~(a) It shall be unlawful for any person to violate any of the provisions of the City of Northglenn Elevator and Escalator Code.~~

~~(b) Any first violation of the provisions of this Article is a civil infraction, punishable according to Section 1-1-10(a)(3) of the Municipal Code, as amended, or is a nuisance, punishable according to this Chapter, or both. In no case shall a violation of this section be deemed to be punishable by jail time. The penalty set forth in Section 1-1-10(a)(2) of the Municipal Code does not apply.~~

~~[Source: Ord. 1517, 2008]~~

~~(c) Any subsequent violation of the same provision of this article shall, upon conviction be punishable as provided in Section 1-1-10(a)(2) of the Northglenn Municipal Code.~~

~~[Source: Ord. 1517, 2008; 1801, 2020]~~

~~**Section 10-9-6. Severability Clause.** If any article, section, paragraph, sentence, clause or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part or parts thereof, irrespective of the fact that any one part or parts be declared invalid or unconstitutional.~~

~~[Source: Ord. 1517, 2008]~~

~~**Section 10-9-7. Safety Clause.** The City Council hereby finds, determines, and declares that this ordinance is necessary for the preservation of the public health, safety and welfare.~~

~~[Source: Ord. 1517, 2008]~~

~~**Section 10-9-8. Conflicts.** If the provisions of the construction building codes, as adopted in this article, conflict with any other provisions of the Municipal Code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.~~

~~[Source: Ord. 1517, 2008]~~

~~**Section 10-9-9. Effective Date.** This ordinance shall become effective five (5) days after public notice following final passage.~~

~~[Source: Ord. 1517, 2008]~~

## **ARTICLE 10**

REPEALED (ORD. 1289, 2001)

## **ARTICLE 11**

### **INTERNATIONAL ENERGY CONSERVATION CODE**

**Section 10-11-1. Title.** This ordinance shall be known and cited as the International Energy Conservation Code.

[Source: Ord. 1799, 2020]

**Section 10-11-2. Adoption of the International Energy Conservation Code.** The International Energy Conservation Code, 2021 Edition, as adopted by the International Code Council, Inc., 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001 is hereby adopted by reference subject to the additions, amendments, and appendices set forth below in Section 10-11-6. The IECC includes appendices CB and RB by the International Code Council, and new appendices CD and RD as set forth below. The subject matter of the IECC includes the design of energy-efficient and high-performance buildings and related energy uses including mechanical, lighting, power systems, and electric vehicle infrastructure for the purpose of protecting the public health, safety and welfare. The 2021 IECC, as amended in this Article, shall apply to all property within the City of Northglenn.

[Source: Ord. 1799, 2020]

**Section 10-11-3. Copies on File.** At least one certified copy of the International Energy Conservation Code, 2021 Edition, as adopted is on file in the office of the City Clerk and may be inspected during regular business hours.

[Source: Ord. 1799, 2020]

**Section 10-11-4. Purpose.** The purpose of this Code is to provide minimum standards to safeguard life or limb, health, property and public welfare by regulating energy efficient buildings and structures.

[Source: Ord. 1799, 2020]

**Section 10-11-5. Application.** The provisions of this Article and the provisions of the International Energy Conservation Code and Appendices, 2021 Edition, adopted by reference shall apply to every building or structure located either within or without the corporate limits of the City of Northglenn, the use of which the City has jurisdiction and authority to regulate.

[Source: Ord. 1799, 2020]

**Section 10-11-6. Amendments to the International Energy Conservation Code, 2021 Edition.**

a. Section C101.1 Title is retained in its entirety with the following amendments:

C101.1 Title. This code shall be known as the International Energy Conservation Code of the City of Northglenn, and shall be cited as such. It is referred to herein as "this code."

b. Section C103.2 Information on construction documents, is amended by modifying item 6 and adding items 14, 15, and 16 as follows:

6. Mechanical and service water heating systems and equipment types, sizes, fuel source, and efficiencies.

14. Details of additional electric infrastructure, including branch circuits, conduit, or pre-wiring, and panel capacity in compliance with the provisions of this code.

15. Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.

16. Location of designated EVSE spaces, EVSE Universal spaces, EV-Ready spaces, and EV-Capable spaces in parking facilities.

c. Section C104.2 "Schedule of Permit Fees"  
See IBC Section 109.2 "Schedule of Permit Fees"

d. Section C104.3 "Work Commencing before Permit Issuance" is amended by deleting the section in its entirety and hereby amended to read as follows:

Section 104.3 Double Fee. Where a licensed contractor or an individual who starts or proceeds with work for which a permit is required by this Code prior to obtaining said permit, the fees specified in Section 109.2" Schedule of Permit Fees" of the City of Northglenn Building Code shall be doubled. Such fee shall be paid whether or not such permit is obtained, but the payment of such fee shall not relieve any persons from fully complying with the requirements of this Code.

e. Section C104.5 "Refunds" is amended by deleting the section in its entirety and replacing it with the following:  
See IBC Section 109.6. "Refunds"

f. Section C105.2.5 Electrical system is amended to read:

C105.2.5 Electrical system. Inspection shall verify lighting system controls, components, meters, and additional electric infrastructure, as required by the code, *approved* plans and specifications.

- g. Section C109 "Stop Work Order" is hereby amended to read as follows:

Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work. If no such person can be contacted at the property, it shall be posted in a conspicuous location on the property involved. Upon issuance of the stop work order, the cited work shall immediately cease. The stop work order shall cite the specific code section violated, state the reason for the order, and state the conditions under which the cited work will be permitted to resume.

- h. Section C110 "Board of Appeals" is amended by deleting the section in its entirety and replacing it with the following:

~~IECC Section 109 "Board of Adjustment"~~

~~109.1 General: Appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this Code may be made to the Northglenn Board of Adjustment. Appeals shall be in accordance with Chapter 11 of the Northglenn Municipal Code.~~

- i. Section C202 GENERAL DEFINITIONS is amended to add or revise the following definitions in alphabetical order:

**ALL-ELECTRIC BUILDING.** A *building* and building site that contains no *combustion equipment*, or plumbing for *combustion equipment*, and that uses heat pump technology as the primary supply for heating, cooling, and service water heating loads.

**COMBUSTION EQUIPMENT:** Any equipment or appliances used for space heating, cooling, water heating (including pools and spas), cooking, clothes drying or lighting that uses natural gas, propane, other fuel gas, or fuel oil.

**HORTICULTURAL LIGHTING.** Electric lighting used for horticultural production, cultivation or maintenance.

**MIXED-FUEL BUILDING.** A *building* and building site that contains *combustion equipment*, or plumbing for *combustion equipment*, for space heating, cooling, water heating (including pools and spas), cooking, or clothes drying.

**PHOTOSYNTHETIC PHOTON EFFICACY (PPE).** Photosynthetic photon flux emitted by a light source divided by its electrical input power in units of micromoles per second per watt, or micromoles per joule ( $\mu\text{mol}/\text{J}$ ) between 400-700nm as defined by ANSI/ASABE S640.

- j. Section C401.2.2 ASHRAE 90.1 is amended to read as follows:

Section C401.2.1 International Energy Conservation Code, item 2, is amended to read as follows: 2. Total Building Performance. The Total Building Performance option requires compliance with Section C407 and, for mixed fuel buildings, Section C405.13 and 10 credits from Tables C406.1(1) through C406.1(5).

C401.2.2 ASHRAE 90.1. Commercial buildings shall comply with the requirements of ANSI/ASHRAE/IESNA 90.1 and, for *mixed fuel buildings*, Section C405.13 and 10 credits from Tables C406.1(1) through C406.1(5).

- k. Section C402.3 Roof solar reflectance and thermal emittance, first sentence, is amended as follows, with the other parts of the section to remain:

C402.3 Roof solar reflectance and thermal emittance. Low-sloped roofs directly above conditioned spaces shall comply with one or more of the options in Table C402.3.

- l. C404.2.1 High input service water-heating systems, item 1 under exceptions, is amended as follows with the other exceptions to remain:

C404.2.1 High input service water-heating systems. Gas-fired water-heating equipment installed in new buildings shall be in compliance with this section. Where a singular piece of water-heating equipment serves the entire building and the input rating of the equipment is 1,000,000 Btu/h (293 kW) or greater, such equipment shall have a thermal efficiency,  $E_t$ , of not less than 92 percent. Where multiple pieces of water-heating equipment serve the building and the combined input rating of the water-heating equipment is 1,000,000 Btu/h (293 kW) or greater, the combined input-capacity-weighted-average thermal efficiency,  $E_t$ , shall not be less than 90 percent.

Exceptions:

1. Where not less than 50 percent of the annual *service water heating* requirement is provided by *on-site renewable energy* or site-recovered energy not including any capacity used for compliance with Section C406 of this code, the minimum thermal efficiency requirements of this section shall not apply.

- m. Section C404.10 is added as follows:

C404.10 Water heating equipment location. Water heaters with *combustion equipment* shall be located in a space with the following characteristics:

1. Minimum dimensions of 3 feet by 3 feet by 7 feet high.
2. Minimum volume of 760 cubic feet, or the equivalent of one 16-inch by 24-inch grill to a heated space and one 8-inch duct of no more than 10 feet in length for cool exhaust air.
3. Contains a condensate drain that is no more than 2 inches higher than the base of the installed water heater and allows natural draining without pump assistance, installed within 3 feet of the water heater.

Exceptions:

1. Instantaneous water heaters located within 10 feet of the point of use.
2. Water heaters with an input capacity of more than 300,000 Btu/h.

- n. Section C405.4 Lighting for plant growth and maintenance is re-titled "Horticultural Lighting" and amended to read as follows:

C405.4 Horticultural Lighting. Permanently installed luminaires shall have a *photosynthetic photon efficacy* of not less than 1.7  $\mu\text{mol/J}$  for *horticultural lighting in greenhouses* and not less than 1.9  $\mu\text{mol/J}$  for all other horticultural lighting. Luminaires

for horticultural lighting in greenhouses shall be controlled by a device that automatically turns off the luminaire when sufficient daylight is available. Luminaires for horticultural lighting shall be controlled by a device that automatically turns off the luminaire at specific programmed times.

- o. Section C405.5.3 Gas lighting is amended to read as follows:

Section C405.5.3. Gas lighting. Gas fired lighting appliances are not permitted.

- p. Table C405.12.2 ENERGY USE CATEGORIES is amended to add a new line at the end:

|                           |                                  |
|---------------------------|----------------------------------|
| Electric vehicle charging | Electric vehicle charging loads. |
|---------------------------|----------------------------------|

- q. A new Section C405.13 is added to read as follows:

C405.13 Additional electric infrastructure. All *combustion equipment* shall be provided with a junction box that is connected to an electrical panel by continuous raceways that meet the following requirements:

1. The junction box, raceway, and bus bar in the electric panel and conductors serving the electric panel shall be sized to accommodate electric equipment sized to serve the same load as the *combustion equipment*.
2. The panel shall have reserved physical space for a three-pole circuit breaker.
3. The junction box and electrical panel directory entry for the dedicated circuit breaker space shall have labels stating "For future electric equipment."
4. The junction box shall allow for the electric equipment to be installed within the same place of the *combustion equipment* that it replaces.

Exceptions:

1. Warm air furnaces serving spaces that also have space cooling.
2. Water heating equipment with an input capacity more than 300,000 Btu/h
3. Industrial, manufacturing, laboratory, and high hazard occupancy combustion equipment.

- r. Section C406.1 Additional energy efficiency credit requirements, first sentence, is amended to read as follows with the other parts of the paragraph and section to remain:

C406.1 Additional energy efficiency credit requirements. New *all-electric buildings* shall achieve a total of 10 credits and new *mixed-fuel buildings* shall achieve a total of 20 credits from Tables C406.1(1) through C406.1(5) where the table is selected based on the use group of the building and from credit calculations as specified in relevant subsections of C406.

- s. TABLE C406.1(2) ADDITIONAL ENERGY EFFICIENCY CREDITS FOR GROUP R AND I OCCUPANCIES is retained in its entirety, except Sections C406.7.3 and C406.7.4 in Climate Zone 5B only are amended to read as follows:

TABLE C406.1(2)  
ADDITIONAL ENERGY EFFICIENCY CREDITS FOR GROUP R AND I OCCUPANCIES

| SECTION                                                   | CLIMATE ZONE 5B |
|-----------------------------------------------------------|-----------------|
| C406.7.3: Efficient fossil fuel water heater <sup>b</sup> | 3               |
| C406.7.4: Heat pump water heater <sup>b</sup>             | 9               |

- t. TABLE C406.1(3) ADDITIONAL ENERGY EFFICIENCY CREDITS FOR GROUP E OCCUPANCIES is retained in its entirety, except Sections C406.7.3 and C406.7.4 in Climate Zone 5B only are amended to read as follows:

TABLE C406.1(3)  
ADDITIONAL ENERGY EFFICIENCY CREDITS FOR GROUP E OCCUPANCIES

| SECTION                                                   | CLIMATE ZONE 5B |
|-----------------------------------------------------------|-----------------|
| C406.7.3: Efficient fossil fuel water heater <sup>a</sup> | N/A             |
| C406.7.4: Heat pump water heater <sup>a</sup>             | 3               |

a. For schools with showers or full-service kitchens.

- u. TABLE C406.1(5) ADDITIONAL ENERGY EFFICIENCY CREDITS FOR OTHER OCCUPANCIES is retained in its entirety, except Sections C406.7.3 and C406.7.4 in Climate Zone 5B only are amended to read as follows:

TABLE C406.1(5)  
ADDITIONAL ENERGY EFFICIENCY CREDITS FOR OTHER<sup>a</sup> OCCUPANCIES

| SECTION                                                   | CLIMATE ZONE 5B |
|-----------------------------------------------------------|-----------------|
| C406.7.3: Efficient fossil fuel water heater <sup>b</sup> | 3               |
| C406.7.4: Heat pump water heater <sup>b</sup>             | 9               |

a. Other occupancies include all groups except Groups B, E, I, M, and R.

b. For occupancy groups listed in Section 406.7.1

- v. TABLE C407.2 REQUIREMENTS FOR TOTAL BUILDING PERFORMANCE is retained in its entirety and amended to add the following items:



TABLE C407.2  
REQUIREMENTS FOR TOTAL BUILDING PERFORMANCE

| SECTION  | TITLE                                        |
|----------|----------------------------------------------|
| Envelope |                                              |
| C401.3   | Thermal envelope certificate                 |
| C402.2.4 | Slabs-on-grade                               |
| C402.2.6 | Insulation of radiant heating system         |
| C402.3   | Roof solar reflectance and thermal emittance |

- w. CB103.1 General, first sentence, is amended to read as follows, with the rest of the paragraph and section to remain:

CB103.1 General. A solar-ready zone shall be located on the roof of all new buildings that are subject to the commercial provisions of the IECC and that are oriented between 110 degrees and 270 degrees of true north or have low-slope roofs.

- x. Appendix CD is added as follows:

#### APPENDIX CD

##### EV READINESS - COMMERCIAL

CD101. Purpose and intent. The purpose and intent of this Appendix CD is to accommodate the growing need for EV charging infrastructure. Including these measures during initial commercial construction substantially reduces the costs and difficulty of installing EV infrastructure at a later date.

CD102. Applicability. This Appendix CD shall apply to all new commercial construction to which the current International Building Code applies.

Section CD103. Definitions.

**AUTOMOBILE PARKING SPACE.** A space within a building or private or public parking lot, exclusive of driveways, ramps, columns, office, and work areas, for the parking of an automobile.

**DIRECT CURRENT FAST CHARGING (DCFC) EVSE:** EV power transfer infrastructure capable of fast charging on a 100A or higher 480VAC three-phase branch circuit. AC power is converted into a controlled DC voltage and current within the EVSE that will then directly charge the electric vehicle.

**EV LOAD MANAGEMENT SYSTEM:** A system designed to allocate charging capacity among multiple EVSE and that complies with the current National Electric Code.

**ELECTRIC VEHICLE (EV).** An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, and electric motorcycles, primarily powered by an electric motor that draws current from an electric source.

**ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE).** Equipment for plug-in power transfer including the ungrounded, grounded, and equipment grounding conductors, and the *electric vehicle* connectors, attachment plugs, personal protection system and all other fittings, devices, power outlets or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the *electric vehicle*.

**ELECTRIC VEHICLE SUPPLY EQUIPMENT INSTALLED SPACE (EVSE space).** An automobile parking space that is provided with a dedicated *EVSE* connection.

**ELECTRIC VEHICLE CAPABLE SPACE (EV CAPABLE SPACE).** A designated automobile parking space that is provided with electrical infrastructure, such as, but not limited to, raceways, cables, electrical capacity, and panelboard or other electrical distribution equipment space, necessary for the future installation of an *EVSE*.

**ELECTRIC VEHICLE READY SPACE (EV READY SPACE).** An automobile parking space that is provided with a branch circuit and either an outlet, junction box or receptacle, that will support an installed *EVSE*.

**UNIVERSAL VEHICLE CHARGING STATION.** A charging station installed in a parking space for a minimum vehicle width of 120 inches (3048 mm) with 36 inch access aisles (915 mm) on each side.

**CD104 Electric vehicle power transfer infrastructure.** New parking facilities shall be provided with *electric vehicle* power transfer infrastructure in compliance with Sections CD104.1 through CD104.6, CD105, and CD106.

**CD104.1 Quantity.** The number of required *EVSE* spaces, *EV ready* spaces, and *EV capable* spaces shall be determined in accordance with this Section and Table CD104.1 based on the total number of *automobile parking spaces* and shall be rounded up to the nearest whole number. For R-2 buildings, the Table requirements shall be based on the total number of dwelling units or the total number of *automobile parking spaces*, whichever is less.

1. Where more than one parking facility is provided on a building site, the number of required *automobile parking spaces* required to have EV power transfer infrastructure shall be calculated separately for each parking facility.
2. Where one shared parking facility serves multiple building occupancies, the required number of spaces shall be determined proportionally based on the floor area of each building occupancy.
3. Installed *EVSE* spaces that exceed the minimum requirements of this section may be used to meet minimum requirements for *EV ready* spaces and *EV capable* spaces.
4. Installed *EV ready* spaces that exceed the minimum requirements of this section may be used to meet minimum requirements for *EV capable* spaces.

5. Where the number of *EV ready* spaces allocated for R-2 occupancies is equal to the number of dwelling units or to the number of *automobile parking spaces*, whichever is less, requirements for *EVSE* spaces for R-2 occupancies shall not apply.
6. In commercial multi-family (R-2, R-3, and R-4) complexes, four stories or greater, that contain multiple buildings, required EV spaces shall be dispersed throughout parking areas so that each building has access to a similar number of spaces per dwelling unit.
7. Requirements for a Group S-2 parking garage shall be determined by the occupancies served by that parking garage. Where new *automobile parking spaces* do not serve specific occupancies, the values for Group S-2 parking garage in Table CD104.1 shall be used.
8. Direct Current Fast Charging. The number of *EVSE* spaces for Groups A, B, E, I, M and S-2 Occupancies may be reduced by up to ten per *DCFC EVSE* provided that the building includes not less than one parking space equipped with a *DCFC EVSE* and not less than one *EV ready* space. A maximum of fifty spaces may be reduced from the total number of *EVSE* spaces.

Exception: Parking facilities, serving occupancies other than R-2 with fewer than 10 *automobile parking spaces*.

TABLE CD104.1  
REQUIRED EV POWER TRANSFER INFRASTRUCTURE

| BUILDING TYPE                  | MINIMUM EV INSTALLED SPACES | MINIMUM EV READY SPACES | MINIMUM EV CAPABLE SPACES |
|--------------------------------|-----------------------------|-------------------------|---------------------------|
| Group A, B, E, M               | 10%                         | 5%                      | 10%                       |
| Group F, I, R-3, R-4           | 2%                          | 0%                      | 5%                        |
| Group R-1 and R-2 <sup>a</sup> | 15%                         | 5%                      | 40%                       |
| Group S-2 Parking Garages      | 10%                         | 5%                      | 0%                        |

a. Where all (100%) parking serving R-2 occupancies are EV ready spaces, requirements for *EVSE* spaces for R-2 occupancies shall not apply.

CD104.2 EV capable spaces. Each *EV capable* space used to meet the requirements of Section CD104.1 shall comply with all of the following:

1. A continuous raceway or cable assembly shall be installed between an enclosure or outlet located within 3 feet (914 mm) of the EV capable space and a suitable panelboard or other onsite electrical distribution equipment.
2. Installed raceway or cable assembly shall be sized and rated to supply a minimum circuit capacity in accordance with CD104.5

3. The electrical distribution equipment to which the raceway or cable assembly connects shall have sufficient dedicated space and spare electrical capacity for a 2-pole circuit breaker or set of fuses.
4. The electrical enclosure or outlet and the electrical distribution equipment directory shall be marked: "For future electric vehicle supply equipment (EVSE)."
5. Reserved capacity shall be no less than 4.1 kVA (20A 208/240V) for each *EV capable* space.

CD104.3 EV ready spaces. Each branch circuit serving *EV ready* spaces used to meet the requirements of Section CD104.1 shall comply with all of the following:

1. Terminate at an outlet or enclosure, located within 3 feet (914 mm) of each *EV ready* space it serves.
2. Have a minimum circuit capacity in accordance with CD104.5.
3. Branch circuit on the panelboard or other electrical distribution equipment directory designated as "For electric vehicle supply equipment (EVSE)" and the outlet or enclosure marked "For electric vehicle supply equipment (EVSE)."

CD104.4 EVSE spaces. An installed *EVSE* with multiple output connections shall be permitted to serve multiple EVSE spaces. Each *EVSE* installed to meet the requirements of Section CD104.1, serving either a single *EVSE* space or multiple *EVSE* spaces, shall comply with all of the following:

1. Have a minimum circuit capacity in accordance with CD104.5.
2. Have a minimum charging rate in accordance with CD104.4.1.
3. Be located within 3 feet (914 mm) of each *EVSE* space it serves.
4. Be installed in accordance with Section CD104.6 and CD104.7.

CD104.4.1 EVSE minimum charging rate. Each installed *EVSE* shall comply with one of the following:

1. Be capable of charging at a minimum rate of 6.2 kVA (or 30A at 208/240V).
2. When serving multiple *EVSE* spaces and controlled by an energy management system providing load management, be capable of simultaneously charging each *EVSE* space at a minimum rate of no less than 3.3 kVA.
3. When serving *EVSE* spaces allowed to have a minimum circuit capacity of 2.7 kVA in accordance with CD104.5.1 and controlled by an energy management system providing load management, be capable of simultaneously charging each *EVSE* space at a minimum rate of no less than 2.1 kVA.

CD104.5 Circuit capacity. The capacity of electrical infrastructure serving each *EV capable* space, *EV ready* space, and *EVSE* space shall comply with one of the following:

1. A branch circuit with a rated capacity not less than 8.3 kVA (or 40A at 208/240V) for each *EV ready* space or *EVSE* space it serves.
2. The requirements of CD104.5.1.

CD104.5.1 Circuit capacity management. The capacity of each branch circuit serving multiple *EVSE* spaces, *EV ready* spaces or *EV capable* spaces designed to be

controlled by an energy management system providing load management in accordance with NFPA 70, shall comply with one of the following:

1. Have a minimum capacity of 4.1 kVA per space.
2. Have a minimum capacity of 2.7 kVA per space when serving *EV ready* spaces or *EVSE* spaces for a building site when all (100%) of the automobile parking spaces are designed to be *EV ready* or *EVSE* spaces.

CD104.6 EVSE installation. *EVSE* shall be installed in accordance with NFPA 70 and shall be listed and labeled in accordance with UL 2202 or UL 2594.

CD104.7. EVSE ENERGY STAR. All *EVSE* shall be ENERGY STAR certified.

CD105. Universal vehicle charging stations. Where electric vehicle charging stations are provided for public use, or where electric vehicle charging stations are shared by multiple multi-family dwelling units, the number of universal vehicle charging stations shall be provided in accordance with Table CD104.1. When multiple stalls are required, access aisles may be shared.

TABLE CD105.1  
UNIVERSAL EV SPACE REQUIREMENTS

| TOTAL # OF EV CHARGING STATIONS | MINIMUM # OF UNIVERSAL VEHICLE CHARGING STATIONS |
|---------------------------------|--------------------------------------------------|
| 1 or more                       | 25%                                              |

CD106. Identification. Construction documents shall designate all EV Capable spaces, EV Ready spaces and EV Installed spaces and indicate the locations of conduit and termination points serving them. The circuit breakers or circuit breaker spaces reserved for the EV Capable spaces, EV Ready spaces, and EV Installed spaces shall be clearly identified in the panel board directory. The conduit for EV Capable spaces shall be clearly identified at both the panel board and the termination point at the parking space.

w. Section R101.1 Title is retained in its entirety with the following amendments:

R101.1 Title. This code shall be known as the International Energy Conservation Code of the City of Northglenn and shall be cited as such. It is referred to herein as “this code.”

- x. Section R103.2 Information on construction documents, is amended by modifying item 6 and adding items 10, 11, and 12 as follows:
6. Mechanical and service water heating systems and equipment types, sizes, fuel source, and efficiencies.
  10. Details of additional electric infrastructure, including branch circuits, conduit, or pre-wiring, and panel capacity in compliance with the provisions of this code.
  11. Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.

12. Location of designated EVSE spaces, EVSE Universal spaces, EV-Ready spaces, and EV-Capable spaces in parking facilities, as applicable.
- y. Section R104.2 "Schedule of Permit Fees"  
See IBC Section 109.2 "Schedule of Permit Fees"
  - z. Section R104.3 "Work Commencing before Permit Issuance" is amended by deleting the section in its entirety and hereby amended to read as follows:
    - aa. Section R104.3 Double Fee. Where a licensed contractor or an individual who starts or proceeds with work for which a permit is required by this Code prior to obtaining said permit, the fees specified in Section 109.2" Schedule of Permit Fees" of the City of Northglenn Building Code shall be doubled. Such fee shall be paid whether or not such permit is obtained, but the payment of such fee shall not relieve any persons from fully complying with the requirements of this Code.
    - bb. Section R104.5 "Refunds" is amended by deleting the section in its entirety and replacing it with the following:  
See IBC Section 109.6. "Refunds"
    - cc. Section R109 "Stop Work Order" is hereby amended to read as follows:  
Issuance. The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work. If no such person can be contacted at the property, it shall be posted in a conspicuous location on the property involved. Upon issuance of the stop work order, the cited work shall immediately cease. The stop work order shall cite the specific code section violated, state the reason for the order, and state the conditions under which the cited work will be permitted to resume.
    - dd. Section R110 "Board of Appeals" is amended by deleting the section in its entirety and replacing it with the following:  
~~IECC Section 109 "Board of Adjustment"~~ REMOVE; NO LONGER IN CODE  
**109.1 General:** Appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this Code may be made to the Northglenn Board of Adjustment. Appeals shall be in accordance with Chapter 11 of the Northglenn Municipal Code.
  - ee. Section R202 GENERAL DEFINITIONS is amended to add the following definitions in alphabetical order:
    - ALL-ELECTRIC BUILDING. A *building* and building site that contains no *combustion equipment*, or plumbing for *combustion equipment*, and that uses heat pump technology as the primary supply for heating, cooling, and service water heating loads.
    - COMBUSTION EQUIPMENT: Any equipment or appliances used for space heating, cooling, water heating (including pools and spas), cooking, clothes drying or lighting that uses natural gas, propane, other fuel gas, or fuel oil.
    - MIXED-FUEL BUILDING. A *building* and building site that contains *combustion equipment*, or plumbing for *combustion equipment*, for space heating, cooling, water heating (including pools and spas), cooking, or clothes drying.
  - ff. Section R401.2.5 Additional energy efficiency is amended as follows:

R401.2.5 Additional energy efficiency. This section establishes additional requirements applicable to all compliance approaches to achieve additional energy efficiency.

1. For buildings complying with Section R401.2.1, the building shall meet one of the following:
  - 1.1. For *all-electric buildings*, one of the additional efficiency package options shall be installed according to Section R408.2.
  - 2.2. For *mixed-fuel buildings*, three of the additional efficiency packages shall be installed, at least one of which addresses the envelope.
2. For buildings complying with Section R401.2.2, the building shall meet one of the following:
  - 2.1. For *all-electric buildings*, one of the additional efficiency package options in Section R408.2 shall be installed without including such measures in the proposed design under Section R405.
  - 2.2. For *mixed-fuel buildings*, three of the additional efficiency packages shall be installed, at least one of which addresses the envelope, without including such measures in the proposed design under Section R405.
  - 2.3. For *all-electric buildings*, the proposed design of the building under Section R405.3 shall have an annual energy cost that is less than or equal to 95 percent of the annual energy cost of the standard reference design.
  - 2.4. For *mixed-fuel buildings*, the proposed design of the building under Section R405.3 shall have an annual energy cost that is less than or equal to 80 percent of the annual energy cost of the standard reference design.
3. For buildings complying with the Energy Rating Index alternative Section R401.2.3, the Energy Rating Index value shall be at least 5 percent less than the Energy Rating Index target specified in Table R406.5.

The options selected for compliance shall be identified in the certificate required by Section R401.3.

- gg. Section R401.3 Certificate, item 4, is amended and new items 8, 9, and 10 are added as follows:

R401.3 Certificate. A permanent certificate shall be completed by the builder or other approved party and posted on a wall in the space where the furnace is located, a utility room or an approved location inside the building. Where located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label or other required labels. The certification shall indicate the following:

4. The types, sizes, fuel sources, and efficiencies of heating, cooling and service water heating equipment. Where a gas-fired unvented room heater, electric furnace or baseboard electric heater is installed in the residence, the certificate shall indicate "gas-fired unvented room heater," "electric furnace" or "baseboard

electric heater,” as appropriate. An efficiency shall not be indicated for gas-fired unvented room heaters, electric furnaces and electric baseboard heaters.

8. The fuel sources for cooking and clothes drying equipment.
  9. Where combustion equipment is installed, the certificate shall indicate information on the installation of additional electric infrastructure including which equipment and/or appliances include additional electric infrastructure, capacity reserved on the electrical service panel for replacement of each piece of combustion equipment and/or appliance
  10. Where a solar-ready zone is provided, the certificate shall indicate the location, dimensions, and capacity reserved on the electrical service panel.
- hh. Section R403.5 Service hot water systems is amended as follows:
- R403.5 Service hot water systems. Energy conservation measures for service hot water systems shall be in accordance with Sections R403.5.1 through R403.5.4.
- ii. Section R403.5.4 Water heating equipment location is added as follows:
- R403.5.4 Water heating equipment location. Water heaters with *combustion equipment* shall be located in a space with the following characteristics:
1. Minimum dimensions of 3 feet by 3 feet by 7 feet high.
  2. Minimum volume of 760 cubic feet, or the equivalent of one 16-inch by 24-inch grill to a heated space and one 8-inch duct of no more than 10 feet in length for cool exhaust air.
  3. Contains a condensate drain that is no more than 2 inches higher than the base of the installed water heater and allows natural draining without pump assistance, installed within 3 feet of the water heater.
- Exceptions:
1. Water heaters with an input capacity of greater than 300,000 Btu/h that serves multiple *dwelling units* or *sleeping units*.
- jj. Section R404.1.1 Fuel gas lighting is amended to read as follows:
- Section R404.1.1. Fuel gas lighting. Fuel gas lighting systems are prohibited.
- kk. A new Section R404.4 Additional electric infrastructure is added as follows:
- R404.4 Additional electric infrastructure. All *combustion equipment* shall be installed in accordance with Section R403.5.4 and shall be provided with a junction box that is connected to an electrical panel by continuous raceways that meet the following requirements:
1. The junction box, raceway, and bus bar in the electric panel and conductors serving the electric panel shall be sized to accommodate electric equipment sized to serve the same load as the *combustion equipment*.
  2. The panel shall have reserved physical space for a dual-pole circuit breaker.
  3. The junction box and electrical panel directory entry for the dedicated circuit breaker space shall have labels stating “For future electric equipment.”



4. The junction box shall allow for the electric equipment to be installed within the same place of the *combustion equipment* that it replaces.

Exceptions:

1. Fossil fuel space heating equipment where a 208/240-volt electrical circuit with a minimum capacity of 40 amps exists for space cooling equipment.
2. Water heating equipment with an input capacity greater than 300,000 Btu/h that serves multiple dwelling units or sleeping units.

- II. Table R405.2 Requirements for Total Building Performance adds a new row under Mechanical and a new row under Electrical Power and Lighting Systems as follows:

TABLE R405.2  
REQUIREMENTS FOR TOTAL BUILDING PERFORMANCE

| SECTION                               | TITLE                              |
|---------------------------------------|------------------------------------|
| Mechanical                            |                                    |
| R403.5.4                              | Water heating equipment location   |
| Electrical Power and Lighting Systems |                                    |
| R404.4                                | Additional electric infrastructure |

- mm. Section R406.2 ERI compliance, first paragraph, is amended to read as follows with the other parts of the section to remain:

R406.2 ERI compliance. Compliance based on the ERI may utilize the HERS Index Score and requires that the rated design meets all of the following:

1. The requirements of the sections indicated within Table R406.2.
2. The maximum ERI of Table R406.5.

- nn. Table R406.2 Requirements for Energy Rating Index adds a new row under Mechanical and a new row under Electrical Power and Lighting Systems as follows:

TABLE R406.2 REQUIREMENTS FOR ENERGY RATING INDEX

| SECTION                               | TITLE                   |
|---------------------------------------|-------------------------|
| Mechanical                            |                         |
| R403.5.4                              | Water heating equipment |
| Electrical Power and Lighting Systems |                         |

|        |                                    |
|--------|------------------------------------|
| R404.4 | Additional electric infrastructure |
|--------|------------------------------------|

oo. Section R406.5 ERI-based compliance is amended as follows:

R406.5 ERI-based compliance. Compliance based on an ERI analysis requires that the rated proposed design and confirmed built dwelling be shown to have an ERI less than or equal to the appropriate value for the proposed all-electric or mixed-fuel building as indicated in Table R406.4 when compared to the ERI reference design.

TABLE R406.5 MAXIMUM ENERGY RATING INDEX

| CLIMATE ZONE | ALL-ELECTRIC BUILDING | MIXED FUEL BUILDING |
|--------------|-----------------------|---------------------|
| 5            | 55                    | 50                  |

pp. Appendix RB Title is amended to read: "Appendix RB Solar Ready Provisions."

qq. RB103.1, first sentence, is amended as follows, with the rest of the paragraph and section remaining:

RB103.1 General. New residential buildings with not less than 600 square feet (55.74 m<sup>2</sup>) of roof area oriented between 110 degrees and 270 degrees of true north shall comply with Sections RB103.2 through RB103.8.

Add Appendix RD to read as follows:

#### APPENDIX RD

##### EV READINESS - RESIDENTIAL

RD101. Purpose and intent. The purpose and intent of this Appendix RD is to accommodate the growing need for EV charging infrastructure, in particular meeting preferences for charging at home. Including these measures during initial construction substantially reduces the costs and difficulty of installing EV infrastructure at a later date.

RD102. Applicability. This Appendix RD shall apply to all new residential construction to which the International Residential Code applies.

RD103. Definitions.

**AUTOMOBILE PARKING SPACE.** A space within a building or private or public parking lot, exclusive of driveways, ramps, columns, office, and work areas, for the parking of an automobile.

**DIRECT CURRENT FAST CHARGING (DCFC) EVSE:** EV power transfer infrastructure capable of fast charging on a 100A or higher 480VAC three-phase

branch circuit. AC power is converted into a controlled DC voltage and current within the *EVSE* that will then directly charge the electric vehicle.

**EV LOAD MANAGEMENT SYSTEM:** A system designed to allocate charging capacity among multiple *EVSE* and that complies with the current National Electric Code.

**ELECTRIC VEHICLE (EV).** An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, and electric motorcycles, primarily powered by an electric motor that draws current from an electric source.

**ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE).** Equipment for plug-in power transfer including the ungrounded, grounded, and equipment grounding conductors, and the *electric vehicle* connectors, attachment plugs, personal protection system and all other fittings, devices, power outlets or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the *electric vehicle*.

**ELECTRIC VEHICLE SUPPLY EQUIPMENT INSTALLED SPACE (EVSE space).** An automobile parking space that is provided with a dedicated *EVSE* connection.

**ELECTRIC VEHICLE CAPABLE SPACE (EV CAPABLE SPACE).** A designated automobile parking space that is provided with electrical infrastructure, such as, but not limited to, raceways, cables, electrical capacity, and panelboard or other electrical distribution equipment space, necessary for the future installation of an *EVSE*.

**ELECTRIC VEHICLE READY SPACE (EV READY SPACE).** An automobile parking space that is provided with a branch circuit and either an outlet, or receptacle, that will support an installed *EVSE*.

**UNIVERSAL VEHICLE CHARGING STATION.** A charging station installed in a parking space for a minimum vehicle width of 120 inches (3048 mm) with 36 inch access aisles (915 mm) on each side.

RD104 One- and two- family dwellings and townhouses. One *EV ready* space shall be provided for each dwelling unit. The branch circuit shall be identified as *EV ready* in the service panel or subpanel directory, and the termination location shall be marked as *EV ready*.

Exception: Dwelling units where no parking spaces are either required or provided.

RD105 Residential multi-family dwellings, 3-stories or less. New dwelling units for residential multi-family buildings, other than duplexes and townhomes, shall be provided with electric vehicle power transfer infrastructure in compliance with Sections RD105.1 through RD105.6 and Sections RD106 through RD107.

RD105.1 Quantity. The number of required *EVSE* spaces, *EV ready* spaces, and *EV capable* spaces shall be determined in accordance with this Section and Table RD105.1 based on the total number of *automobile parking spaces* and shall be rounded up to the nearest whole number. For R-2 buildings, the Table requirements shall be based on the total number of dwelling units or the total number of *automobile parking spaces*, whichever is less.

1. Where more than one parking facility is provided on a building site, the number of required *automobile parking spaces* required to have EV power transfer infrastructure shall be calculated separately for each parking facility.
2. Installed *EVSE* spaces that exceed the minimum requirements of this section may be used to meet minimum requirements for *EV ready* spaces and *EV capable* spaces.
3. Installed *EV ready* spaces that exceed the minimum requirements of this section may be used to meet minimum requirements for *EV capable* spaces.
4. Where the number of *EV ready* spaces allocated for R-2 occupancies is equal to the number of dwelling units or to the number of *automobile parking spaces* allocated to R-2 occupancies, whichever is less, requirements for *EVSE* spaces for R-2 occupancies shall not apply.
5. In residential multi-family complexes that contain multiple buildings, required EV spaces shall be dispersed throughout parking areas so that each building has access to a similar number of spaces per dwelling unit.

TABLE RD105.1  
REQUIRED EV POWER TRANSFER INFRASTRUCTURE FOR MULTI-FAMILY

| BUILDING TYPE                  | MINIMUM EV INSTALLED SPACES | MINIMUM EV READY SPACES | MINIMUM EV CAPABLE SPACES |
|--------------------------------|-----------------------------|-------------------------|---------------------------|
| Group R-1 and R-2 <sup>a</sup> | 15%                         | 5%                      | 40%                       |
| Group R-3 and R-4              | 2%                          | 0%                      | 5%                        |

a. Where all (100%) parking serving R-2 occupancies are *EV ready* spaces, requirements for *EVSE* spaces for R-2 occupancies shall not apply.

RD105.2 *EV capable* spaces. Each *EV capable* space used to meet the requirements of Section RD105.1 shall comply with all of the following:

1. A continuous raceway or cable assembly shall be installed between an enclosure or outlet located within 3 feet (914 mm) of the *EV capable* space and a suitable panelboard or other onsite electrical distribution equipment.
2. Installed raceway or cable assembly shall be sized and rated to supply a minimum circuit capacity in accordance with C104.5
3. The electrical distribution equipment to which the raceway or cable assembly connects shall have sufficient dedicated space and spare electrical capacity for a 2-pole circuit breaker or set of fuses.
4. The electrical enclosure or outlet and the electrical distribution equipment directory shall be marked: "For future electric vehicle supply equipment (EVSE)."
5. Reserved capacity shall be no less than 4.1 kVA (20A 208/240V) for each *EV capable* space.

RD105.3 EV ready spaces. Each branch circuit serving *EV ready* spaces used to meet the requirements of Section RD105.1 shall comply with all of the following:

1. Terminate at an outlet or enclosure, located within 3 feet (914 mm) of each *EV ready* space it serves.
2. Have a minimum circuit capacity in accordance with RD105.5.
3. The panelboard or other electrical distribution equipment directory shall designate the branch circuit as "For electric vehicle supply equipment (EVSE)" and the outlet or enclosure shall be marked "For electric vehicle supply equipment (EVSE)."

RD105.4 EVSE spaces. An installed *EVSE* with multiple output connections shall be permitted to serve multiple EVSE spaces. Each *EVSE* installed to meet the requirements of Section RD105.1, serving either a single *EVSE* space or multiple *EVSE* spaces, shall comply with all of the following:

1. Have a minimum circuit capacity in accordance with RD105.5.
2. Have a minimum charging rate in accordance with RD105.4.1.
3. Be located within 3 feet (914 mm) of each *EVSE* space it serves.
4. Be installed in accordance with Section RD105.6 and RD105.7

RD105.4.1 EVSE minimum charging rate. Each installed *EVSE* shall comply with one of the following:

1. Be capable of charging at a minimum rate of 6.2 kVA (or 30A at 208/240V).
2. When serving multiple *EVSE* spaces and controlled by an energy management system providing load management, be capable of simultaneously charging each *EVSE* space at a minimum rate of no less than 3.3 kVA.
3. When serving *EVSE* spaces allowed to have a minimum circuit capacity of 2.7 kVA in accordance with RD105.5.1 and controlled by an energy management system providing load management, be capable of simultaneously charging each *EVSE* space at a minimum rate of no less than 2.1 kVA.

RD105.5 Circuit capacity. The capacity of electrical infrastructure serving each *EV capable* space, *EV ready* space, and *EVSE* space shall comply with one of the following:

1. A branch circuit shall have a rated capacity not less than 8.3 kVA (or 40A at 208/240V) for each *EV ready* space or *EVSE* space it serves.
2. The requirements of RD105.5.1.

RD105.5.1 Circuit capacity management. The capacity of each branch circuit serving multiple *EVSE* spaces, *EV ready* spaces or *EV capable* spaces designed to be controlled by an energy management system providing load management in accordance with NFPA 70, shall comply with one of the following:

1. Have a minimum capacity of 4.1 kVA per space.

2. Have a minimum capacity of 2.7 kVA per space when serving *EV ready* spaces or *EVSE* spaces for a building site when all (100%) of the automobile parking spaces are designed to be *EV ready* or *EVSE* spaces.

RD105.6 *EVSE* installation. *EVSE* shall be installed in accordance with NFPA 70 and shall be listed and labeled in accordance with UL 2202 or UL 2594.

RD105.7. *EVSE* ENERGY STAR. All *EVSE* shall be ENERGY STAR certified.

RD106. Universal vehicle charging stations. Where electric vehicle charging stations are provided for public use, or where electric vehicle charging stations are shared by multiple multi-family dwelling units, the number of universal vehicle charging stations shall be provided in accordance with Table RD106.1. When multiple stalls are required, access aisles may be shared.

TABLE RD106.1  
UNIVERSAL EV SPACE REQUIREMENTS

| TOTAL # OF EV CHARGING STATIONS | MINIMUM # OF UNIVERSAL VEHICLE CHARGING STATIONS |
|---------------------------------|--------------------------------------------------|
| 1 or more                       | 25%                                              |

RD107. Identification. Construction documents shall designate all *EV capable* spaces, *EV ready* spaces and *EVSE* spaces and indicate the locations of conduit and termination points serving them. The circuit breakers or circuit breaker spaces reserved for the *EV capable* spaces, *EV ready* spaces, and *EVSE* Installed spaces shall be clearly identified in the panel board directory. The conduit for *EV capable* spaces shall be clearly identified at both the panel board and the termination point at the parking space.

[Source: Ord. 1799, 2020]

**Section 10-11-7. Violations--Penalty.**

(a) It shall be unlawful for any person to violate any of the provisions of the International Energy Conservation Code, 2021 Edition, or the provisions of this ordinance.

(b) Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Energy Conservation Code, 2021 Edition, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of this Code.

[Source: Ord. 1799, 2020]

**Section 10-11-8. Conflicts.** If the provisions of this Code, as adopted in this Article, conflict with any other provisions of the Municipal Code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

[Source: Ord. 1799, 2020]

**ARTICLE 12**  
**ASBESTOS CONTROL**

~~Section 10-12-1. Title.~~ This Article 12 of Chapter 10 of the Municipal Code shall be known and cited as the Northglenn Asbestos Control Ordinance.

[Source: Ord. 864, 1987]

~~Section 10-12-2. Legislative Declaration.~~ The City Council hereby finds that exposure to airborne asbestos fibers and particles has been linked by reputable medical and scientific authorities to a significant increase in the incidence of diseases such as asbestosis, bronchogenic carcinoma, mesothelioma, and other malignancies and that substantial amounts of materials containing asbestos have been used in buildings for fireproofing, insulation, soundproofing, decorative and other purposes. The Council further finds that the predominant cause of asbestos becoming airborne is due to the performance of building renovation and demolition without adequate procedures for the removal, transport, storage and disposal of asbestos material for the protection of workers and the general public. Therefore, it is the purpose of this ordinance to safeguard the public health by establishing certain requirements as to the removal, transportation, storage and disposal of materials containing asbestos.

[Source: Ord. 864, 1987]

~~Section 10-12-3. Definitions.~~ As used in this Article 12, the following terms shall have the following meanings:

- ~~(a) "Asbestos" shall mean any hydrated mineral silicate separable into commercially usable fibers, including but not limited to chrysotile (serpentine), amosite (cumingtonite-gruneute), Crocidilite (riebeckite), tremolite, anthophyllite and actinolite.~~
- ~~(b) "Asbestos containing material" or "ACM" shall mean materials containing asbestos in an amount greater than 1% by weight or volume, either alone or mixed with fibrous or non-fibrous materials.~~
- ~~(c) "Asbestos containing waste material" shall mean any waste that contains asbestos including asbestos mill tailings, asbestos containing material, asbestos waste from control devices, friable asbestos waste material, and bags or containers that previously contained asbestos containing materials. As applied to demolition and renovation operations this term includes only friable asbestos waste and asbestos waste from control devices.~~
- ~~(d) "Asbestos project" shall mean any form of work performed in connection with the renovation or demolition of a building or structure which will disturb friable asbestos containing material in any quantity.~~
- ~~(e) "Demolition" shall mean the wrecking or taking out of any load supported structural member of a facility together with any related handling operations including but not limited to the transportation, storage or disposal of asbestos containing materials.~~
- ~~(f) "Emission permit" shall mean a document issued by the State of Colorado allowing an individual or business to engage in operations that could potentially generate any air pollutant.~~
- ~~(g) "Facility" shall mean any institutional, commercial, industrial, or residential structure, installation, or building.~~
- ~~(h) "Facility component" shall mean any pipe, duct, boiler, tank reactor, turbine, or furnace at or in a facility; or any structural member of a facility.~~
- ~~(i) "Friable asbestos material" shall mean any material containing more than 1% asbestos by weight or volume that hand pressure can crumble, pulverize, or reduce to powder when dry, or any asbestos containing material that can reasonably be expected as a result of the demolition or renovation to be undertaken, to become pulverized through breaking, chipping, crumbling, crushing, or other means of rendering fibers available to the ambient air.~~
- ~~(j) "Renovation" shall mean altering or modifying in any way a facility or one or more facility components. Operations in which load supporting structural members are wrecked or taken out are excluded.~~

(k) "Store" or "storage" shall mean keeping or holding any quantity of ACM for any period of time other than the keeping or holding of ACM at an asbestos project site for a period not to exceed seven (7) calendar days.

(l) To the extent not otherwise defined in this Article 12, the definitions of terms contained in Regulation No. 8 of the Colorado Air Quality Control Commission shall apply.

[Source: Ord. 864, 1987]

~~Section 10-12-4. Asbestos Projects—Permit Required.~~ It shall be unlawful for any person to commence or engage in any asbestos project within the City of Northglenn without first obtaining a permit for such asbestos project from the building official of the City. No City of Northglenn building permit shall be issued until the applicant for such permit has either received a permit pursuant to this Article or represented that the work for which the building permit is sought does not involve an asbestos project.

[Source: Ord. 864, 1987]

~~Section 10-12-5. Asbestos Projects—Application for Permit.~~

(a) An application for an asbestos project permit shall be submitted to the building official of the City at the same time as the application for a building permit on forms provided by the building official, together with an application fee of \$60.00. ~~Not correct — this depends on what type of demo they are doing, residential, commercial, etc.~~

(b) The application shall contain the following information:

1. ~~The names, street addresses and telephone numbers of the applicant, the general contractor on the project, the owner of the property on which the project will take place and the street address of such property if different from the address of the owner;~~
2. ~~A description of the protective clothing and respirators that the applicant will use during the asbestos project;~~
3. ~~The name, street address and telephone number of any person who will transport ACM from the asbestos project site;~~
4. ~~The name, street address and telephone number of each asbestos storage site to be used in relation to the asbestos project;~~
5. ~~The name, street address and telephone number of each asbestos disposal site to be used in relation to the asbestos project;~~
6. ~~A description of the site decontamination procedures that the applicant will use in relation to the asbestos project;~~
7. ~~A description of the removal and encapsulation methods for any ACM encountered during the asbestos project;~~
8. ~~A description of the procedures to be used for handling ACM encountered during the asbestos project;~~
9. ~~A description of the air monitoring procedures to be employed during the asbestos project;~~
10. ~~A description of the procedures to be used in cleaning up after the completion of the asbestos project;~~
11. ~~Proof of general liability insurance with policy limits of not less than \$1,000,000 single limit;~~
12. ~~The signature of the applicant;~~
13. ~~A copy of the notification required by Section 11.B.5. of Regulation No. 8 of the Colorado Air Quality Control Commission or, if no such notification is required pursuant to said regulation, the information which would otherwise be contained in such notification; and~~
14. ~~Any other information which the building official may require.~~

(c) It shall be unlawful for any holder of an asbestos project permit to omit, alter or fail to perform on any asbestos project any work or procedure which such person has represented will be performed in the application for such permit.



[Source: Ord. 864, 1987]

~~Section 10-12-6. Asbestos Projects—Compliance with Applicable Laws and Regulations.~~ Any person engaged in an asbestos project shall, throughout the course of such project, comply in all respects with all federal, state and local laws and regulations including but not limited to all regulations promulgated by the United States Environmental Protection Agency, the Occupational Safety and Health Administration, and the Colorado Air Quality Control Commission.

[Source: Ord. 864, 1987]

~~Section 10-12-7. Asbestos Transport.~~ Any person transporting ACM in or through the City of Northglenn shall comply in all respects with all applicable federal, state and local laws and regulations applicable to such transportation, including but not limited to all regulations promulgated by the United States Environmental Protection Agency, the Occupational Safety and Health Administration, and the Colorado Air Quality Control Commission.

[Source: Ord. 864, 1987]

~~Section 10-12-8. Asbestos Storage—Permit Required.~~ It shall be unlawful for any person to store any quantity of ACM in the City of Northglenn without first obtaining a permit for such storage from the building official of the City.

[Source: Ord. 864, 1987]

~~Section 10-12-9. Asbestos Storage—Application for Permit.~~

~~(a) An application for an asbestos storage permit shall be submitted to the building official of the City prior to the commencement of any storage of ACM in the City by the applicant, together with an application fee of \$100.00. Each asbestos storage permit shall expire one (1) year from the date of its issuance.~~

~~(b) The application shall contain the following information:~~

- ~~1. The name, street address and telephone number of the applicant;~~
- ~~2. The name and location of the storage site;~~
- ~~3. A statement as to the maximum amount of ACM to be stored at any one time;~~
- ~~4. A description of the containers in which the ACM will be stored;~~
- ~~5. A description of the enclosure in which the containers of ACM will be stored;~~
- ~~6. A description of the procedures to be used for handling the ACM containers;~~
- ~~7. Copies of all reports, notices or documents filed by applicant with any other federal, state or local government or agency relating to the storage of ACM;~~
- ~~8. Any other information which the building official may reasonably require.~~

~~(c) It shall be unlawful for any holder of an asbestos storage permit to omit, alter or fail to perform as to the storage of ACM any work or procedure which such person has represented will be performed in the application for such permit.~~

[Source: Ord. 864, 1987]

~~Section 10-12-10. Asbestos Storage—Compliance with Applicable Laws and Regulations.~~ Any person engaged in the storage of asbestos shall, at all times, comply in all respects with all applicable federal, state and local laws and regulations applicable to such storage, including but not limited to all regulations promulgated by the United States Environmental Protection Agency, the Occupational Safety and Health Administration, and the Colorado Air Quality Control Commission.

[Source: Ord. 864, 1987]

~~Section 10-12-11. Permits—Revocation, Suspension and Denial.~~ The building official may revoke, suspend or deny any permit provided for in this Article if he finds that the permit holder is responsible for any one or more of the following acts or omissions:

- ~~1. Failure to comply with any of the provisions of this Article;~~
- ~~2. Violation of any other local, state or federal law or regulation relating to asbestos; or~~

3. Any misrepresentation, falsehood, or omission contained in the application for such permit.

{Source: Ord. 864, 1987}

~~Section 10-12-12. Revocation and Suspension Procedure.~~ If the building official determines that a permit issued pursuant to this Article should be revoked or suspended under the terms of this Article, the procedure therefore shall be as provided in Section 18-1-7 of the Municipal Code. For purposes of such Section 18-1-7, the Director of Community Development shall be deemed the "licensing authority."

{Source: Ord. 864, 1987}

~~Section 10-12-13. Rules and Regulations.~~ The building official is hereby authorized and directed to promulgate rules and regulations in accordance with the rule-making procedures contained in Section 3-6-2 of the Municipal Code, not inconsistent with this Article, governing the removal, storage, transportation and disposal of ACM so as to promote the health or safety of the permittee, its employees and the public.

{Source: Ord. 864, 1987}

~~Section 10-12-14. Violations--Public Nuisance.~~ Violations of any of the provisions of this Article are declared to be public nuisances pursuant to Article 1, Chapter 9 of this Municipal Code and may be abated or enjoined in accordance with said Article.

{Source: Ord. 864, 1987}

~~Section 10-12-15. Violations--Penalty.~~

(a) Violations of any of the provisions of this Article is a civil infraction, punishable according to Section 1-1-10(a)(3) of the Municipal Code, as amended, or is a nuisance, punishable according to this Chapter, or both. In no case shall a violation of this section be deemed to be punishable by jail time. The penalty set forth in Section 1-1-10(a)(2) of the Municipal Code does not apply.  
(b) Any subsequent violation of the same provision of this article shall be punishable by a fine of not more than \$300.00 or by imprisonment in the City or County jail for not more than ninety days, or by both such fine and imprisonment, unless otherwise provided by ordinance or statute. Each day such violation is allowed to continue shall be deemed a separate offense.

{Source: Ord. 864, 1987; 1801, 2020}

~~Section 10-12-16. Severability Clause.~~ If any provision of this Article or the application thereof to any person or circumstance is held invalid, such invalidity shall not affect other provisions or applications of this Article which can be given effect without the invalid provision or application, and to this end the provisions of this ordinance are declared to be severable.

{Source: Ord. 864, 1987}

## ARTICLE 13

REPEALED (ORD. 1476, 2007)

## ARTICLE 14

### EMERGENCY RADIO COVERAGE .

~~Section 10-14-1. Definitions.~~ The following words, terms and phrases, when used in this article, shall have the meanings ascribed to them in this section:

(a) "Emergency Communications Center(s)" shall mean any centralized dispatch service for emergency service providers.

(b) "Emergency Service Provider(s)" shall mean any police, fire or ambulance service operating within the City.

(c) "Emergency Services Communications" shall mean any communication between an emergency communications center and emergency service provider.

{Source: Ord. 1470, 2007}

~~Section 10-14-2. Purpose.~~ The purpose of this part is to provide minimum standards to insure a reasonable degree of reliability for emergency services communication from within certain

buildings and structures within the City to and from emergency communication centers. It is the responsibility of the emergency service provider to receive the signal to and from the building or structure.

[Source: Ord. 1470, 2007]

**Section 10-14-3. Scope.** The provisions of this article shall apply to:

- (a) New buildings and structures greater than 50,000 square feet or additions or modifications that cause the buildings to be greater than 50,000 square feet.
- (b) All basements over 10,000 square feet where the design occupant load is greater than 50, regardless of the occupancy.
- (c) Existing buildings and structures of any size or construction type where the Police Chief and the Fire Chief determines that lack of adequate radio coverage for emergency services providers either constitutes a special hazard to occupants or emergency responders or would otherwise likely result in unduly difficult conduct of emergency operations.
- (d) For purposes of this section, fire walls cannot be used to define separate buildings.

[Source: Ord. 1470, 2007]

**Section 10-14-4. Radio Coverage.** Except as otherwise provided in this article, no person shall erect, construct, or modify any building or structure or any part thereof, or cause the same to be done which fails to support adequate radio coverage for emergency services providers.

- (a) After a building permit has been issued, upon request by the owner or the owner's agent, the Police department will, within ten to fourteen days, identify the frequency range or ranges that must be supported.
- (b) In the event that an emergency service provider modifies its communications equipment in any way that impairs its ability to communicate with an existing system installed in accordance with this part, such agency shall be responsible for all costs associated with reestablishing communications within the affected building or structure.
- (c) Adequate radio coverage for emergency services providers requires:
  - 1. That on each floor, 85% of valid tests conducted in accordance with section 10-14-6 result in intelligible two-way communications between the appropriate dispatch center and the tester in the building; and
  - 2. That 100% of valid tests conducted in accordance with section 10-14-6 result in intelligible two-way communications between the appropriate dispatch center and the tester within the following building spaces:
    - (A) Throughout vertical exit enclosures and horizontal exit passageways;
    - (B) Fire command centers, if provided;
    - (C) Police substation.
- (d) FCC authorization: If amplification is used in the system, all FCC authorizations must be obtained prior to the use of the system. A copy of these authorizations shall be provided to the City.

[Source: Ord. 1470, 2007]

**Section 10-14-5. Enhanced Amplification Systems.**

- (a) Where buildings and structures are required to provide amenities to achieve adequate signal strength, such buildings and structures shall be equipped with any of the following to achieve the required adequate radio coverage: radiating cable systems, internal multiple antenna systems with a frequency range as established in Section 10-14-4, with amplification systems as needed, voting receiver system, or any other approved system.
- (b) If any part of the installed system or systems contains an electrically powered component, the system shall be capable of operation on an independent battery and/or generator system for a period of at least four hours without external power input or maintenance. The battery system shall automatically charge in the presence of external power input.

[Source: Ord. 1470, 2007]

**Section 10-14-6. Testing Procedures.** Method to conduct the tests:

~~(a) Measurements shall be made using the following guidelines:~~

- ~~1. Each measurement shall be made using a portable radio in general use by each emergency service provider agency, which agencies minimally include the Police department and the Fire department. Any digital, non-simplex channel programmed into such radio may be used during testing; the same channel need not be used for all tests.~~
- ~~2. Portable radios used in testing shall not be displaying "Low Battery" indications.~~
- ~~3. During Test Transmissions, the portable radio shall be held approximately two (2) inches from the mouth of the tester, at approximately a 45-degree angle with the tester's with the built in microphone and speaker directed towards the tester's mouth, and with the antenna in a vertical orientation above the radio. The antenna of each radio shall be mounted directly on the top of the radio body/case. The built in microphone shall be used for all testing; shoulder or other attached microphones/headsets shall not be used for testing.~~
- ~~4. The tester shall orient himself or herself so as to be facing towards the exterior wall of the building nearest the point of the test.~~
- ~~5. Both initial and annual tests shall be conducted by persons employed by the Emergency Service Provider Agency. At least one tester from the Police department and one tester from the Fire department shall conduct initial and annual tests, unless alternate arrangements are approved by both agencies.~~
- ~~6. Each tester shall be solely responsible for determining whether or not radio messages received in the building are intelligible; the dispatcher at the Emergency Agency Dispatch Center shall be solely responsible for determining whether or not radio messages received in the dispatch center are intelligible. An unintelligible message constitutes a failure of the test at the specific location being tested (see below).~~
- ~~7. The tester in the building shall initiate each test by attempting to transmit a message to the Dispatch Center. Failure to receive a reply from the dispatch center constitutes a failure of the test at the specific location being tested.~~
- ~~8. The tester in the building shall exercise reasonableness and discretion in the conduct of all tests. If the tester believes a particular test is not valid (e.g., is flawed by human error), then the results of that test may be discarded and the test shall be repeated.~~

~~(b) Initial tests:~~

- ~~1. Each floor of the structure shall be divided into 100-foot grids, and testing shall be performed at the center of each grid. In critical areas, including (but not limited to) those areas enumerated in section 10-14-4(c)(2), the grids shall be reduced to 25 feet. At least one test shall be conducted at the center of every room having a use identified in section 10-14-4(c)(2)b or 10-14-4(c)(2)c. The size of the grids may also be further reduced upon recommendation of any tester in areas where displays, equipment, stock, or any other obstruction may significantly affect communications or attenuate radio signals.~~
- ~~2. A test shall be performed on every landing within vertical exit enclosures.~~

~~(c) Annual tests:~~

- ~~1. Annual tests will be conducted by both the Fire department and the Police department. If the communications appear to have degraded or if the testing fails to demonstrate adequate system performance, the owner of the building or structure shall remedy the problem and restore the system in a manner consistent with the original approval criteria.~~
- ~~2. If the degradation to the system is due to building additions or remodeling, the owner of the building or structure is required to remedy the problem and restore the system in a manner consistent with the original approval criteria in order to obtain a final inspection for occupancy.~~
- ~~3. Any system degradation or failure not related to the performance of the owner's on-site system will be the responsibility of the appropriate emergency service agency.~~

[Source: Ord. 1470, 2007]

**ARTICLE 15**  
**UNIFORM CODE FOR THE ABATEMENT OF DANGEROUS BUILDINGS**

**Section 10-15-1. Title.** This ordinance shall be known and cited as the Uniform Code for the Abatement of Dangerous Buildings.

[Source: Ord. 1466, 2007]

**Section 10-15-2. Adoption of the Uniform Code for the Abatement of Dangerous Buildings.** The Uniform Code for the Abatement of Dangerous Buildings, 1997 edition, published by the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California 90601, is adopted by reference as a primary code of the City of Northglenn, to have the same force and effect as though set forth in this chapter in every particular.

[Source: Ord. 1466, 2007]

**Section 10-15-3. Copies on File.** A least one certified copy of the Uniform Code for the Abatement of Dangerous Buildings, 1997 edition as adopted, is on file in the office of the City Clerk and may be inspected during regular business hours.

[Source: Ord. 1466, 2007]

**Section 10-15-4. Purpose.** The purpose of this Chapter is to provide a just, equitable, and practical method, to be cumulative with and in addition to, any other remedy provided by the provisions of this Code, or otherwise available at law, whereby buildings or structures which, from any cause, endanger the life, limb, health, morals, property, safety, or welfare of the general public or their occupants, may be required to be repaired, vacated, or demolished.

[Source: Ord. 1466, 2007]

**Section 10-15-5. Scope.** The purpose of the Code is not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of the Code.

[Source: Ord. 1466, 2007]

**Section 10-15-6. Amendments to the Uniform Code for the Abatement of Dangerous Buildings, 1997 edition.**

The Uniform Code for the Abatement of Dangerous Buildings adopted by Section 10-15-2 is amended as follows; section numbers refer to section numbers of the Uniform Code for the Abatement of Dangerous Buildings:

(a) Section 103, is hereby amended to read as follows:

"All buildings or structures which are required to be repaired under the provisions of this Code shall be subject to the provisions of Section 34 of the 2021 International Building Code."

(b) Section 301 is hereby amended to read as follows:

"Board of Appeals means the same as Board of Adjustment as used in this Code and defined in Section 11-42 of the Northglenn Municipal Code, and the two phrases shall be used interchangeably."

(c) Section 302, Items No. 15 and 16, is hereby amended to read as follows:

15. Whenever any building or structure, used or intended to be used for dwelling purposes, because of inadequate maintenance, dilapidation, decay, damage, contamination, faulty construction or arrangement, inadequate light, air or sanitation facilities, or otherwise, is determined by the Building Official to be unsanitary, unfit for human habitation or in such a condition that is likely to cause sickness or disease.

16. Whenever any building or structure, because of obsolescence, dilapidated condition, deterioration, damage, inadequate exits, lack of sufficient fire-resistive construction, faulty

electric wiring, gas connections or heating apparatus, or other cause, is determined by the Building Official to be a fire hazard.

(d) Section 401.1 is hereby amended to read as follows:

"401.1 Commencement of Proceedings. When the Building Official has inspected or caused to be inspected any building and has found and determined that such building is a dangerous building, the Building Official shall commence proceedings to abate by the repair, rehabilitation, remediation, demolition and/or vacation of the building."

(e) Subsections 401.2(3.1), (3.3), (4), and (5) are hereby amended to read as follows:

3.1 If the Building Official has determined that the building or structure must be repaired, rehabilitated or remediated, the order shall require that any required permits be secured therefore and the work physically commenced within such time (not to exceed 60 days from the date of the order) and completed within such time as the Building Official shall determine is reasonable under all of the circumstances.

3.3 If the Building Official has determined that the building or structure must be demolished, the order shall require that the building be vacated within such time as the Building Official shall determine is reasonable (not to exceed 30 days from the date of the order); that all required permits be secured therefore within 15 days from the date of the order; and that the demolition be completed within such time as the Building Official shall determine is reasonable.

4. Statements advising that if any required repair, rehabilitation, remediation, or demolition work (without vacation also being required) is not commenced within the time specified, the Building Official (I) will order the building vacated and posted to prevent further occupancy until the work is completed, and (II) may proceed to cause the work to be done and charge the costs thereof against the property or its owner.

5. Statements advising (I) that any person having any record title or legal interest in the building may appeal from the notice and order or any action of the Building Official to the Board of Appeals, provided the appeal is made in writing as provided in this Code and filed with the Building Official within 15 days from the date of service of such notice and order; and (II) that failure to appeal will constitute a waiver of all right to an administrative hearing and determination of the matter.

(f) Section 401.4 is hereby amended to read as follows:

"401.4 Method of Service. Service of the notice and order shall be made upon all persons entitled thereto either personally or by mailing a copy of such notice and order by certified mail, postage prepaid, return receipt requested, to each such person at their address as it appears on the last equalized assessment roll of the county or as known to the Building Official. If no address of any such person so appears or is known to the Building Official, then a copy of the notice and order shall be so mailed, addressed to such person, at the address of the building involved in the proceedings. The failure of any such person to receive such notice shall not affect the validity of any proceedings taken under this section. Service by certified mail in the manner herein provided shall be effective on the date of mailing, for all persons entitled thereto, and the date the property is posted for all action against the property."

(g) Subsection 403(1) is hereby amended to read as follows:

"The following standards shall be followed by the Building Official (and by the Board of Appeals if an appeal is taken) in ordering the repair, rehabilitation, remediation, vacation or demolition of any dangerous building or structure:

1. Any building declared a dangerous building under this Code shall be made to comply with one of the following:

1.1 The building shall be repaired, rehabilitated or remediated in accordance with the current building code, health code, resolution or standards, or other current code applicable to the type of substandard conditions requiring repair; or

1.2 The building shall be demolished at the option of the building owner; or

1.3 If the building does not constitute an immediate danger to the life, limb, property or safety of the public it may be vacated, secured and maintained against entry."

(h) Subsection 701.1 is hereby amended to read as follows:

"701.1 General. After any notice and order of the Building Official becomes effective or the Board of Appeals made pursuant to this Code shall have become final, it shall be unlawful for any such person to whom any such notice and order is directed to fail, neglect or refuse to obey any such notice and order.

1. Any such person who fails to comply with any such order is guilty of a municipal ordinance offense.

2. Each day that the property remains in violation of the notice and order and the person to whom such notice and order is directed fails to obey such notice and order shall constitute a separate and distinct violation.

3. Any person who pleads guilty or no contest to or who, after trial, is found guilty of violating this Section 701.1 shall be penalized as provided in section 1-1-10(a)(2) of the Northglenn Municipal Code."

(j) Subsection 701.2 is hereby amended to read as follows:

"Failure to Obey Order. If, after any order of the Building Official becomes effective or Board of Appeals made pursuant to this Code has become final, the person to whom such order is directed shall fail, neglect or refuse to obey such order, the Building Official may (I) cause such person to be prosecuted under section 701.1 or (II) institute any appropriate action to abate such building as a public nuisance."

(k) Subsection 701.3(3) is hereby amended to read as follows:

"3. The Building Official may, in addition to any other remedy herein provided, cause the building to be repaired, rehabilitated, and/or remediated to the extent necessary to correct the conditions which render the building dangerous as set forth in the notice and order; or, if the notice and order required demolition, to cause the building to be sold and demolished or demolished and the materials, rubble and debris therefrom removed and the lot cleaned. Any such repair, rehabilitation, remediation, or demolition work shall be accomplished and the cost thereof, including all administrative costs of the City, paid and recovered in the manner hereinafter provided in this Code. Any surplus realized from the sale of any such building, or from the demolition thereof, over and above the cost of demolition and of cleaning the lot, shall be paid over to the person or persons lawfully entitled thereto."

(l) Sections 801.1 and 801.2 are hereby amended, and a new Section 801.3 is hereby enacted to read as follows:

801.1 Procedure. When any work, construction, rehabilitation, remediation, repair or demolition is to be done pursuant to section 701.3, item 3, of this Code, the work shall be accomplished by private contract upon the direction of the Building Official. Plans and specifications therefore may be prepared by the contractor, or the Building Official may employ such architectural and engineering assistance on a contract basis as deemed reasonably necessary. If any part of the work is to be accomplished by private contract, standard contractual procedures shall be followed to choose the contractor. If the work to be performed is related to remediation or rehabilitation of contaminated property, cleanup shall meet State of Colorado and Tri-County health standards and regulations.

801.2 Costs. The cost of such work and all administrative costs of the City may be paid by a special assessment against the property involved, but also shall be or may be made a personal obligation of the property owner. Such special assessment shall become and constitute a continuing and perpetual lien and charge upon the lots or parcels of ground upon which they are levied and such lien shall have a priority over all other liens except general taxes.

(m) 801.3 Special Assessments.

"801.3.1 Collection of Special Assessments. Collection of the special assessments, referred to in Subsection 801.2, may be collected following the procedures set forth in Subsection 801.3.2 herein. The procedures for collections of special assessments in this subsection, if followed, are in lieu of sections 901 through 907 of chapter 9."

(n) 801.3.2 collection of special assessment procedure.

1. A notice of special assessment, including the right to a hearing, as set out in Subsections 801.3.2(5) and (6) of this Section, shall be sent first class mail, from the City's Finance Director to the property owner/lessee at the address listed for the property owner in the county record and the property address. If any notice is returned, the property shall be posted with such notice.
2. The property owner/lessee has 30 days from the date the notice of special assessment is mailed or if notice is returned, from the date the property is posted to pay the assessment. Failure to pay within the time allotted will cause the special assessment to be recorded against the property. The special assessment will constitute a continuing lien against such property.
3. The amount of the assessment will include, in addition to all contractors' charges, inspection costs, attorneys' fees, court costs, and all other associated costs. The assessment may be paid any time prior to the assessment being turned over to the county treasurer. Payments must be made directly to the City's Finance Director.
4. Unpaid assessments will be filed quarterly with the proper office of the County Clerk and Recorder's office and annually with the treasury office.
5. An owner/lessee may object to such assessment within 30 days from the date the notice of assessment was mailed or if the notice is returned, from the date the property is posted. The objection must be in writing and mailed to and received by the building official within the 30-day period. The objection must include a phone number and address of the objecting party, and must state the basis for the objection and must be on forms made available for this purpose by the building inspection division. Upon receipt of such objection and payment of the appropriate fee, the Building Official will notify the chairperson of the Board of Appeals who will then set a hearing date, which hearing shall be the next regularly scheduled meeting of the Board of Appeals following receipt of the objection. Notice of this date will be mailed to the person making the objection. Failure to include an address in the objection will constitute a waiver of the right to file an objection.
6. The owner/lessee who requests the hearing will be charged an administrative fee pursuant to Section 11-45-2(a) of the Northglenn Municipal Code pertaining to hearings before the Board of Appeals. Failure of such person to attend the hearing at the date and time scheduled shall constitute a waiver of such right to a hearing and a determination of all issues regarding the assessment.
7. The Board of Appeals shall conduct the hearing in an informal manner and shall not be bound by technical rules of evidence. The Building Official shall carry the burden of establishing that a violation existed and that costs for abatement represented in the special assessment were reasonable under the facts and circumstances of the particular case. The standard of proof shall be by a preponderance of the evidence. A written decision will be prepared at the end of the hearing. This decision will be reached after both



the landowner and the Building Official have presented their cases. The decision will be deemed effective three days from the date the decision is mailed to the owner/lessee and will be a final decision.

(o) Section 802.1 is hereby amended to read as follows:

"802.1 General. The legislative body of this jurisdiction may establish a special revolving fund to be designated as the repair, rehabilitation, remediation, and demolition fund. Payments shall be made out of said fund upon the demand of the Building Official to defray the costs and expenses which may be incurred by this jurisdiction in doing or causing to be done the necessary work of repair or demolition of dangerous buildings."

(p) Sections 908.1 and 909 are hereby amended to read as follows:

"908.1 Priority. Immediately upon a special assessment being turned over to the County Treasurer, the assessment shall be deemed to be complete, the several amounts assessed shall be payable, and the assessments shall be liens against the lots or parcels of land assessed, respectively. The liens shall be subordinate to all existing special assessment liens previously imposed upon the same property and shall be paramount to all other liens except for state, county and property taxes with which it shall be upon a parity. The lien shall continue until the assessment and all interest due and payable thereon are paid."

(q) Section 909 -- report to assessor and tax collector: addition of assessment to tax bill.

"Certified copies of the special assessment shall be given to the County Assessor and/or the tax collector for this jurisdiction, who shall add the amount of the assessment to the next regular tax bill levied against the parcel."

[Source: Ord. 1466, 2007; 1799, 2020]

**Section 10-15-7. Violations--Penalty.**

(a) It shall be unlawful for any person to violate any of the provisions of the Uniform Code for the Abatement of Dangerous Buildings, 1997 edition, as adopted, or the provisions of this ordinance.

(b) Any violation of the provisions of this ordinance, and any violation of any of the provisions of the Uniform Code for the Abatement of Dangerous Buildings, 1997 edition, as adopted, shall upon conviction, be punishable as provided in section 1-1-10(a)(2) of the Northglenn Municipal Code.

[Source: Ord. 1466, 2007]

**Section 10-15-8. Severability Clause.** If any article, section, paragraph, sentence, clause or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part or parts thereof, irrespective of the fact that any one part or parts be declared invalid or unconstitutional.

[Source: Ord. 1466, 2007]

**Section 10-15-9. Safety Clause.** The City Council hereby finds, determines, and declares that this ordinance is necessary for the preservation of the public health, safety and welfare.

[Source: Ord. 1466, 2007]

**Section 10-15-10. Conflicts.** If the provisions of the construction Building Codes, as adopted in this article, conflict with any other provisions of the Municipal Code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

[Source: Ord. 1466, 2007]

**Section 10-15-11. Effective Date.** This ordinance shall become effective five (5) days after public notice following final passage.

[Source: Ord. 1466, 2007]

**ARTICLE 16**  
**INTERNATIONAL PROPERTY MAINTENANCE CODE**

**Section 10-16-1. Title.** This ordinance shall be known and cited as the International Property Maintenance Code.

[Source: Ord. 1799, 2020]

**Section 10-16-2. Adoption of the International Property Maintenance Code.** The International Property Maintenance Code, 2021 Edition, as published by the International Code Council, Inc., 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001, is adopted by reference as a primary code to have the same force and effect as though set forth in this Chapter in every particular, as amended by Section 10-16-5 below.

[Source: Ord. 1799, 2020]

**Section 10-16-3. Copies on File.** At least one certified copy of the International Property Maintenance Code, 2021 Edition, as adopted, is on file in the office of the City Clerk and may be inspected during regular business hours.

[Source: Ord. 1799, 2020]

**Section 10-16-5. Amendments to the International Property Maintenance Code, 2018 edition.** The following sections are hereby amended:

(a) Section 101.1 "Title" is amended by the addition of the term "City of Northglenn" where indicated.

(b) Section 101.3 "**Purpose**" Is amended and adopted to read as follows:

This Code shall be construed to secure its expressed intent, which is to ensure public health, safety and welfare insofar as they are affected by the continued occupancy and maintenance of structures and premises. Existing structures and premises that do not comply with these provisions shall be altered or repaired to provide a minimum level of health and safety as required herein. Repairs, alterations, additions to and changes in occupancy in existing buildings shall comply with the 2021 International Existing Building Code.

(c) Section 104 "Fees"

See IBC Section 109.2 "Schedule of Permit Fees"

(d) Section 109.4 "Violation Penalties" is amended and adopted to read as follows:

1. It shall be unlawful for any person to violate any of the provisions of the International Property Maintenance Code, 2021 Edition, as adopted, or the provisions of this ordinance.
2. Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Property Maintenance Code, 2021 Edition, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of the Northglenn Municipal Code.
3. Each and every day on which any violation of the ordinances of the City, or the rules and regulations adopted pursuant to such ordinances, is committed, exists or continues shall be deemed a separate offense.

(e) Section 111 "**Board of Adjustment**" is amended by deleting the section in its entirety and replacing it with the following:

Section 111 "Board of Adjustment"

111.1 General: Appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this Code may be made to the Northglenn Board of Adjustment. Appeals shall be in accordance with Chapter 11 of the Northglenn Municipal Code.

(f) Section 302.4 "Weeds" is deleted in its entirety.

(g) Section 304.14 "Insect Screens" is amended and adopted to read as follows:

Every door, window and other outside opening required for ventilation of habitable rooms, food preparation areas, food service areas or any areas where products to be included or utilized in food for human consumption are processed, manufactured, packaged or stored, shall be supplied with approved tightly fitting screens of not less than 16 mesh per inch (16 mesh per 25 mm), and every swinging screened door shall have a self-closing device in good working condition.

Exception: Screens shall not be required where other approved means, such as air curtains or insect repellent fans, are employed.

(h) Section 602.3 "Heat Supply" is amended and adopted to read as follows:

Every owner and operator of any building who rents, leases or lets one or more dwelling units, rooming units, dormitory or guestrooms on terms, either expressed or implied, is required to furnish heat to the occupants thereof and shall supply heat to maintain a temperature of not less than 68°F (20°C) in all habitable rooms, bathrooms and toilet rooms.

Exception: When the outdoor temperature is below the winter outdoor design temperature for the City, maintenance of the minimum room temperature shall not be required, provided that the heating system is operating at its full design capacity. The winter outdoor design temperature for the locality shall be as indicated in Appendix D of the International Plumbing Code.

(i) Section 604.2 "Service" is amended and adopted to read as follows:

The size and usage of appliances and equipment shall serve as a basis for determining the need for additional facilities in accordance with the National Electrical Code. Dwelling units shall be served by a three-wire, 120/240 volt, and single phase electrical service having a rating of not less than 60 amperes.

[Source: Ord. 1799, 2020]

**Section 10-16-4. Scope.** The purpose of the code is not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of the code.

[Source: Ord. 1799, 2020]

**Section 10-16-6. Violations--Penalty.**

(a) It shall be unlawful for any person to violate any of the provisions of the International Property Maintenance Code, 2021 Edition, as adopted, or the provisions of this ordinance.

(b) Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Property Maintenance Code, 2018 Edition, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of the Northglenn Municipal Code.

[Source: Ord. 1799, 2020]

**Section 10-16-7. Conflicts.** If the provisions of this Code, as adopted in this Article, conflict with any other provisions of the municipal code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

[Source: Ord. 1799, 2020]

## **ARTICLE 17 INTERNATIONAL EXISTING BUILDING CODE**

**Section 10-17-1. Title.** This ordinance shall be known and cited as the International Existing Building Code.

[Source: Ord. 1799, 2020]

**Section 10-17-2. Adoption of the International Existing Building Code.** The International Existing Building Code, 2021 Edition, as published by the International Code Council, Inc., 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001, is adopted by reference as a primary

code to have the same force and effect as though set forth in this chapter in every particular, as amended by Section 10-17-5 below.

[Source: Ord. 1799, 2020]

**Section 10-17-3. Copies on File.** At least one certified copy of the International Existing Building Code, 2021 Edition, as adopted, is on file in the office of the City Clerk and may be inspected during regular business hours.

[Source: Ord. 1799, 2020]

**Section 10-17-4. Scope.** The purpose of the code is not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of the Code.

[Source: Ord. 1799, 2020]

**Section 10-17-5. Amendments to the International Existing Building Code, 2021 Edition.** The following sections are hereby amended:

(a) Section 101.1 "Title" is amended by the addition of the term "City of Northglenn" where indicated.

(b) Section 107.3 "Temporary power" is hereby amended to read as follows:

The Building Official is authorized to give permission to temporarily supply and use power in part of an electrical installation before such installation has been fully completed and the final certificate of completion has been issued. The part covered by the temporary certificate of completion shall comply with the requirements specified for temporary lighting, heat and power in the 2020 NEC (or currently adopted code).

(c) Section 108.2 "Schedule of permit fees"

See IBC Section 109.2 "Schedule of permit fees"

(d) Section 108.4 "Work commencing before permit issuance" is amended by deleting the section in its entirety and hereby amended to read as follows:

Section 108.4 Double fee. Where a licensed contractor or an individual who starts or proceeds with work for which a permit is required by this code prior to obtaining said permit, the fees specified in Section 109.2 "Schedule of permit fees" of the City of Northglenn Building Code shall be doubled. Such fee shall be paid whether or not such permit is obtained, but the payment of such fee shall not relieve any persons from fully complying with the requirements of this code.

(e) Section 108.6 "Refunds" is amended by deleting the section in its entirety and hereby amended to read as follows:

See IBC Section 109.6 "Refunds"

(f) Section 112 "Means of Appeals" is amended by deleting the section in its entirety and replacing it with the following:

Section 112 "Means of Appeals"

112.1 General: Appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this code may be made to the Northglenn Board of Adjustment. Appeals shall be in accordance with Chapter 11 of the Northglenn Municipal Code.

(g) Section 113.4 "Violation penalties" is deleted in its entirety and hereby amended to read as follows:

1. It shall be unlawful for any person to violate any of the provisions of the International Existing Building Code, 2021 Edition, as adopted, or the provisions of this ordinance.
2. Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Existing Building Code, 2021 Edition, as adopted, shall,

upon conviction, be punishable as provided in Section 1-1-10(a)(2) of Northglenn Municipal Code.

3. Each and every day on which any violation of the ordinances of the City, or the rules and regulations adopted pursuant to such ordinances, is committed, exists or continues shall be deemed a separate offense.
- (h) Section 114.2 "Issuance" is deleted in its entirety and hereby amended to read as follows:  
The stop work order shall be in writing and shall be given to the owner of the property involved, or to the owner's agent, or to the person doing the work or posted in a conspicuous location on the property involved. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order, and the conditions under which the cited work will be permitted to resume.

- (i) Section 1301.2 "Applicability" is deleted in its entirety and hereby amended to read as follows:

Structures existing prior to the date of adoption, in which there is work involving additions, alterations, or changes of occupancy shall be made to conform to the requirements of this chapter or the provisions of Chapters 6 through 10. The provisions of Sections 1301.2.1 through 1301.2.5 shall apply to existing occupancies that will continue to be, or are proposed to be, in groups A, B, E, F, I-2 M, R, and S. These provisions shall not apply to buildings with occupancies in group H or I-1, I-3 or I-4.

[Source: Ord. 1799, 2020]

**Section 10-17-6. Application.** The provisions of this article and the provisions of the International Existing Building Code, 2021 Edition, adopted by reference shall apply to every building or structure located either within or without the corporate limits of the City of Northglenn, the use of which the City has jurisdiction and authority to regulate.

[Source: Ord. 1799, 2020]

**Section 10-17-7. Violations--Penalty.**

- (a) It shall be unlawful for any person to violate any of the provisions of the International Existing Building Code, as adopted, or the provisions of this ordinance.
- (b) Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Existing Building Code, 2021 Edition, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of the Northglenn Municipal Code.

[Source: Ord. 1799, 2020]

**Section 10-17-8. Conflicts.** If the provisions of this code, as adopted in this article, conflict with any other provisions of the Northglenn Municipal Code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

[Source: Ord. 1799, 2020]

## **ARTICLE 18 CONTRACTOR LICENSES**

**Section 10-18-1. Contractor License General Requirements.**

- (a) Any contractor performing in a business involving the building, construction, alteration, remodeling, repairing, equipping, moving, or wrecking of buildings and other structures shall be licensed as a contractor, as required in this article.
- (b) Any building permit(s) issued shall be suspended if there are no current contractor licenses.
- (c) Homeowner permits are available to property owners who wish to perform electrical and/or plumbing work on any new construction, remodeling or repair on their own property or residence. Statutory provisions require that this property is not intended for immediate sale or resale; is not rental property which is occupied or is to be occupied by tenant for lodging, either

transient or permanent; and is not generally open to the public in accordance with C.R.S. § 12-115-116(4) and C.R.S. § 12-155-118(2), as the same may be amended from time to time.

(d) Investigation Fee: Work without a license or with an expired license. Whenever any work for which a license is required by this article is commenced without first obtaining said license, or when work is done and the license is expired, a special investigation shall be made before a license may be issued or renewed for such work and an investigation fee, in an amount equal to the license fee, shall be collected whether or not a license is then or subsequently issued. The investigation fee shall be in addition to the license fee required by this Code, and shall be as set forth in Section 10-18-3.

(e) Workmanship. The licensee shall be held responsible for performing the activity authorized by the license in a proficient, workmanlike manner consistent with acceptable building practice; the failure to comply with this requirement shall be cause for the denial, suspension, revocation, or restriction of the license or future licenses.

(f) Incomplete Work. In the event a structure is not pursued to completion and work is stopped for any period exceeding one hundred eighty (180) days, the licensee shall notify the Building Official in writing of such stoppage and shall take reasonable steps to protect and to prevent the structure from deteriorating to the condition of a dangerous or unsafe building.

[Source: Ord. 1467, 2007; 1800, 2020]

#### Section 10-18-2. Contractor Defined.

(a) Contractor, within the meaning of this article is any person, which also means and includes a firm, co-partnership, corporation, association, or other organization, or any combination thereof, who:

1. Undertakes to build, construct, alter, remodel, repair, move, or wreck any building or structure, or any portion thereof, for which a permit from the city is required;
2. Holds himself or herself out to perform house moving or the moving of buildings or structures from one location to another;
3. Holds himself or herself out to perform the service of wrecking a building or other structure.

(b) The following persons shall not fall within the definition of contractor:

1. Employees working for and under the supervision of a contractor;
2. Homeowners shall not be required to obtain a City Contractor's License for the purposes of remodeling, enlarging, altering, repairing, or in any other way improving any building regulated by the International Residential Code, or accessory thereto, which they own. Homeowners will be required to obtain the necessary building permits for the proposed work prior to construction.
3. A homeowner who constructs his or her own residence, or a building or structure accessory thereto, which is intended for his or her own personal use; however, this will be permitted at only one residence within a period of a year, or such homeowner will be deemed a contractor.
4. Public utility companies shall not be required to obtain the licenses described in this article when engaged in the installation, operation, and maintenance of their equipment used for the production, generation, or distribution of the utility product or service through the facilities owned or operated by the utility company to the point of consumer service.
5. Persons who perform work with homeowners as volunteers on projects for which a homeowner is not required to obtain a license.

[Source: Ord. 1467, 2007]

#### Section 10-18-3. Classification; Fees.

(a) No person shall perform any work as a contractor within the City without having first obtained a license as provided in this article. No permits shall be issued for work to be done by

a contractor who does not have a valid license as required in this article. No work shall be done during the period a permittee's license is suspended or revoked.

(b) The following classes of contractors' license are established and the indicated fees shall be required of contractors within the City:

1. Class A. This class license shall entitle the holder to contract for the construction, alteration, or repair of any type of structure permitted by this article. The annual fee shall be \$150.00. A class "A" license is required for all work requiring the supervision of an architect or structural engineer. Possession of a class "A" license permits the activities authorized by class "B" or "C" license.
2. Class B. This license shall entitle the holder to contract for the construction, alteration, or repair of one-family and two-family residences of two stories or less. This contractor may not contract for public buildings or places of public assembly. The aforementioned limitations shall not apply to repairs on buildings not involving structural members. The annual fee shall be \$100.00. Possession of a Class "B" license permits the activities authorized by a Class "C" license.
3. Class C. This license shall be issued to those engaged in contracting for labor or for labor and material involving specialized trades, such as brick, plastering, framing, drywalling, glazing, irrigation systems, swimming pools, sheds, drainlayers, and fence contractors. Such license may include more than one such trade carried on by the licensee. The annual fee shall be \$75.00. This license shall be issued to wrecking contractors, moving contractors, and mobile home set-up contractors. No wrecking shall be done except by a licensed wrecking contractor, except that a licensed general contractor of the Class "A" or "B" category may wreck minor buildings or remove portions of a building where such wrecking is a portion of a program of alteration or remodeling.
4. Mechanical Contractor License. This license shall be issued to those engaged in contracting to erect, install or construct all mechanical systems, including hot water heating systems, air conditioning systems, refrigeration systems, or install boilers, evaporative coolers, and sheet metal work. This license shall entitle the holder to replace existing domestic water heaters and all connections thereto. Any connections to the potable water system must be performed by licensed plumbing contractor. Line voltage electrical work must be done by a licensed electrical contractor. The annual fee shall be \$50.00.
5. Plumbing Contractor License. This license shall be issued to those engaged in contracting to install, alter, repair, renovate, or add to any plumbing fixtures, gas or drainage piping, water heating or treating equipment connected to a public or private potable water distribution system or any public or private sewer system, and who possess valid State of Colorado master plumber license. the annual fee shall be \$50.00.
6. Electrical Contractor License. This license shall be issued to those engaged in contracting to install, alter, repair, renovate, or add to electrical wiring, appliances, or apparatus for the purpose of electrical light, heat, power, or signal systems or other similar purposes within or affixed to any building or structure, and who possess valid State of Colorado Master Electrician License. There shall be no annual fee for electrical contractor licenses.

[Source: Ord. 1467, 2007; 1800, 2020]

#### Section 10-18-4. Requirements.

(a) The Building Official shall have the authority in accordance with the terms of this article, to approve, deny, suspend, or revoke any license provided for in this article.

(b) Examining Procedures. The Chief Building Official shall establish such reasonable examining procedures for the issuance of licenses as shall, from time to time, become necessary. These examining procedures shall be implemented so as to ensure the City that the applicant does indeed have the knowledge and capability to perform work in accordance with

the regulations of the building codes, and the City shall not deny a license to any person capable and willing to perform in such fashion.

(c) Application Form and Procedure. Applications for contractor's license shall be on such forms and shall contain such information as may be required by the Building Official. Applicants may at any time, or from time to time, be required to furnish additional information with respect to their qualifications and financial status, or other matters relating to or affecting their license, as may be deemed necessary or desirable by the Building Official or the Board of Adjustment. Failure to furnish such information within a reasonable time, or to furnish supplemental information as may be required by the Building Official or the Board of Adjustment, shall be grounds for denial or revocation of license.

1. Proof of state license required: every applicant for a plumbing contractor license or electrical contractor license shall be required to present with the application his or her valid state of Colorado Master Electricians' or Electrical License or a Master Plumbers' License issued by the State of Colorado.

(d) License Without Examination. The Building Official may license, without examination, upon the payment of the required fees, applicants who are duly licensed under the laws of the State and/or Cities and/or Counties having requirements for the licensing and regulating of the plumbing trade, mechanical trade, building trade, etc., deemed by the Building Official to be equivalent to the requirements of this Building Code and this State.

[Source: Ord. 1467, 2007]

#### Section 10-18-5. Qualified Supervisors.

(a) When Required. The respective licensees, whether individuals, firms or corporations, shall not be required to possess those skills and qualifying experience records required for the work they are permitted to do under the terms and provisions of their respective licenses, provided that they retain in their business a supervisor whose skills and qualifying experience records are such that he would be qualified to supervise all work in his principal's license category. The respective licensees' rights to do business shall be dependent upon the continued retention of the designated supervisors in active, full-time capacity.

(b) Termination of Supervisor. Whenever a designated supervisor terminates his association with a licensee or otherwise becomes inactive, the licensee shall immediately notify the building department. In such event, the license shall be deemed to be suspended and there shall be a thirty (30) day grace period from the date of termination of the supervisor in order to acquire a proper supervisor before complete termination of the license. Should the supervisor be replaced, such fact shall be made known to the Building department. If the proposed replacement is found to meet the required qualifications, the license shall again be deemed in full force and effect without imposition of an additional license fee for the license period.

(c) Qualifications of Supervisor. Each individual who is to act as a supervisor shall be reviewed in accordance with the qualifications required by the building official for the work proposed to be done. Each individual who is to act as a supervisor shall be designated as such in each application for a license.

[Source: Ord. 1467, 2007]

#### Section 10-18-6. Classification Upgrading.

(a) Licensees wishing to upgrade their license to a higher classification must submit a new application and the total fee for the new classification, subject to proration as set forth in Section 10-18-8. No credit shall accrue toward the new classification fee for the unused term of the original license.

[Source: Ord. 1467, 2007]

#### Section 10-18-7. Expiration and Renewal.

(a) All licenses required under this article shall be valid for the current year of issuance, and all such licenses shall expire on December 31st of each year.



(b) The fee for the renewal of a license shall be the same as the fee for issuing such license as set forth in Section 10-18-3.

[Source: Ord. 1467, 2007]

**Section 10-18-8. Fees; No refund.**

(a) The applicable license fee, as set forth in Section 10-8-3(b), shall be prorated on a quarterly basis as follows:

| application date         | filing fee |
|--------------------------|------------|
| January 1 to March 31    | 100%       |
| April 1 to June 30       | 75%        |
| July 1 to September 30   | 50%        |
| October 1 to December 31 | 25%        |

The investigation fee set forth in Section 10-18-1(c) shall not be prorated.

(b) License fees shall not be refunded. However, any fee paid by an applicant who is denied a license shall be refunded.

[Source: Ord. 1467, 2007]

**Section 10-18-9. Validity.**

(a) A change of name, business designation, or address must be reported to the building inspection office within ten (10) days after making such a change. Failure of the licensee to report such change within the time limit shall cause the license to expire by force of law and become invalid at the expiration of the ten (10) day period.

(b) Incorporation or change in incorporation creating a new legal entity shall require a new license for such entity, even though one or more stockholders or directors have a license.

(c) The organization of a partnership or the change in a partnership creating a new legal entity shall require a new license, even though one or more of the partners are licensed.

(d) The dissolution of a corporation or partnership which has been licensed terminates the license and no individual or firm may operate under such license.

(e) Licenses are not transferable.

[Source: Ord. 1467, 2007]

**Section 10-18-10. Licensee Responsibility.**

(a) All licensees shall be responsible for work requiring a permit under the provisions of this Article, without limitation, and for the items listed in this Section:

1. To report in writing to the Building Official any accident occurring in any construction or undertaking which has resulted in lost time, injury, or death to any person, or damage to any building or structure within seventy-two hours after such accident;
2. To provide minimum safety measures and equipment to protect workmen and the public, as prescribed by this Article;
3. To observe any other City ordinances prescribing measures for the safety of workmen and of the public;
4. To present his or her license card when requested by the Building Official or his or her authorized representative;
5. To employ a qualified supervisor and to provide the name of such supervisor on the permit inspection card;
6. To obtain a permit when the same is required;
7. Provide honest and factual information on all applications for permits;
8. To faithfully construct, without substantial departure from or disregard of drawings and specifications, when such drawings and specifications have been filed and approved by the Building Official and a permit issued for same, unless such changes are approved by the Building Official;

9. To complete all work authorized on the permit issued under the authority of this article, unless good cause is shown;
10. To obtain inspection services when the same are required by this Article;
11. To faithfully conform to the requirements of the special inspection program as prescribed by Article 17 of the International Building Code, when required;
12. To pay any fee assessed under authority of this Article;
13. To obey any order issued under authority of this Article;
14. To provide toilet facilities prior to and during construction or demolition;
15. To obtain a certificate of occupancy, when required, upon completion of the work authorized by the licensee's permit;
16. To keep streets and sidewalks that are adjacent to construction-sites and open to the public traffic free of obstructions, construction materials, equipment, debris, mud, dirt or any other material that may be a hindrance or hazard to vehicular or pedestrian traffic;
17. To observe and conform to all of the rules and regulations governing construction and land use in the City.

[Source: Ord. 1467, 2007]

**Section 10-18-11. Suspension, Revocation, or Denial.**

(a) The Building Official may suspend, revoke, or deny a license when the licensee or applicant, including partners of a partnership, members of a joint venture, or officers, directors, or holders of ten percent or more of the stock of a corporate licensee or applicant, is responsible for one or more of the following acts or omissions:

1. Failure to comply with any of the licensee responsibilities, as outlined in Section 10-18-10, if such failure is not corrected within ten (10) days of written notification of such failure by the Building Official;
2. Knowingly combining or conspiring with any other person to permit or allow the licensee's license to be used by such other person;
3. By acting as principal agent, partner, associate, or in any other capacity with persons, to evade any provisions of this article;
4. Violation of any provision of this Article, Chapter 5-3 of the Northglenn Municipal Code, or any violation of the laws of the United States, the State of Colorado, or the ordinances of the City having any bearing upon or relation to the work or services performed under the license, or ability to perform the work or services under the license, if such violation is not corrected within ten (10) days of being notified of such failure by the Building Official;
5. Any conduct constituting fraud or misrepresentation in or connected with any activity or activities relating to building, or which are licensed or governed by this Article.
6. Failure to keep and maintain necessary State License.

(b) With regard to the acts or omissions listed in Section 10-18-11(a):

1. The first act or omission during a term of a license issued under this Article shall cause the license to be suspended for a period of twenty (20) days.
2. The second act or omission during a term of a license issued under this Article shall cause the license to be suspended for a period of forty (40) days.
3. The third act or omission during the term of a license issued under this Article shall cause the license to be revoked.
4. Three or more acts or omissions during the preceding year shall be cause for the denial of a license.

[Source: Ord. 1467, 2007]

**Section 10-18-12. Suspension, Revocation, or Denial Procedures.**

(a) When any of the acts or omissions as enumerated in Section 10-18-11 are committed by a licensee and the Building Official deems that such license would be suspended, revoked, or denied, the procedure shall be as follows:

1. The licensee shall be notified, in writing, by certified mail, mailed to the licensee's address of record with the Building Official, at least ten (10) days prior to suspension, revocation, or denial.
2. Upon receipt of the notice, the licensee may request a hearing. Such request shall be in writing to the Building Official within ten (10) days of mailing of the notice.
3. If a hearing is requested by the licensee, in writing, within the time limit designated above, the Building Official shall set a time, date, and place for the hearing within five days of receipt of the request for a hearing, and so notify the licensee.
4. When a hearing is conducted, the licensee and other interested parties may be in attendance. Upon completion of the hearing, the Building Official may take all the evidence admitted under advisement, and shall within ten (10) days, notify the licensee of his or her findings and ruling, in writing, by certified mail. No suspension or revocation shall be effective while the matter is under advisement, except for emergency suspensions under section 10-18-14.
5. If the decision rendered by the Building Official is adverse to the licensee, the licensee may appeal to the Board of Adjustment as an "aggrieved" person, and shall file an application for review by the Board of Adjustment within thirty (30) days after mailing of notice of the ruling of the Building Official.

[Source: Ord. 1467, 2007]

**Section 10-18-13. Board of Adjustment; Hearing and Review Duties.**

- (a) Appeals to the Board of Adjustment shall be in accordance with the provisions of Section 11-42 of the Northglenn Municipal Code.
- (b) The Board of Adjustment may, after a full hearing on the charges, suspend any license or registration for a period not to exceed sixty (60) days. The Board of Adjustment may also recommend to City Council that the license in question be suspended for more than sixty (60) days or that the license be revoked. The City Council, after a full hearing on the charges, may revoke or suspend any license or registration issued pursuant to this article.

[Source: Ord. 1467, 2007]

**Section 10-18-14. Emergency Suspension.**

- (a) If the Building Official finds that emergency cause exists for suspension or revocation of a license, he or she may enter an order for immediate suspension of such license, pending further investigation and proceedings for suspension or revocation, as provided in this Article. The licensee may, upon notice of such suspension, request an immediate hearing before the Building Official. The procedure shall thereafter be as provided in this Article.

[Source: Ord. 1467, 2007]

**Section 10-18-15. Denial or Revocation; Reapplication.**

- (a) If a license is denied or revoked by the Building Official, and in case of an appeal, if the denial or revocation has been affirmed by the Board of Adjustment, the applicant may reapply, but not sooner than ninety (90) days after the denial or revocation, or in the case of an appeal, ninety (90) days after the order of the Board of Adjustment affirming the denial or revocation.

[Source: Ord. 1467, 2007]

**Section 10-18-16. Transitional Provisions.**

- (a) Except as otherwise expressly provided herein, the Building Code shall not be construed to require the duplication or reissuance of any license within the same calendar year, the duplication of any examination or the duplication of any payment of any license fee for a particular grade of license within the same calendar year. All persons in the building and construction industries licensed as of the effective date of the ordinance from which this Section derives under former codes and ordinances shall be deemed to be appropriately licensed under this Article. Any such licensee under a former code or ordinance who fails to reapply for a license at the conclusion of the calendar year shall surrender the license, and the license shall be deemed to be null and void.

[Source: Ord. 1467, 2007]

**Section 10-18-17. Violations.**

- (a) It shall be unlawful for any person to violate any of the provisions of this ordinance.
- (b) Any violation of the provisions of this ordinance shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of this Code.

[Source: Ord. 1467, 2007]

**Section 10-18-18. Severability Clause.**

- (a) If any article, section, paragraph, sentence, clause or phrase of this ordinance is held to be unconstitutional or invalid for any reason, such decision shall not affect the validity or constitutionality of the remaining portions of this ordinance. The City Council hereby declares that it would have passed this ordinance and each part or parts thereof, irrespective of the fact that any one part or parts be declared invalid or unconstitutional.

[Source: Ord. 1467, 2007]

**Section 10-18-19. Safety Clause.**

- (a) The City Council hereby finds, determines, and declares that this ordinance is necessary for the preservation of the public health, safety and welfare.

[Source: Ord. 1467, 2007]

**Section 10-18-20. Conflicts.**

- (a) If the provisions of this Article conflict with any other provisions of the Municipal Code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

[Source: Ord. 1467, 2007]

**Section 10-18-21. Effective Date.**

- (a) This ordinance shall become effective January 1, 2007.

[Source: Ord. 1467, 2007]

**ARTICLE 19**

**GROWING OF MEDICAL MARIJUANA IN RESIDENTIAL STRUCTURES**

**Section 10-19-1. Purpose.** This Article 19 of Chapter 10 is intended to apply to the growing of medical marijuana in residential structures whether such growing is done by patients for their own use, or by primary caregivers.

[Source: Ord. 1606, 2011]

**Section 10-19-2. Growing of Medical Marijuana in Residential Structures.** A primary caregiver for purposes of this Article 19 of Chapter 10 and consistent with Article XVIII, Section 14(1)(f) of the Colorado Constitution is defined as a natural person, other than the patient and the patient's physician, who is eighteen (18) years of age or older and has significant responsibility for managing the well-being of a patient who has a debilitating medical condition. In addition to other activities conducted on behalf of the patient, a primary caregiver, a patient or a group of patients cultivating marijuana plants for their own use may cultivate, possess, produce, use or transport marijuana or paraphernalia to administer marijuana for medicinal purposes, subject to the following.

- (a) Such cultivation, production, or possession of marijuana plants must be in full compliance with all applicable provisions of Article XVIII, section 14 of the Colorado Constitution, the Colorado Medical Marijuana Code, C.R.S. §12-43.3-101 et seq., and the Medical Marijuana Program, C.R.S. §25-1.5-106.
- (b) Such marijuana plants are cultivated, produced, or possessed within a licensed patient's or registered caregiver's primary residence, as defined by subsection (i) below, and no more than a total of twelve (12) total plants, whether for medical or for recreational use, may be cultivated within one primary residence.
- (c) The cultivation, production, or possession of such marijuana plants must not be perceptible from the exterior of the primary residence, including but not limited to:

1. common visual observation, including any form of signage;
  2. unusual odors, smells, fragrances, or other olfactory stimulus;
  3. light pollution, glare, or brightness that disturbs the repose of another; and
  4. undue vehicular or foot traffic, including excess parking within the residential zone.
- (d) Such marijuana plants shall not be grown or processed in the common areas of a multi-family or attached residential development.
- (e) Such cultivation, production, or possession of marijuana plants shall be limited to the following space limitations within a primary residence:
1. Within a single-family dwelling unit (Group R-3 as defined by the International Building Code): A secure, defined, contiguous 150 square foot area within the primary residence of the licensed patient or registered caregiver.
  2. Within a multi-family dwelling unit (Group R-2 as defined by the International Building Code): A secure, defined, contiguous 100 square foot area within the primary residence of the patient or registered caregiver.
  3. Such cultivation, production, or possession of marijuana plants shall not occur in any accessory structure, which accessory structures shall specifically include greenhouses.
- (f) Such cultivation, production, or possession of marijuana plants shall meet the requirements of all adopted City of Northglenn building regulations, and other applicable regulations of the State of Colorado, the City of Northglenn, the North Metro Fire Rescue District, and the Tri-County Health Department, as the same may be amended from time to time.
- (g) Such cultivation, production, or possession of marijuana plants shall meet the requirements of all adopted water and sewer regulations promulgated by the City.
- (h) Such cultivation, production, or possession of marijuana plants shall be considered a "home occupation" pursuant to Section 11-5-2(b)(69) as the same may be applicable to such use, except that in the case of a conflict between this Article 19 of Chapter 10 and Section 11-5-2(b)(69), the provisions of this Article 19 of Chapter 10 shall control.
- (i) For purposes of this ordinance, "primary residence" means the place that a person, by custom and practice, makes his or her principle domicile and address and to which the person intends to return, following any temporary absence, such as vacation. Residence is evidenced by actual daily physical presence, use, and occupancy of the primary residence and the use of the residential address for domestic purposes, such as, but not limited to, slumber, preparation of and partaking of meals, regular mail delivery, vehicle and voter registration, or credit, water, and utility billing. A person shall have only one primary residence. A primary residence shall not include accessory buildings.
- (j) For purposes of this ordinance, "a secure" area means an area within the primary residence accessible only to the patient or primary caregiver. Secure premises shall be locked or partitioned off to prevent access by children, visitors, casual passersby, vandals, or anyone not licensed and authorized to possess medical marijuana.
- (k) The cultivation, production, or possession of marijuana plants in a residential structure pursuant to this Article 19 of Chapter 10 is and shall be deemed consent by the primary caregiver or patient(s) upon reasonable notice for the City to inspect the premises to assure compliance with the provisions of this Article 19 of Chapter 10.

[Source: Ord. 1606, 2011; 1748, 2017]

## **ARTICLE 20 GROWING OF RECREATIONAL MARIJUANA IN RESIDENTIAL STRUCTURES FOR PERSONAL USE**

**Section 10-20-1. Purpose.** This Article 20 of Chapter 10 is intended to apply to the growing of recreational marijuana in residential structures for personal use to the extent authorized by Article XVIII, Section 16(3)(b) of the Colorado Constitution.

[Source: Ord. 1647, 2013]

**Section 10-20-2. Growing of Recreational Marijuana in Residential Structures.** Any person, for purposes of this Article 20 and consistent with Article XVIII, Section 16(3)(b) of the Colorado Constitution, who is twenty-one (21) years of age or older that is cultivating marijuana plants for their own use, may possess, grow, process or transport no more than six (6) marijuana plants, with three (3) or fewer being mature, subject to the requirements that follow.

(a) Such possessing, growing, processing or transporting of marijuana plants for personal use must be in full compliance with all applicable provisions of Article XVIII, Section 16 of the Colorado Constitution.

(b) Such marijuana plants are possessed, grown, or processed within the primary residence of the person possessing, growing or processing the marijuana plants for personal use, as defined by subsection (h) below, and no more than a total of twelve (12) total plants, whether for medical or for recreational use, may be cultivated within one primary residence.

(c) The possession, growing and processing of such marijuana plants must not be perceptible from the exterior of the primary residence, including, but not limited to:

1. common visual observation, including any form of signage;
2. unusual odors, smells, fragrances, or other olfactory stimulus;
3. light pollution, glare, or brightness that disturbs the repose of another; and
4. undue vehicular or foot traffic, including excess parking within the residential zone.

(d) Such marijuana plants shall not be grown or processed in the common areas of a multi-family or attached residential development.

(e) Such cultivation, production, growing and processing of marijuana plants shall be limited to the following space limitations within a primary residence:

1. Within a single-family dwelling unit (Group R-3 as defined by the International Building Code): A secure, defined, contiguous 150 square foot area within the primary residence of the person possessing, growing or processing the marijuana plants for personal use.
2. Within a multi-family dwelling unit (Group R-2 as defined by the International Building Code): A secure, defined, contiguous 100 square foot area within the primary residence of the person possessing, growing or processing the marijuana plants for personal use.
3. Such possession, growing and processing of marijuana plants shall not occur in any accessory structure, which accessory structures shall specifically include greenhouses.

(f) Such cultivation, production, or possession of marijuana plants shall meet the requirements of all adopted City of Northglenn building regulations, and other applicable regulations of the State of Colorado, the City of Northglenn, the North Metro Fire Rescue District, and the Tri-County Health Department, as the same may be amended from time to time.

(g) Such cultivation, production, or possession of marijuana plants shall meet the requirements of all adopted water and sewer regulations promulgated by the City.

(h) For purposes of this ordinance, "primary residence" means the place that a person, by custom and practice, makes his or her principle domicile and address and to which the person intends to return, following any temporary absence, such as vacation. Residence is evidenced by actual daily physical presence, use, and occupancy of the primary residence and the use of the residential address for domestic purposes, such as, but not limited to, slumber, preparation of and partaking of meals, regular mail delivery, vehicle and voter registration, or credit, water, and utility billing. A person shall have only one primary residence. A primary residence shall not include accessory buildings.

(i) For purposes of this ordinance, "a secure" area means an area within the primary residence accessible only to the person possessing, growing or processing the marijuana plants for personal use. Secure premises shall be locked or partitioned off to prevent access by children, visitors, casual passersby, vandals, or anyone not authorized to possess marijuana.

(j) The possession, growing and processing of marijuana plants in a residential structure pursuant to this Article 20 of Chapter 10 is and shall be deemed consent by the person possessing, growing or processing the marijuana plants for personal use, upon reasonable

notice, for the City to inspect the premises to assure compliance with the provisions of this Article 20 of Chapter 10.

[Source: Ord. 1647, 2013; 1748, 2017]

## **ARTICLE 21 INTERNATIONAL SWIMMING POOL AND SPA CODE**

**Section 10-21-1. Title.** This ordinance shall be known and cited as the International Swimming Pool and Spa Code.

[Source: Ord. 1799, 2020]

**Section 10-21-2. Adoption of the International Swimming Pool and Spa Code.** The International Swimming Pool and Spa Code, 2021 Edition, as published by the International Code Council, Inc., 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001, is adopted by reference as a primary code to have the same force and effect as though set forth in this chapter in every particular.

[Source: Ord. 1799, 2020]

(a) Section 101.1 "Title" is amended by the addition of the term "City of Northglenn" where indicated.

(b) Section 101.3 "Purpose" Is amended and adopted to read as follows:

This Code shall be construed to secure its expressed intent, which is to ensure public health, safety and welfare insofar as they are affected by the continued occupancy and maintenance of structures and premises. Repairs, alterations, additions to and changes to pool and spas shall comply with the 2021 International Pool and Spa Code.

(c) Section 108.2 "Schedule of Permit Fees"

See IBC Section 109.2 "Schedule of Permit Fees"

(d) Section 113.4 "Violation Penalties" is amended and adopted to read as follows:

4. It shall be unlawful for any person to violate any of the provisions of the International Pool and Spa Code, 2021 Edition, as adopted, or the provisions of this ordinance.

5. Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Pool and Spa Code, 2021 Edition, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of the Northglenn Municipal Code.

6. Each and every day on which any violation of the ordinances of the City, or the rules and regulations adopted pursuant to such ordinances, is committed, exists or continues shall be deemed a separate offense.

(e) Section 112 "Board of Appeal" is amended by deleting the section in its entirety and replacing it with the following:

**Section 111 "Board of Adjustment"**

111.1 General: Appeals of orders, decisions or determinations made by the Building Official relative to the application and interpretation of this Code may be made to the Northglenn Board of Adjustment. Appeals shall be in accordance with Chapter 11 of the Northglenn Municipal Code.

**Section 10-21-3. Copies on File.** At least one certified copy of the International Swimming Pool and Spa Code, 2021 Edition, as adopted, is on file in the office of the City Clerk and may be inspected during regular business hours.

[Source: Ord. 1799, 2020]

**Section 10-21-4. Scope.** The purpose of the code is not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefited by the terms of the Code.

[Source: Ord. 1799, 2020]

**Section 10-21-5. Violations--Penalty.**

(a) It shall be unlawful for any person to violate any of the provisions of the International Swimming Pool and Spa Code, as adopted, or the provisions of this ordinance.

(b) Any violation of the provisions of this ordinance and any violation of any of the provisions of the International Swimming Pool and Spa Code, 2021 Edition, as adopted, shall, upon conviction, be punishable as provided in Section 1-1-10(a)(2) of the Northglenn Municipal Code.

[Source: Ord. 1799, 2020]

[Section 10-21-6. Conflicts.](#) If the provisions of this code, as adopted in this article, conflict with any other provisions of the Northglenn Municipal Code then the more restrictive of the two shall govern. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable.

[Source: Ord. 1799, 2020]



# ATTACHMENT 2

Version: Sept  
26, 2022

| Category                              | Amend. Number | Amendment purpose                                                                                                                                                                                                                                | Section Number | Amendment language                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Admin                                 | q             | Avoids duplicative or conflicting code                                                                                                                                                                                                           | IRC Ch. 11     | The 2021 IRC is amended as follows:<br>Chapter 11 [RE] ENERGY EFFICIENCY is hereby deleted in its entirety and all provisions for energy efficiency shall comply with the currently adopted International Energy Conservation Code, residential provisions, and its local amendments because the language of this chapter is duplicated therein.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Admin                                 | a             | Inserts jurisdiction name                                                                                                                                                                                                                        | C101.1         | Section C101.1 Title is retained in its entirety with the following amendments:<br>C101.1 Title. This code shall be known as the International Energy Conservation Code of [City/Town/County], and shall be cited as such. It is referred to herein as "this code" or "the IECC."<br>Section C103.2 Information on construction documents, is amended by modifying item 6 and adding items 14, 15, and 16 as follows:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Admin                                 | b             | This ensures fuel source, electric-ready, solar-ready, and EV-ready are shown on the construction documents. Since some of these are new elements, this also helps with compliance. (Matches Fort Collins.)                                      | C103.2         | 6.Mechanical and service water heating systems and equipment types, sizes, fuel source, and efficiencies.<br>14.Details of additional electric infrastructure, including branch circuits, conduit, or pre-wiring, and panel capacity in compliance with the provisions of this code.<br>15.Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.<br>16.Location of designated EVSE spaces, EVSE Universal spaces, EV-Ready spaces, and EV-Capable spaces in parking facilities.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Electric-ready                        | f             | This adds the electric-ready infrastructure to inspection.                                                                                                                                                                                       | C105.2.5       | Section C105.2.5 Electrical system is amended to read:<br>C105.2.5 Electrical system. Inspection shall verify lighting system controls, components, and meters, and additional electric infrastructure, as required by the code, approved plans and specifications.<br>Section C202 GENERAL DEFINITIONS is amended to add or revise the following definitions in alphabetical order:<br><br>ALL-ELECTRIC BUILDING. A building and building site that contains no combustion equipment, or plumbing for combustion equipment, and that uses heat pump technology as the primary supply for heating, cooling, and service water heating loads.<br><br>COMBUSTION EQUIPMENT: Any equipment or appliances used for space heating, cooling, water heating (including pools and spas), cooking, clothes drying or lighting that uses natural gas, propane, other fuel gas, or fuel oil.<br><br>HORTICULTURAL LIGHTING. Electric lighting used for horticultural production, cultivation or maintenance.<br><br>MIXED-FUEL BUILDING. A building and building site that contains combustion equipment, or plumbing for combustion equipment, for space heating, cooling, water heating (including pools and spas), cooking, or clothes drying.<br><br>PHOTOSYNTHETIC PHOTON EFFICACY (PPE). Photosynthetic photon flux emitted by a light source divided by its electrical input power in units of micromoles per second per watt, or micromoles per joule (μmol/J) between 400-700nm as defined by ANSI/ASABE S640.<br>Section C401.2.1, item 2, is amended to read as follows: |
| Definitions                           | i             | This adds definitions to accommodate all-electric buildings (matches Superior) as well as horticulture lighting (approved by 2024 IECC Commercial Consensus Committee.)                                                                          | C202           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Electric-ready and electric-preferred | j             | This adds electric-ready and electric-preferred for buildings selecting the Total Performance Path                                                                                                                                               | C401.2.1       | 2. Total Building Performance. The Total Building Performance option requires compliance with Section C407 and, for mixed fuel buildings, Section C405.13 and 10 credits from Tables C406.1(1) through C406.1(5).<br>Section C401.2.2 ASHRAE 90.1 is amended to read as follows:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Electric-ready and electric-preferred | k             | This adds electric-ready and electric-preferred for buildings selecting ASHRAE 90.1.                                                                                                                                                             | C401.2.2       | C401.2.2 ASHRAE 90.1. Commercial buildings shall comply with the requirements of ANSI/ASHRAE/IESNA 90.1 and C405.14 Additional electric infrastructure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Heat island                           | l             | This expands the cool roof requirement to climate zone 5. Note: This doesn't impact solar panels, skylights, mechanical equipment, rooftop amenities, vegetative roofs, etc. and it doesn't apply to roof repairs, recoverings, or replacements. | C402.3         | Section C402.3 Roof solar reflectance and thermal emittance, first sentence, is amended as follows, with the other parts of the section to remain:<br>C402.3 Roof solar reflectance and thermal emittance. Low-sloped roofs directly above conditioned spaces shall comply with one or more of the options in Table C402.3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Clarifying (avoids double-counting)   | m             | This ensures that renewable energy used to meet the exemption is not also double-counted towards compliance with C104 or C406.                                                                                                                   | C404.2.1       | C404.2.1 High input service water-heating systems, item 1 under exceptions, is amended to read as follows:<br>1.Where not less than 50 percent of the annual service water heating requirement is provided by on-site renewable energy or site-recovered energy not including any capacity used for compliance with Section CD104 or C406 of this code, the minimum thermal efficiency requirements of this section shall not apply.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

Section C404.10 is added as follows:

C404.10 Water heating equipment location. Water heaters with combustion equipment shall be located in a space with the following characteristics:

1. Minimum dimensions of 3 feet by 3 feet by 7 feet high.
2. Minimum volume of 760 cubic feet, or the equivalent of one 16-inch by 24-inch grill to a heated space and one 8-inch duct of no more than 10 feet in length for cool exhaust air.
3. Contains a condensate drain that is no more than 2 inches higher than the base of the installed water heater and allows natural draining without pump assistance, installed within 3 feet of the water heater.

Exceptions:

1. Instantaneous water heaters located within 10 feet of the point of use.
2. Water heaters with an input capacity of more than 300,000 Btu/h.

Section C405.4 Lighting for plant growth and maintenance is re-titled "Horticultural Lighting" and amended to read as follows:

C405.4 Horticultural Lighting. Permanently installed luminaires shall have a photosynthetic photon efficacy of not less than 1.7  $\mu\text{mol}/\text{J}$  for horticultural lighting in greenhouses and not less than 1.9  $\mu\text{mol}/\text{J}$  for all other horticultural lighting. Luminaires for horticultural lighting in greenhouses shall be controlled by a device that automatically turns off the luminaire when sufficient daylight is available. Luminaires for horticultural lighting shall be controlled by a device that automatically turns off the luminaire at specific programmed times.

Section C405.5.3 Gas lighting is amended to read as follows:

Section C405.5.3. Gas lighting. Gas fired lighting appliances shall not be equipped with continuously burning pilot ignition systems are not permitted.

Electric-ready n This is part of electric-ready. It ensures sufficient physical space for future electric water heating systems. It only applies to water heaters with a clear path to electrification presently and exempts systems that don't. (Matches Denver.) C404.10

Efficiency o Given the very high energy use of indoor agriculture, in particular marijuana grow facilities, this helps improve the efficiency of the lighting. (Approved by 2024 IECC Commercial Consensus Committee.) C405.4

Electric-preferred p This disallows gas-powered lighting. Gas lighting is rarely used anymore, but this adds assurance that it can't be. (Matches Superior.) C405.5.3

EV q Adding a category for monitoring EV charging separately allows the building load to be measured independently from this non-building load. This will be critical with the wider adoption of Building Performance Standards or other existing building energy use policies as it will allow EV charging to be easily excluded from the building loads for the purposes of regulating actual energy use in buildings. (Approved for the 2024 IECC by the full Commercial Consensus Committee.) C405.12.2

Table C405.12.2 ENERGY USE CATEGORIES is amended to add a new line at the end:  
Electric vehicle charging|Electric vehicle charging loads.

A new Section C405.13 is added to read as follows:

C405.13 Additional electric infrastructure. All combustion equipment shall be provided with a junction box that is connected to an electrical panel by continuous raceways that meet the following requirements:

1. The junction box, raceway, and bus bar in the electric panel and conductors serving the electric panel shall be sized to accommodate electric equipment sized to serve the same load as the combustion equipment.
2. The panel shall have reserved physical space for a three-pole circuit breaker.
3. The junction box and electrical panel directory entry for the dedicated circuit breaker space shall have labels stating "For future electric equipment."
4. The junction box shall allow for the electric equipment to be installed within the same place of the combustion equipment that it replaces.

Exceptions:

1. Warm air furnaces serving spaces that also have space cooling.
2. Water heating equipment with an input capacity more than 300,000 Btu/h
3. Industrial, manufacturing, laboratory, and high hazard occupancy combustion equipment.

Electric-ready r This adds electric-ready wiring for combustion equipment. (Matches Denver.) C405.13

Electric-preferred s This is the electric-preferred section. To encourage electrification of buildings while allowing for mixed-fuel construction, mixed fuel buildings are required to achieve more efficiency credits (20 instead of 10). (NOTE: This is where a community can go more or less aggressively towards decarbonization and net zero. For example, Denver is proposing ~40 credits for mixed fuel (depending on building type). C406.1

Section C406.1 Additional energy efficiency credit requirements, first sentence, is amended to read as follows with the other parts of the paragraph and section to remain:

C406.1 Additional energy efficiency credit requirements. New all-electric buildings shall achieve a total of 10 credits and new mixed-fuel buildings shall achieve a total of 20 credits from Tables C406.1(1) through C406.1(5) where the table is selected based on the use group of the building and from credit calculations as specified in relevant subsections of C406.

Electric-preferred t Continuing with electric preferred, this fixes a problem where fossil fuel water heaters were given more credits than high-efficiency electric. (This problem is also fixed in the 2024 IECC by the Commercial Consensus Committee.) C406.1(2)

TABLE C406.1(2) ADDITIONAL ENERGY EFFICIENCY CREDITS FOR GROUP R AND I OCCUPANCIES is retained in its entirety, except Sections C406.7.3 and C406.7.4 in Climate Zone 5B are amended to read as follows:

TABLE C406.1(2)  
ADDITIONAL ENERGY EFFICIENCY CREDITS FOR GROUP R AND I OCCUPANCIES  
SECTION CLIMATE ZONE 5B  
C406.7.3: Efficient fossil fuel water heater (b) 3  
C406.7.4: Heat pump water heater (b) 9

|                                     |    |                                                                                                                                                                                                                                                    |           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electric-preferred                  | u  | Cont'd from 16                                                                                                                                                                                                                                     | C406.1(3) | <p>TABLE C406.1(3) ADDITIONAL ENERGY EFFICIENCY CREDITS FOR GROUP E OCCUPANCIES is retained in its entirety, except Sections C406.7.3 and C406.7.4 in Climate Zone 5B are amended to read as follows:</p> <p>TABLE C406.1(3)<br/>ADDITIONAL ENERGY EFFICIENCY CREDITS FOR GROUP E OCCUPANCIES<br/>SECTION CLIMATE ZONE 5B<br/>C406.7.3: Efficient fossil fuel water heater (a) N/A<br/>C406.7.4: Heat pump water heater (a) 3</p> <p>20. TABLE C406.1(5) ADDITIONAL ENERGY EFFICIENCY CREDITS FOR OTHER OCCUPANCIES is retained in its entirety, except Sections C406.7.3 and C406.7.4 in Climate Zone 5B are amended to read as follows:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Electric-preferred                  | v  | Cont'd from 16                                                                                                                                                                                                                                     | C406.1(5) | <p>TABLE C406.1(5)<br/>ADDITIONAL ENERGY EFFICIENCY CREDITS FOR OTHERa OCCUPANCIES<br/>SECTION CLIMATE ZONE 5B<br/>C406.7.3: Efficient fossil fuel water heater (b) 3<br/>C406.7.4: Heat pump water heater (b) 9</p> <p>TABLE C407.2 REQUIREMENTS FOR TOTAL BUILDING PERFORMANCE is retained in its entirety and amended to add the following items:<br/>TABLE C407.2<br/>REQUIREMENTS FOR TOTAL BUILDING PERFORMANCE</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Clarifying (avoids double-counting) | w  | This adds the thermal energy certification, slab and radiant heating insulation, and cool roofs to the Total Building Performance pathway, to match the other pathways. (Approved by the 2024 IECC Commercial Consensus Committee.)                | C407.2    | <p>SECTION   TITLE<br/>Envelope<br/>C401.3 Thermal envelope certificate<br/>C402.2.4 Slabs-on-grade<br/>C402.2.6 Insulation of radiant heating system<br/>C402.3 Roof solar reflectance and thermal emittance</p> <p>CB103.1, first sentence, is amended to read as follows, with the exceptions to remain:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Solar-ready                         | x  | This is part of the solar-ready adoption. This amendment fixes the gap for multi-family. (Aligns with Superior.)                                                                                                                                   | CB103.1   | <p>CB103.1 General. A solar-ready zone shall be located on the roof of all new buildings that are subject to the commercial provisions of the IECC and that are oriented between 110 degrees and 270 degrees of true north or have low-slope roofs. Solar-ready zones shall comply with Sections CB103.2 through CB103.9.</p> <p>Appendix CD is added E23 to read as follows:</p> <p>APPENDIX CD<br/>EV READINESS - COMMERCIAL</p> <p>CD101. Purpose and intent. The purpose and intent of this Appendix CD is to accommodate the growing need for EV charging infrastructure. Including these measures during initial commercial construction substantially reduces the costs and difficulty of installing EV infrastructure at a later date.</p> <p>CD102. Applicability. This Appendix CD shall apply to all new commercial construction to which the current International Building Code applies.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| EV                                  | y  | This is the EV-ready appendix for commercial and commercial multi-family (four stories and greater). (Mostly matches the version approved by the 2024 IECC Commercial Consensus Committee and Denver's 2021 IECC Technical Advisory Committee.[1]) | CD        | <p>Section CD103. Definitions.</p> <p>AUTOMOBILE PARKING SPACE. A space within a building or private or public parking lot, exclusive of driveways, ramps, columns, office, and work areas, for the parking of an automobile.</p> <p>DIRECT CURRENT FAST CHARGING (DCFC) EVSE: EV power transfer infrastructure capable of fast charging on a 100A or higher 480VAC three-phase branch circuit. AC power is converted into a controlled DC voltage and current within the EVSE that will then directly charge the electric vehicle.</p> <p>EV LOAD MANAGEMENT SYSTEM: A system designed to allocate charging capacity among multiple EVSE and that complies with the current National Electric Code.</p> <p>ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, and electric motorcycles, primarily powered by an electric motor that draws current from an electric source.</p> <p>ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). Equipment for plug-in power transfer including the ungrounded, grounded, and equipment grounding conductors, and the electric vehicle connectors, attachment plugs, personal protection system and all other fittings, devices, power outlets or apparatus</p> <p>Section R101.1 Title is retained in its entirety with the following amendments:</p> |
| Admin                               | ff | Adds jurisdiction name                                                                                                                                                                                                                             | R101.1    | <p>R101.1 Title. This code shall be known as the International Energy Conservation Code of [City/Town/County], and shall be cited as such. It is referred to herein as "this code" or "the IECC."</p> <p>Section R103.2 Information on construction documents, is amended by modifying item 6 and adding items 10, 11, and 12 as follows:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Admin                               | gg | This ensures fuel source, electric-ready, solar-ready, and EV-ready are shown on the construction documents. Since some of these are new elements, this also helps with compliance. (Matches Fort Collins.)                                        | R103.2    | <p>6. Mechanical and service water heating systems and equipment types, sizes, fuel source, and efficiencies.</p> <p>10. Details of additional electric infrastructure, including branch circuits, conduit, or pre-wiring, and panel capacity in compliance with the provisions of this code.</p> <p>11. Location of pathways for routing of raceways or cable from the solar ready zone to the electrical service panel.</p> <p>12. Location of designated EVSE spaces, EVSE Universal spaces, EV-Ready spaces, and EV-Capable spaces in parking facilities, as applicable.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

Section R202 GENERAL DEFINITIONS is amended to add the following definitions in alphabetical order:

**ALL-ELECTRIC BUILDING.** A building and building site that contains no combustion equipment, or plumbing for combustion equipment, and that uses heat pump technology as the primary supply for heating, cooling, and service water heating loads.

Definitions hh This adds definitions to accommodate all-electric buildings. (Matches Superior.)

**COMBUSTION EQUIPMENT:** Any equipment or appliances used for space heating, cooling, water heating (including pools and spas), cooking, clothes drying or lighting that uses natural gas, propane, other fuel gas, or fuel oil.

**MIXED-FUEL BUILDING.** A building and building site that contains combustion equipment, or plumbing for combustion equipment, for space heating, cooling, water heating (including pools and spas), cooking, or clothes drying.

Section R401.2.5 Additional energy efficiency is amended as follows:

R401.2.5 Additional energy efficiency. This section establishes additional requirements applicable to all compliance approaches to achieve additional energy efficiency.

1. For buildings complying with Section R401.2.1, the building shall meet one of the following:

1.1. For all-electric buildings, one of the additional efficiency package options shall be installed according to Section R408.2.

2.2. For mixed-fuel buildings, three of the additional efficiency packages shall be installed, at least one of which addresses the envelope.

2. For buildings complying with Section R401.2.2, the building shall meet one of the following:

2.1. For all-electric buildings, one of the additional efficiency package options in Section R408.2 shall be installed without including such measures in the proposed design under Section R405.

2.2. For mixed-fuel buildings, three of the additional efficiency packages shall be installed, at least one of which addresses the envelope, without including such measures in the proposed design under Section R405.

2.3. For all-electric buildings, the proposed design of the building under Section R405.3 shall have an annual energy cost that is less than or equal to 95 percent of the annual energy cost of the standard reference design.

2.4. For mixed-fuel buildings, the proposed design of the building under Section R405.3 shall have an annual energy cost that is less than or equal to 80 percent of the annual energy cost of the standard reference design.

3. For buildings complying with the Energy Rating Index alternative Section R401.2.3, the Energy Rating Index value shall be at least 5 percent less than the Energy Rating Index target specified in Table R406.5.

The options selected for compliance shall be identified in the certificate required by Section R401.3.

Section R401.3 Certificate, item 4, is amended and new items 8, 9, and 10 are added as follows:

R401.3 Certificate. A permanent certificate shall be completed by the builder or other approved party and posted on a wall in the space where the furnace is located, a utility room or an approved location inside the building. Where located on an electrical panel, the certificate shall not cover or obstruct the visibility of the circuit directory label, service disconnect label or other required labels. The certification shall indicate the following:

□

4. The types, sizes, fuel sources, and efficiencies of heating, cooling and service water heating equipment. Where a gas-fired unvented room heater, electric furnace or baseboard electric heater is installed in the residence, the certificate shall indicate "gas-fired unvented room heater," "electric furnace" or "baseboard electric heater," as appropriate. An efficiency shall not be indicated for gas-fired unvented room heaters, electric furnaces and electric baseboard heaters.

8. The fuel sources for cooking and clothes drying equipment.

9. Where combustion equipment is installed, the certificate shall indicate information on the installation of additional electric infrastructure including which equipment and/or appliances include additional electric infrastructure, capacity reserved on the electrical service panel for replacement of each piece of combustion equipment and/or appliance

10. Where a solar-ready zone is provided, the certificate shall indicate the location, dimensions, and capacity reserved on the electrical service panel.

Section R403.5 Service hot water systems is amended as follows:

R403.5 Service hot water systems. Energy conservation measures for service hot water systems shall be in accordance with Sections R403.5.1 through R403.5.4.

Section R403.5.4 Water heating equipment location is added as follows:

R403.5.4 Water heating equipment location. Water heaters with combustion equipment shall be located in a space with the following characteristics:

1. Minimum dimensions of 3 feet by 3 feet by 7 feet high.

2. Minimum volume of 760 cubic feet, or the equivalent of one 16-inch by 24-inch grill to a heated space and one 8-inch duct of no more than 10 feet in length for cool exhaust air.

3. Contains a condensate drain that is no more than 2 inches higher than the base of the installed water heater and allows natural draining without pump assistance, installed within 3 feet of the water heater.

Exceptions:

1. Water heaters with an input capacity of greater than 300,000 Btu/h that serves multiple dwelling units or sleeping units.

Electric-preferred ii This encourages electrification and more evenly weighs the impact of the additional efficiency credits by requiring a mixed-fuel home to select three packages whereas an all-electric home selects one. Of the three packages required for the mixed-fuel home, one must address the envelope (improved envelope or reduced infiltration plus better ventilation) while the remaining two impact HVAC (better equipment or more efficient ducts) and water-heating (better equipment) requirements. R401.2.5

Electric-ready jj This adds fuel sources and electric-ready information to the certificate. R401.3

Electric-ready kk This and the next are part of electric-ready. They ensure sufficient physical space for future electric water heating systems. (Matches Denver.) R403.5

Electric-ready ll Cont'd from 29

|                    |    |                                                                                                                                                                        |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electric-preferred | mm | This prohibits fuel gas lighting. This type of lighting is rare. (Matches Superior.)                                                                                   | R404.1.1 | <p>Section R404.1.1 Fuel gas lighting is amended to read as follows:</p> <p>Section R404.1.1. Fuel gas lighting. Fuel gas lighting systems are prohibited.</p> <p>A new Section R404.4 Additional electric infrastructure is added as follows:</p> <p>R404.4 Additional electric infrastructure. All combustion equipment shall be installed in accordance with Section R403.5.4 and shall be provided with a junction box that is connected to an electrical panel by continuous raceways that meet the following requirements:</p> <ol style="list-style-type: none"> <li>1.The junction box, raceway, and bus bar in the electric panel and conductors serving the electric panel shall be sized to accommodate electric equipment sized to serve the same load as the combustion equipment.</li> <li>2.The panel shall have reserved physical space for a dual-pole circuit breaker.</li> <li>3.The junction box and electrical panel directory entry for the dedicated circuit breaker space shall have labels stating "For future electric equipment."</li> <li>4.The junction box shall allow for the electric equipment to be installed within the same place of the combustion equipment that it replaces.</li> </ol> <p>Exceptions:</p> <ol style="list-style-type: none"> <li>1.Fossil fuel space heating equipment where a 208/240-volt electrical circuit with a minimum capacity of 40 amps exists for space cooling equipment.</li> <li>2.Water heating equipment with an input capacity greater than 300,000 Btu/h that serves multiple dwelling units or sleeping units.</li> </ol> <p>Table R405.2 Requirements for Total Building Performance adds a new row under Mechanical and a new row under Electrical Power and Lighting Systems as follows:</p> |
| Electric-ready     | nn | This adds electric-ready wiring for combustion equipment. (Aligns with Superior, Denver, and Fort Collins.)                                                            | R404.4   | <p>TABLE R405.2 REQUIREMENTS FOR TOTAL BUILDING PERFORMANCE</p> <p>SECTION   TITLE</p> <p>Mechanical</p> <p>R403.5.4 Water heating equipment location</p> <p>Electrical Power and Lighting Systems</p> <p>R404.4 Additional electric infrastructure</p> <p>Section R406.2 ERI compliance, first paragraph, is amended to read as follows with the other parts of the section to remain:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Electric-ready     | oo | This adds electric-ready to the Total Building Performance table.                                                                                                      | R405.2   | <p>SECTION   TITLE</p> <p>Mechanical</p> <p>R403.5.4 Water heating equipment location</p> <p>Electrical Power and Lighting Systems</p> <p>R404.4 Additional electric infrastructure</p> <p>Section R406.2 ERI compliance, first paragraph, is amended to read as follows with the other parts of the section to remain:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Clarifying         | pp | This clarifies that the ERI can use the HERS Index.                                                                                                                    | R406.2   | <p>R406.2 ERI compliance. Compliance based on the ERI, utilizing the HERS Index Score, requires that the rated design meets all of the following:</p> <ol style="list-style-type: none"> <li>1.The requirements of the sections indicated within Table R406.2.</li> <li>2.The maximum ERI of Table R406.5.</li> </ol> <p>Table R406.2 Requirements for Energy Rating Index adds a new row under Mechanical and a new row under Electrical Power and Lighting Systems as follows:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Electric-ready     | qq | This adds electric-ready to the ERI mandatory requirements table.                                                                                                      | R406.2   | <p>TABLE R406.2 REQUIREMENTS FOR ENERGY RATING INDEX</p> <p>SECTION   TITLE</p> <p>Mechanical</p> <p>R403.5.4 Water heating equipment</p> <p>Electrical Power and Lighting Systems</p> <p>R404.4 Additional electric infrastructure</p> <p>Section R406.5 ERI-based compliance is amended as follows:</p> <p>R406.5 ERI-based compliance. Compliance based on an ERI analysis requires that the rated proposed design and confirmed built dwelling be shown to have an ERI less than or equal to the appropriate value for the proposed all-electric or mixed-fuel building as indicated in Table R406.5 when compared to the ERI reference design.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Electric-preferred | rr | This incorporates electric-preferred into the ERI path.                                                                                                                | R406.5   | <p>TABLE R406.5 MAXIMUM ENERGY RATING INDEX</p> <p>CLIMATE ZONEALL-ELECTRIC BUILDINGMIXED FUEL BUILDING</p> <p>55550</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Solar-ready        | ss | This is part of the solar-ready adoption. These two amendments, along with a similar amendment in Appendix CB, fixes the gap for multi-family. (Aligns with Superior). | RB       | <p>Appendix RB Title is amended to read: "Appendix RB Solar Ready Provisions."</p> <p>38.RB103.1, first sentence, is amended as follows, with the rest of the section remaining:</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Solar-ready        | tt | Cont'd from 35                                                                                                                                                         | RB103.1  | <p>RB103.1 General. New detached one- and two-family dwellings, and townhouses residential buildings with not less than 600 square feet (55.74 m<sup>2</sup>) of roof area oriented between 110 degrees and 270 degrees of true north shall comply with Sections RB103.2 through RB103.8.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

Appendix RD is added E1 to read as follows:

APPENDIX RD  
EV READINESS - RESIDENTIAL

RD101. Purpose and intent. The purpose and intent of this Appendix RD is to accommodate the growing need for EV charging infrastructure, in particular meeting preferences for charging at home. Including these measures during initial construction substantially reduces the costs and difficulty of installing EV infrastructure at a later date.

RD102. Applicability. This Appendix RD shall apply to all new residential construction to which the International Residential Code applies.

RD103. Definitions.

AUTOMOBILE PARKING SPACE. A space within a building or private or public parking lot, exclusive of driveways, ramps, columns, office, and work areas, for the parking of an automobile.

DIRECT CURRENT FAST CHARGING (DCFC) EVSE: EV power transfer infrastructure capable of fast charging on a 100A or higher 480VAC three-phase branch circuit. AC power is converted into a controlled DC voltage and current within the EVSE that will then directly charge the electric vehicle.

EV LOAD MANAGEMENT SYSTEM: A system designed to allocate charging capacity among multiple EVSE and that complies with the current National Electric Code.

ELECTRIC VEHICLE (EV). An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, and electric motorcycles, primarily powered by an electric motor that draws current from an electric source.

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE). Equipment for plug-in power transfer including the ungrounded, grounded, and equipment grounding conductors, and the electric vehicle connectors,

EV

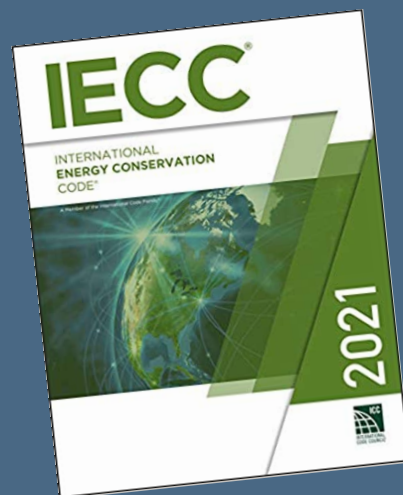
uu

This is the EV-ready appendix for residential, including multi-family three stories or less.

## ATTACHMENT 3

# 2021 International Energy Conservation Code

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**About I-Codes:** Building codes improve the quality of construction of the built environment and thereby promote the health, safety, resiliency, affordability, sustainability, and general welfare of our communities. Building codes set a bare minimum construction quality that local officials deem necessary and that consumers expect. Most jurisdictions across the country adopt model building codes published by the International Code Council, and these are updated every three years in an extensive process involving builders, trades, architects, manufacturers and suppliers, low-income advocates, and, crucially, local building officials who are ultimately responsible for enforcing the codes. These codes are then adopted at local level. The 2021 codes are the most recent edition.

**About the 2021 International Energy Conservation Code (IECC):** After two previous cycles of stagnant efficiency, building officials voted overwhelmingly in favor of provisions in the latest IECC to strengthen energy efficiency. Overall, the 2021 IECC reduces energy by 8-9% (and reduces energy bills by 8-9%) compared to the previous 2018 IECC. The 2021 also includes language clean-up and clarifications, and an expanded focus on flexibility and options. Most of the changes "tighten up" provisions already in the code. Key changes for residential new construction include a better "thermal envelope" (e.g. walls, insulation, windows, doors, etc.), windows that take into account "solar heat gain" in climate zone 5B (the climate zone for the front range of Colorado), changes to duct testing, and increased use of lighting controls. On the commercial side, key changes include air barrier commissioning (i.e. testing and verification of the layer in walls that keeps outside air out and clean, conditioned inside air in), more efficient mechanical systems, technology for energy monitoring in larger buildings so that building operators can better measure and track their building's energy use, and increased options for additional energy efficiency "points."

**Jurisdictions with the 2021 IECC:** Arapahoe County, Aurora, Crested Butte, Fort Collins, Golden, Larimer County, Longmont, Louisville, Parker, Superior, and Vail. At least 66 other jurisdictions covering 70% of Colorado's population have announced plans to adopt the 2021 IECC in the next year.

**New Colorado Law (2022):** The Colorado legislature passed a new bipartisan law that updates minimum energy code requirements. Jurisdictions must adopt at least the 2021 IECC, along with EV-ready, PV-ready, and electric-ready, when updating any other building codes between July 1, 2023 and July 1, 2026. After that date, jurisdictions must adopt at least a low-energy and carbon code. A new Energy Code Board will identify code language for the EV-ready, PV-ready, electric-ready, and low energy and carbon code, and jurisdictions can choose to adopt that code language, something equivalent, or something stronger.

**Cost Discussion:** An extensive [analysis](#) from the Pacific Northwest National Labs (PNNL, the entity charged by the U.S. Congress to perform energy code cost-effectiveness studies) calculates that the increased first cost per household is \$3,376 for the 2021 IECC versus the 2015 IECC in Climate Zone 5B (as of Dec. 2021). PNNL's analysis is considered the most credible compared to other estimates because of PNNL's long-standing peer-reviewed methodology, and its absence of profit motive or conflict of interest. The majority of the first cost increase compared to the 2015 IECC is an increase in insulation levels. (Cost data is roughly similar between the 2015 and 2018 IECC, since the efficiency levels were similar.)

| Increased First Cost (vs 2015) | Mortgage Increase | Annual Energy Savings | Net Savings | Years to Positive Savings | Lifecycle Cost Savings |
|--------------------------------|-------------------|-----------------------|-------------|---------------------------|------------------------|
| \$3,376                        | \$122             | \$161                 | \$20/yr     | 9                         | \$1,247                |

Other studies of incremental upfront costs to builders for the 2021 IECC (not including local, state, utility, or federal incentives):

- ICF International: \$3,651-\$4,809
- PNNL for Louisville using NAHB 19% inflation adder and larger house size: \$5,118
- City of Louisville (via Group 14) survey of two local builders: \$6,450
- Diverge Homes (high-end efficient homes in Marshall Fire area: \$8,000
- NAHB (via Home Innovation Research Lab): \$9,435-\$11,900 (note: ICF study found HIRL study used incorrect economic assumptions)

**Mild/Medium/Aggressive Rating:** Mild. The 2021 IECC is the minimum energy code required by the state of Colorado and even before the state law, jurisdictions covering half of Colorado's population had already announced plans to adopt it. As such, "mild" also includes EV-ready, PV-ready, and electric-ready as required by Colorado law. A "medium" rating would include a higher degree of electric transition – for instance, allowing a choice of either all-electric or mixed fuel new construction but requiring mixed fuel homes and buildings to pursue additional energy efficiency to make up for the extra emissions from fossil gas use onsite. An “aggressive” rating would include either all-electric requirements, the zero energy appendices, or both.

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**Prepared For:** DOLA Code Cohort for Northwestern Metro / Boulder County

**Date Updated:** September 26, 2022



SOUTHWEST ENERGY EFFICIENCY PROJECT



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# Solar-Ready

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**About:** Solar-Ready appendices (RB for residential and CB for commercial) are officially prepared by the International Code Council as “add-on” to the IECC. They prepare homes and buildings for the future installation of solar by requiring conduit, space on the electrical panel, space reserved on the roof free from obstructions and shady objects, adequate roof structural capacity, notation on construction documentation, and a permanent certificate. Shady roofs are exempted. The current appendices only include multifamily buildings 4-5 stories tall, so an amendment is needed to include all multifamily buildings – a provision we call “expanded solar-ready”.

**Cost Discussion:** Upfront costs are minimal (<\$200). Cost savings include avoiding the need to tear up walls, redo wiring, and potentially upgrade an electrical panel. They also avoid the situation where roof penetrations for attic vents, etc. are poorly placed in a way that prevents future solar.

**Jurisdictions with Solar-Ready:** Avon, Boulder, Boulder County, Breckenridge,\* Craig, Denver, Fort Collins, Frisco,\* Golden, Lafayette, Louisville, Superior, Vail, and Wheat Ridge. Others considering or in the process of adopting it, besides Code Cohort communities, include Eagle County (\*via Summit County sustainability program). Note: a new 2022 Colorado law requires all upcoming IECC adoptions to include solar-ready provisions equivalent to or better than a version to be identified by the state's Energy Code Board. We highly anticipate Appendices RB and CB with the multifamily fix will meet the law.

**Mild/Medium/Aggressive Rating:** Mild. A “medium” rating would require solar to actually be installed on some buildings for part of the energy load, plus a residential solar access law. An “aggressive” rating would require solar installed on all buildings for all of the energy load, a residential solar access law, and a retrofit policy.

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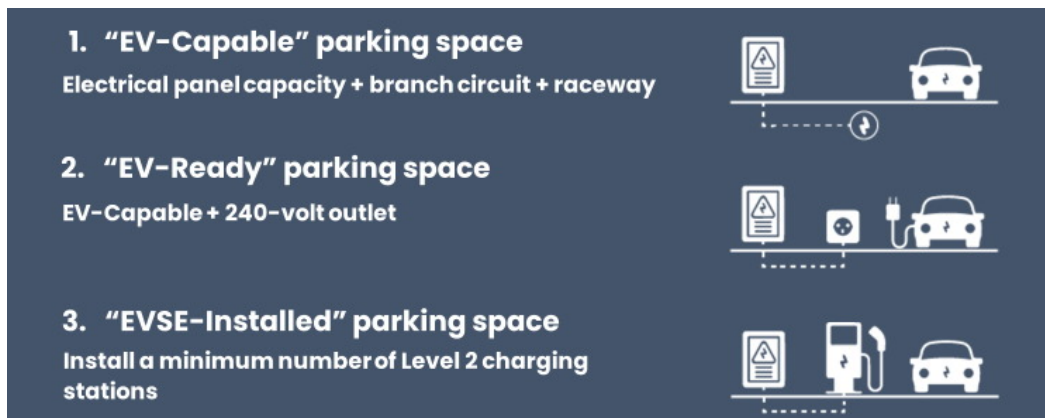
# EV-Ready



**About:** Electric Vehicle Ready (EV-Ready) appendices prepare homes and buildings for the current transition to electric vehicles. These appendices recognize that the vast majority of all electric vehicle charging will occur at home, with some charging infrastructure needed at work or around town. New single family homes will require one EV-ready space, and new multifamily and commercial buildings will require a percentage of EV-capable, EV-ready, and EV-installed spaces depending on the building type and use.

- Note: EV-ready is especially important for multifamily buildings, for equity reasons, since renters can't retrofit their parking lot or garage to install a 240-volt outlet on their own.

These percentages align with levels recently approved by Denver's code committee, and are less than the percentages adopted in some other jurisdictions (Superior, for instance). Multifamily percentages were reduced to ease the cost impact to new housing, and commercial building percentages were reduced to account for charging behavior based on building type.



| Building Type                  | Minimum EV Installed Spaces | Minimum EV Ready Spaces | Minimum EV Capable Spaces |
|--------------------------------|-----------------------------|-------------------------|---------------------------|
| Single-family Duplex, Townhome | N/A                         | 1 Space                 | N/A                       |
| Group A, B, E, M               | 10%                         | 5%                      | 10%                       |
| Group F, I, R-3, R-4           | 2%                          | 0%                      | 5%                        |
| Group R-1 and R-2 <sup>a</sup> | 15%                         | 5%                      | 40%                       |
| Group S-2 Parking Garages      | 10%                         | 5%                      | 0%                        |

a. Where all (100%) parking serving R-2 occupancies are EV ready spaces, requirements for EVSE spaces for R-2 occupancies shall not apply.

(In I-code terminology, Group A is Assembly, B is Business, E is Education, F is Factory & Industrial, I is Institutional, M is Mercantile, R-1 is transient residential, R-2 is apartments and other non-transient residential, R-3 and R-4 are small group homes including halfway houses, rehab centers, care facilities, etc., and S is Storage.)

**Market Discussion:** EVs comprised [9% of new vehicle sales](#) in Colorado in Q1 2022, and dealers continue to have long waitlists, especially with the recent rises in gas prices. [All major auto brands](#) have announced plans to shift the majority of their fleets to EVs by the mid-2030s or sooner. Newer models have ranges of well over 300 miles. Besides the reduced environmental impact, buyers like the faster acceleration, the low maintenance, the safety ratings, and the convenience of avoiding trips to the gas station.

**Cost Discussion:** One EV-ready space for a single-family home averages about [\\$325-\\$400](#) at the time of construction. Federal and Xcel Energy rebates are available. Retrofitting even just the wiring later can run [\\$481-\\$1,493](#) per space (depending on the distance from the panel to the garage) plus potential costs to upgrade the electrical panel. For commercial and multifamily, costs can run [\\$300](#) for EV-capable, [\\$1,300](#) for EV-ready, and [\\$2,500](#) for EV-Installed per space. Federal, Colorado, and Xcel Energy rebates are available. Retrofits done later can cost several times more, and may include the need to tear up and rebuild walls (and in the case of commercial and multifamily, parking lots and landscaping), redo wiring, and upgrade the electrical panel.

**Climate Impact:** It depends on adoption by homeowners, but for an average-sized household, a new EV in Colorado [reduces CO<sub>2</sub>e](#) 8,175 pounds per year compared to new gas car (a 63% reduction), as of 2022. The CO<sub>2</sub>e reductions improve over time as Xcel's grid adds increasing levels of renewables.

**Jurisdictions with EV-Ready:** Aspen, Avon, Boulder, Boulder County, Breckenridge, Broomfield, Denver, Dillon, Durango, Eagle County, Fort Collins, Frisco, Golden, Lafayette, Lakewood, Larimer County, Louisville, Longmont, Pueblo County, Steamboat, Summit County, Superior, and Vail, Others in the Code Cohort communities are also planning to adopt it. Note: a new 2022 Colorado law requires all upcoming IECC adoptions to include EV-ready provisions equivalent to or better than a version to be identified by the state's Energy Code Board. We highly anticipate these amendments will meet the new law.

**Mild/Medium/Aggressive Rating:** Medium. A "mild" rating would have lower percentages for commercial and multifamily. An "aggressive" rating would require every space in multifamily to have some level of infrastructure, plus a policy for renovations.

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**Prepared For:** DOLA Code Cohort for Northwestern Metro Area / Boulder County

**Date Updated:** September 26, 2022



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# Electric-Ready and Electric-Preferred



**About:** Electric-ready amendments prepare homes and buildings for the choice between electric and gas equipment and appliances by ensuring they have the wiring and panel capacity available for future electric equipment (and enough physical space, in the case of water heaters). Electric-preferred amendments, the next step, still allow new construction to be either all-electric or "mixed fuel" (e.g. natural gas) but mixed fuel homes and buildings require extra efficiency to make up for extra emissions.

**Code Amendment Specifics:** In particular, the residential amendments in the prescriptive path require mixed fuel homes to select three "additional efficiency packages" instead of one. Mixed fuel homes choosing the "Total Building Performance" pathway would similarly choose three additional efficiency packages instead of one, or have annual energy costs less than or equal to 80% of the standard reference design instead of 95%. Mixed fuel homes choosing the "Energy Rating Index" (ERI) pathway would seek a score of 52 instead of 55.\* For commercial buildings, mixed fuel buildings would choose extra efficiency options totaling an extra 10 points. The amendment also fixes two places in the commercial code where gas systems were given more points than electric.

**Market Developments:** Air source heat pumps have been commonplace in other parts of the country, and are now making inroads in Colorado thanks to rapid technological developments that allow "cold climate" heat pumps to supply heat even when outdoor temps fall to -22F. Other configurations are possible as well, such as a non-cold-climate heat pump plus extra "strip heat" that can kick in for extra cold times. (This configuration is cheaper upfront but more expensive to run in extra cold temperatures.) For water heating, heat pump water heaters are an easy replacement for a typical gas or electric hot water storage tank. Finally, on the cooking side, some homeowners may express a preference for gas, but induction stoves are proving their mettle with twice-as-fast boil times, more finely-tunable controls, safety protections (e.g. the ability to touch the burner and not get burned) and the near-elimination of harmful air pollutants that lead to increased asthma rates and other respiratory distress. Note that reliability of electric systems during a power outage is the same as for gas systems, since gas systems require electricity to run as well.

**Cost Discussion:** Upfront costs depend highly on the configuration selected by the builder. All-electric homes, depending on supply chain availability and builder/contractor familiarity, can be built at no additional cost compared to mixed fuel [1]. Although the upfront costs of an air source heat pump and heat pump water heater are typically more than gas equivalents, the big savings come from avoiding the gas connection and gas piping costs to and within the home or building, and state and utility rebates offset the cost as well. Separate market transformation efforts are underway to train builders and contractors for the transition to all-electric equipment, and the familiarity and economies of scale are expected to bring total costs down further.

\* Before 5% efficiency required in R401

**(Cost Discussion Cont'd):** For mixed fuel homes, electric-ready infrastructure is estimated at \$300 for a water heater and the same for a stove (or possibly increased to \$400 each with inflation and a tight labor market). No additional costs are incurred for electric readiness for a furnace, because central air conditioning or other space cooling would be provided anyway. The cost of the additional two efficiency packages, required for mixed fuel homes, range from \$467 for the HVAC efficiency option to \$1,453 for the ventilation option (not including inflation since 2021).

**Jurisdictions with Electric-Ready and/or Electric Preferred:** Boulder, Boulder County, Crested Butte (all-electric) Denver (in progress), Fort Collins, Louisville, Superior, other Code Cohort communities (in progress). Note: a new 2022 Colorado law requires all upcoming IECC adoptions to include electric-ready provisions equivalent to or better than a version to be identified by the state's Energy Code Board. We highly anticipate these amendments will be in compliance with the law.

**Mild/Medium/Aggressive Rating:** Medium. A “mild” rating would be just electric ready – i.e. just the wiring and panel capacity. An “aggressive” rating would require all-electric heating and water heating for most residential, multifamily, and commercial buildings, or, even further, no gas connections at all.

[1] Despite a few recent studies, a couple local home builders report challenges getting the costs to "pencil out." State policies passed since then, like the 10% tax credit for heat pumps, heat pump water heaters, and panels, plus regulatory dockets underway at the Public Utilities Commission, in addition to incentives in the Inflation Reduction Act, may improve the cost calculations.

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**Prepared For:** DOLA Code Cohort for Northwestern Metro Area / Boulder County

**Date Updated:** September 26 2022



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# Efficiency Amendments

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**About:** One amendment improves the lighting efficiency in horticulture facilities, and another amendment addresses the heat island effect, as explained below.

These two were selected from a wide array of other strengthening amendments, including a review of other nearby jurisdictions' codes, decarbonization model codes, and the 2024 IECC proposals. These two were selected based on a balance of technical and practical implementability, simple code language, and sustainability impact.

No additional efficiency-strengthening amendments are proposed for residential buildings (beyond those in the electric-preferred proposals). This is recognition of the already-decent efficiency improvements in the 2021 IECC, the current challenges with the cost of construction, and the general preferences for simplicity and focused impact.

**Horticulture lighting.** Energy consumption from lighting in marijuana grow facilities, as well as other indoor agricultural facilities, is staggering, and is projected to continue increasing. Lighting can account for 50% to 80% of an indoor facility's energy use and 30% of a greenhouse's energy use. Traditionally, grow facilities hadn't invested in efficient lighting because of uncertainty in their market and shifting legal policies. This proposal is cost-neutral for greenhouses and has a [3-year payback](#) for indoor facilities. This proposal has been approved by the 2024 IECC Commercial Consensus Committee.



**Cool roofs.** Cool roofs are made of materials that reflect more sunlight and absorb less heat. They are usually, though not always, made of lighter-color materials. Cool roofs still allow the installation of solar panels, skylights, mechanical equipment, rooftop amenities, and/or vegetative roofs at the building owner's discretion. This only affects low-sloped (i.e. flat or nearly flat) roofs, and it doesn't apply to roof repairs or replacements. Cool roofs are already in the IECC, but this brings them into our climate zone (5B) in recognition of increased summer temperatures and the growing problem of the heat island effect. Higher urban temperatures also speed the formation of ground-level ozone, the primary component of smog. Costs for a cool roof are equivalent to costs for a black roof, and most suppliers and contractors supply both types. Energy costs are not notably impacted, because more recent energy codes have high amounts of insulation in the attic that limit the roof's impact on inside temperatures. Instead, as noted, the significant benefits here are for reducing heat island and improving air quality.

**Climate Impact:** Horticulture lighting will be luminaires 1.9  $\mu\text{mol/J}$  vs 1.6  $\mu\text{mol/J}$ , or a 16% reduction in energy use.

**Jurisdictions with Efficiency Amendments:** Denver requires a cool roof and has improved horticulture lighting. Other jurisdictions in the area have selected various other amendments to increase the efficiency of their homes and buildings, including Boulder, Boulder County, Breckenridge, Carbondale, Denver, Fort Collins, Frisco, Golden, Louisville, Summit County, and Superior.

**Mild/Medium/Aggressive Rating:** Medium. A “mild” rating would be just the 2021 IECC unamended. An “aggressive” rating would have prescriptive table updates, stricter performance path requirements (e.g. 10% more efficient), and/or more amendments approved for the 2024 IECC.

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**Prepared For:** DOLA Code Cohort for Northwestern Metro Area / Boulder County  
**Date Updated:** July 7, 2022



**RESOLUTION 2022 - XX**

**Commitment to Net Zero Energy Building Codes in [Jurisdiction]**

WHEREAS, Colorado is already experiencing impacts of the climate crisis, including extreme heat, dangerous air quality, reduced snowpack, drought, wildfires, extreme weather events, and floods; and

WHEREAS, the most recent Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment report, as well as the Fourth National Climate Assessment, are clear that these impacts will increase and worsen and that we must immediately reduce emissions in order to maintain a livable climate; and

WHEREAS, much of the burden and cost of these impacts falls on local governments and our residents; and

WHEREAS, [Jurisdiction] has adopted the goal of [emissions reduction by date]; and

WHEREAS, [Jurisdiction] has adopted [other resolutions]; and

WHEREAS, building codes are one of the principal tools local governments have for reducing emissions, improving resilience, and lowering energy cost burden; and

WHEREAS, utility bills and energy cost burden are important components of the total cost of home ownership and rentals, and reducing energy use lowers utility bills and energy cost burden for the lifespan of the home or building;

WHEREAS, homes and buildings built under this decade's building codes will determine the carbon emissions profile and energy performance of the building sector for many decades to come; and

WHEREAS, the use of fossil fuels in homes and buildings releases both carbon dioxide and methane into the atmosphere, making energy efficiency and building electrification important strategies for reducing building greenhouse gas emissions and protecting indoor air quality as our electric utility approaches its renewable energy goals; and

WHEREAS, building codes that ensure new homes and buildings emit net zero greenhouse gases are technically and financially feasible with current technology and increasingly so with technology standardization and an increasingly renewable electric grid; and

WHEREAS, [Jurisdiction] has laid a foundation for net zero new construction by undertaking to adopt, by the end of 2022, the latest edition of the 2021 International Energy Conservation Code, as published by the International Code Council, along with strengthening amendments that will prepare new homes and buildings for the accommodation of electric vehicles, rooftop solar, and zero-emission heating and water heating; and

WHEREAS, [Jurisdiction] has joined with neighboring communities in a codes adoption cohort to achieve these goals with maximum consistency in order to streamline the construction process for builders and developers who work across our communities, reduce the costs of adoption and enforcement, and address shared priorities around affordability, equity, resilience and indoor/outdoor air quality; and



WHEREAS, [Jurisdiction] will continue to monitor technical and economic developments to minimize the total cost of net zero energy homes and buildings and maintain affordability while maximizing the benefits to homeowners, building owners, and tenants;

NOW, THEREFORE, BE IT RESOLVED BY THE [COUNCIL/BOARD] OF [JURISDICTION] AS FOLLOWS:

[Jurisdiction] commits to reaching 100 percent net zero greenhouse gas emissions in new residential and commercial construction through building energy and carbon codes adopted by or before 2030.

In service of this commitment, [Jurisdiction] will develop, in conjunction with neighboring communities, a roadmap of ranked achievable, affordable, and equitable building code strategies that prioritize energy efficiency and electrification as the most cost-effective paths to net zero operational greenhouse gas emissions.

[Jurisdiction] will apply this roadmap to adopt, by or before 2030, new residential and commercial building codes that achieve net zero greenhouse gas emissions and maximize consistency across neighboring jurisdictions.

ADOPTED this XX day of Xxxx, 2022.

[BOARD/COUNCIL]  
OF [JURISDICTION]

To: Honorable Mayor Meredith Leighty and City Council Members  
From: Northglenn Sustainability Committee  
Date: October 3, 2022  
Subject: 2021 International Building Code Adoption – Committee Recommendation

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**ROLE OF THE SUSTAINABILITY COMMITTEE**

The vision of the Northglenn Sustainability Committee is to creatively and thoughtfully utilize our resources, show pride in our community, and meet our present and future generation’s needs without compromising the ecosystems on which we depend, in order to create an exceptional quality of life for every generation.

The Sustainability Committees mission is to coordinate, to initiate, and to promote sustainability within the City. The Committee’s purpose is to:

- Advance and encourage environmentally sustainable practices and ideas within the City, including, but not limited to City operations and facilities, new development, City ordinances, governing construction and development, local businesses, neighborhoods, homeowners, and residents.
- Collaborate with City staff to continue to implement and update the strategies and goals in the Sustainability Plan.
- Provide recommendations and suggestions to the City Council regarding laws, ordinances, rules, programs, and funding which promote sustainability.
- Work in cooperation with other City board, commissions, and committees to promote sustainability policies and programs.
- To promote sustainability awareness at town events or at the request of interested individuals or groups.

The Sustainability Committee will focus on policies, programs, and awareness as identified in the City’s adopted Sustainability Plan goal areas. One of the goals areas includes Resource Conservation. The Committee is also working to update the plan to include Climate Action Goals.

**2021 INTERNATIONAL BUILDING CODE ADOPTION – COMMITTEE RECOMMENDATION**

The Sustainability Committee recommends Council adopt the 2021 IBCs and the proposed strengthening amendments to further the City’s sustainability Goals. Adoption of the 2021 IBC will reduce energy usage of new construction by 8-9%. The following strengthening amendments add additional energy and environmental benefits per the attached Fact Sheets.

- Efficiency Amendments
  - Horticulture lighting
  - Cool roofs
- Electric-ready/Electric Preferred
- Electric Vehicle (EV)-Ready
- Solar-ready

# ***BUILDING CODE UPDATES: 2021 I-CODES***

## **Co-Presenters:**

- Brook Svoboda, Director of Planning & Development
- Dan Wester, Building Official, SAFEbuilt
- Hope Medina, Shums Coda
- Christine Brinker, Southwest Energy Efficiency Project

**Study Session**  
*Oct. 17, 2022*



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# ***PURPOSE***

**To provide an overview for the adoption of the 2021 International Building Codes (IBCs) with amendments, and introduce a path to net zero standards for new construction by 2030.**



# ***OVERVIEW***



# ***BACKGROUND***

**Model building codes (“I-Codes”) are updated every three years and adopted locally across the country**

## **Codes’ purpose**

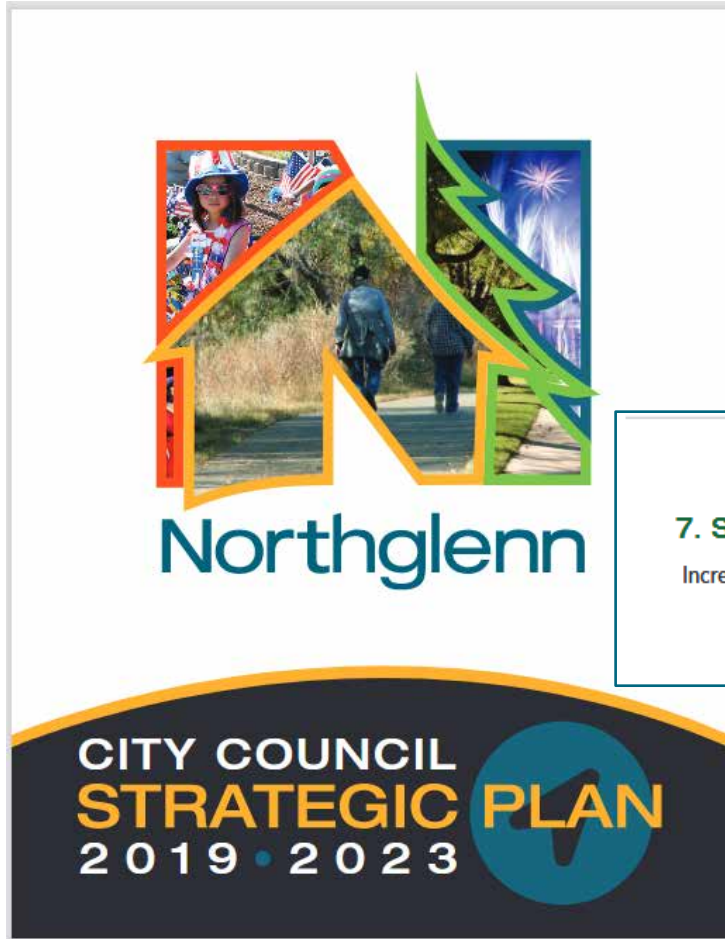
Improve the construction and maintenance of the built environment and thereby promote the health, safety, resiliency, affordability, sustainability, and general welfare of the community

## **Supporting amendments’ purpose:**

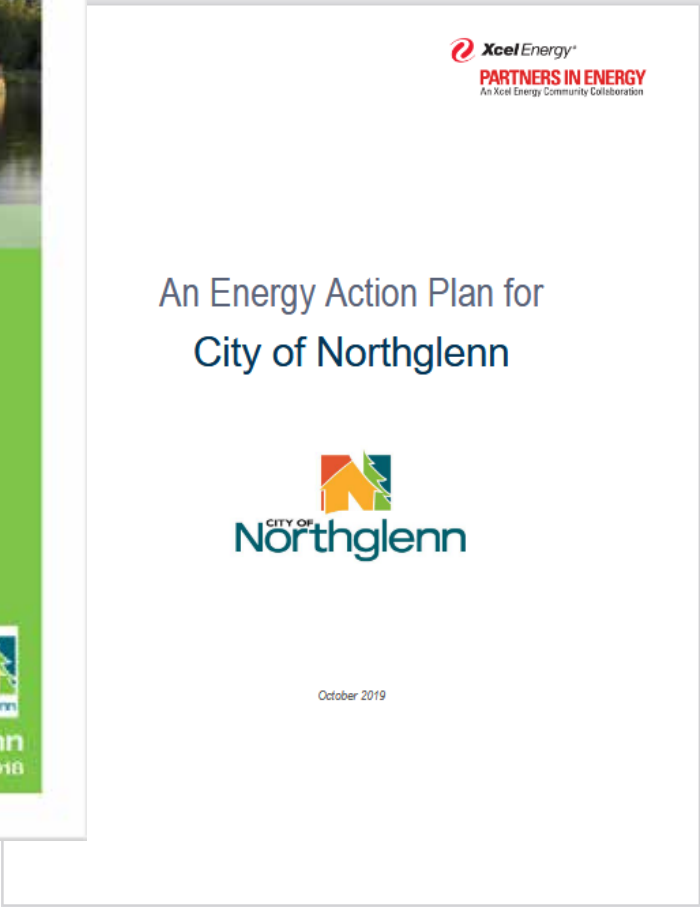
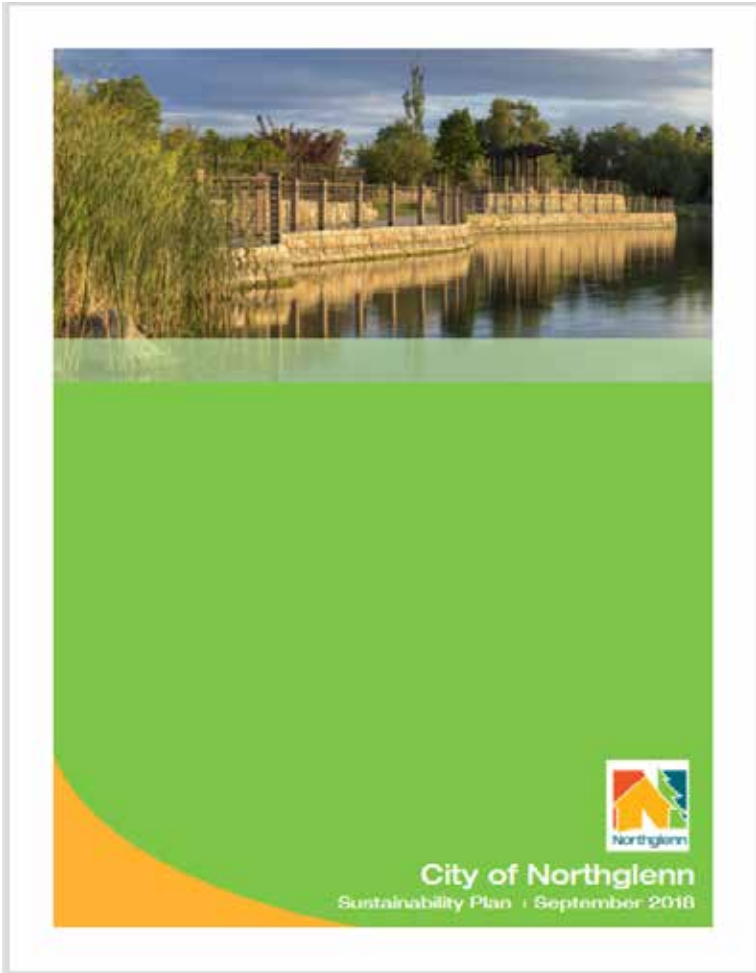
Strategically align codes with City of Northglenn goals



# CITY PLAN AND POLICY ALIGNMENT



  
**7. Sustainability**  
Increase environmental sustainability.



# *2021 INTERNATIONAL ENERGY CONSERVATION CODE*



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# 2021 IECC OVERVIEW

## 8-9% more efficient than 2018 IECC

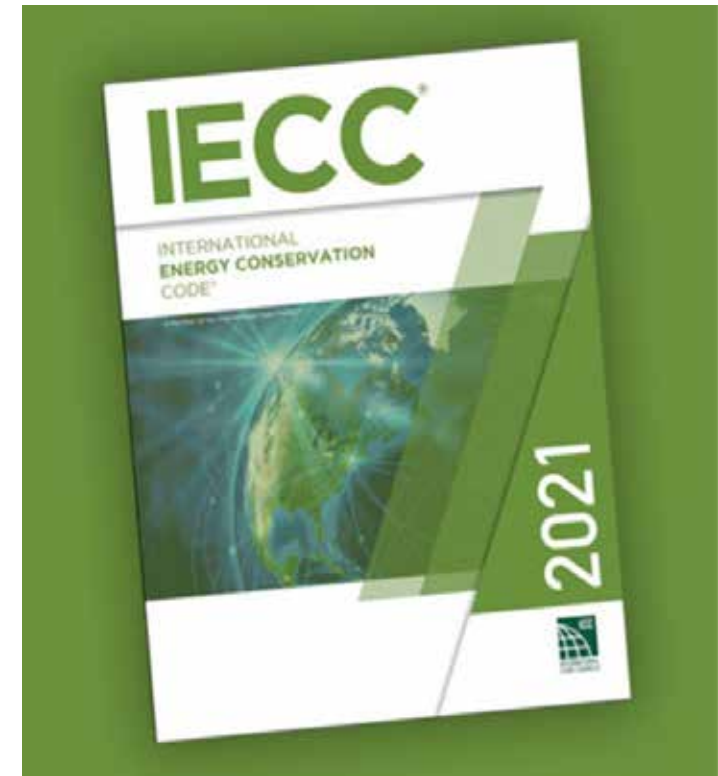
Residential: Improved insulation, windows, lighting, air leakage testing, more package options

Commercial: Improved mechanical systems, air barrier commissioning, more options

**Overwhelmingly approved by building officials across the country**

**Language clean-up and clarification**

**Continued focus on flexibility & options**



# ***DOLA GRANT***



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# ***REGIONAL COMMUNITY COHORT***

**Grant from DOLA to work with neighboring communities on consistent 2021 IECC adoption with supporting amendments**

Communities: Erie, Lafayette, Northglenn, Boulder County, Superior, Broomfield\*, Louisville\*, Boulder\*, and Longmont\* (*\*partial members with different timelines*)

**Goals: Consistency for builders, easier for building departments**

**Joint collaboration with building departments and sustainability staff**

**Met January through May 2022 to discuss and refine amendments**

**Phase 2: Roadmap to net zero new construction**



# ***CODE COHORT PROCESS***

- 1 Review comprehensive plans, sustainability plans, council directions**
- 2 Identify amendments already widely adopted or underway, and amendments rising in interest/popularity**
- 3 Calibrate with Colorado State law (changed May 2022)**
- 4 Screen and pare down based on impact, cost, and simplicity**
- 5 Rework and refine based on input from residents and builders (public survey, webinar/Q&A, builder focus group)**



# ***STATUS OF CODE ADOPTION***

**Erie:** 2021 IECC + supporting amendments underway

**Lafayette:** 2021 IECC + supporting amendments underway

**Boulder County:** 2021 IECC + supporting amendments delayed (Marshall fire)

**Superior:** 2021 IECC + supporting amendments adopted

**Louisville:** 2021 IECC + more aggressive supporting amendments adopted

**Longmont:** 2021 IECC + Electric Vehicle (EV)-ready adopted; remaining supporting amendments under consideration

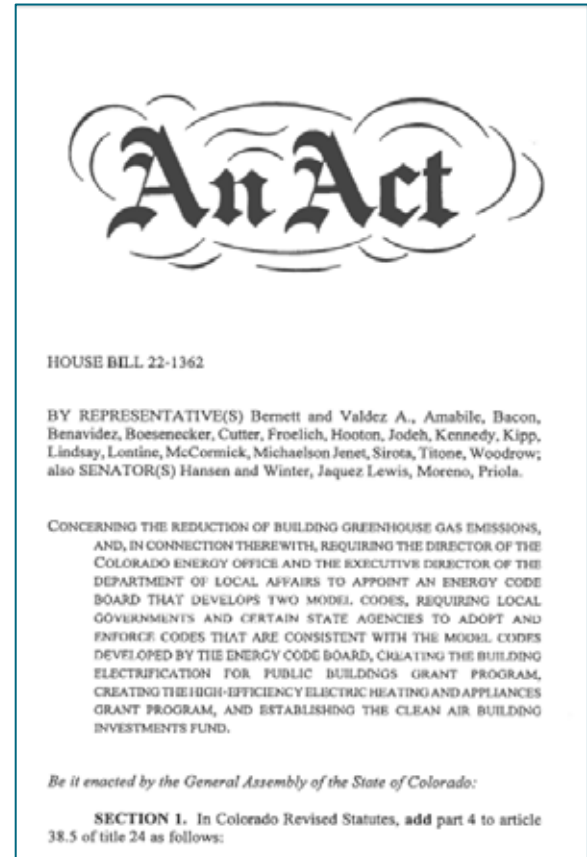
**Broomfield:** EV-ready adopted; 2021 IECC planned; remaining supporting amendments under consideration

**Other 2021 IECC Adoptions:** Aurora, Arapahoe County, Crested Butte, Fort Collins, Golden, Larimer County, Parker, Vail (66+ more in progress)



# ALIGNMENT WITH HB22-1362

- Local jurisdictions must adopt at least 2021 IECC + EV-ready, PV-ready, and electric-ready when updating other codes (*July 1, 2023-July 1, 2026*)
- Local jurisdictions must adopt at least low-energy and carbon code when updating other codes (*after July 1, 2026*)
- Energy Code Board will select model code language
- Code Cohort amendments highly expected to comply



# *2021 IECC SUPPORTING AMENDMENTS*



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# ***WHY SOLAR-READY, EV-READY, ELECTRIC-READY, EFFICIENCY?***

**Many times cheaper than retrofitting**

**Meet resident and customer needs**

**Future-proof homes and buildings**

**Overcome critical barriers to  
adoption**

**Equity impacts / renter benefits**

**Climate goals**



Electrical  
system retrofits



Breakage and repair  
of hardscapes



Soft Costs: permitting,  
inspection, HOA or  
landlord approvals, etc.





# ***SOLAR-READY***



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# **SOLAR-READY**

**Officially prepared by the International Code Council (ICC) as an “add-on” to the IECC (Appendices CB and RB)**

**Prepares homes and buildings for future solar**

Conduit, space on electrical panel, space on roof, roof structural capacity; exempts shady roofs

**Amended to include all multifamily**

**Required by new state law**

**Cost for new home: ~\$200**

**Jurisdictions**

Avon, Basalt, Boulder, Boulder County, Breckenridge, Craig, Crested Butte, Denver, Fort Collins, Frisco, Golden, Lafayette, Louisville, Superior, Vail, Wheat Ridge



# ***SOLAR-READY RANKING***

## **Mild**



**Required by state law**

**Minimal cost**

## **Medium**

**Solar required on some buildings for part of load**

**Solar access law**

## **Aggressive**

**Solar required on all buildings for most of load (as feasible)**

**Solar access law**

**Roof replacements included**



# *EV-READY*



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# ***WHY ADOPT EV-READY CODES?***

**(Because this isn't safe or effective)**



# ***EV-READY***

## **Prepares homes and buildings for transition to EVs**

EVs were 9% of new vehicle sales in CO, Q1 2022

All major auto brands shifting majority of fleets to EVs by 2030s

## **Vast majority of EV charging will occur at home**

EV-ready is especially important in multifamily, for equity reasons

## **Required by new State law**

**Cost for new home: ~\$325-400 (plus inflation)**

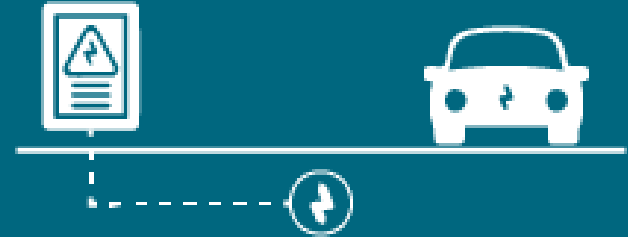
## **Jurisdictions:**

Aspen, Avon, Basalt, Boulder, Boulder County, Breckenridge, Broomfield, Crested Butte, Denver, Dillon, Durango, Eagle County, Fort Collins, Frisco, Golden, Lafayette, Lakewood, Larimer County, Longmont, Louisville, Pueblo County, Steamboat, Summit County, Superior, Westminster, and Vail

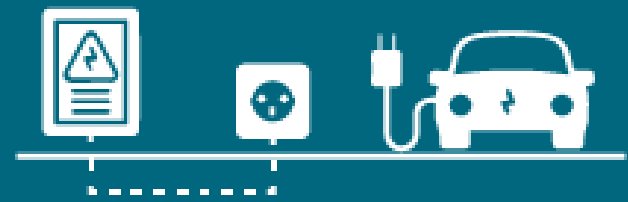


# TERMINOLOGY

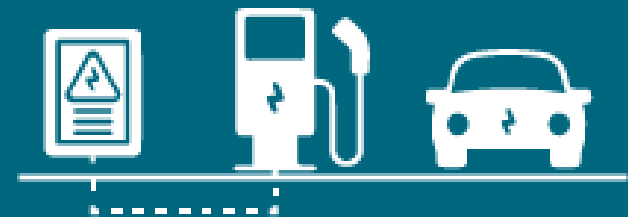
1. **“EV-Capable” parking space**  
Electrical panel capacity + branch circuit + raceway



2. **“EV-Ready” parking space**  
EV-Capable + 240-volt outlet



3. **“EVSE-Installed” parking space**  
Install a minimum number of Level 2 charging stations



# ***EV-READY RANKING***

## **Mild**

**Lower percentages for commercial and multifamily**

## **Medium**



## **Aggressive**

**Every space in multifamily with some level of infrastructure**

**Include renovations**



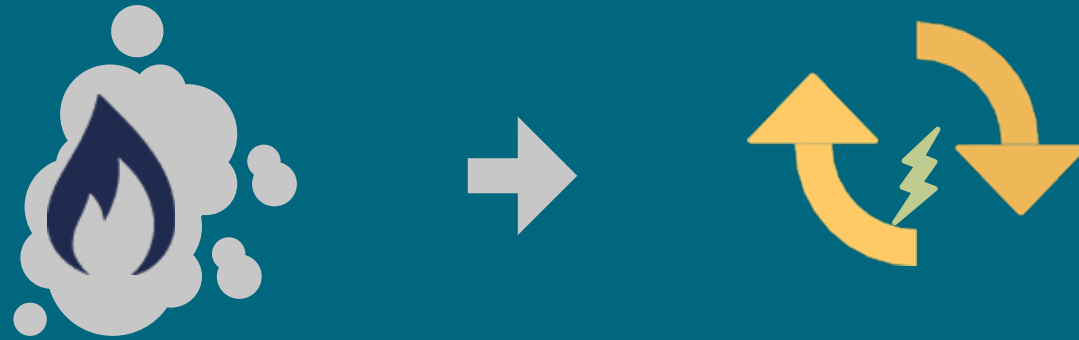


***ELECTRIC READY /  
ELECTRIC PREFERRED***



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# ***WHAT IS ELECTRIFICATION?***



**Electrification means upgrading appliances, equipment, or vehicles that would otherwise run on natural gas, propane, or gasoline - such as furnaces, water heating, stoves, clothes dryers, and cars - to clean and efficient electric versions.**

# ***ELECTRIC-READY / ELECTRIC PREFERRED***

**Electric-ready prepares homes and buildings for the choice between electric and gas equipment**

Wiring, panel capacity, physical space (for water heaters)

**Electric-preferred still allows the choice, but homes and buildings with gas equipment require extra efficiency to make up for extra emissions**

**Electric-ready is required by new State law**

**Jurisdictions:**

Avon, Basalt, Boulder, Boulder County, Crested Butte (all electric), Denver (in progress), Fort Collins, Golden, Longmont, Louisville, Superior, other Code Cohort communities (in progress)



# ***ELECTRIC-PREFERRED COST DISCUSSION***

## **All-electric option:**

Heat pumps and heat pump water heaters cost more upfront than gas equipment - but save on gas connection and piping

No separate air conditioner needed

## **Mixed fuel option:**

Price depends on additional efficiency packages chosen (\$500-\$2,500 each)

Cost of electric-ready infrastructure: \$0 heat pump, \$300 water heater, \$300 stove



# ***COMMON FAQs ON HEAT PUMPS***

## **Are we talking about heating/cooling from the ground?**

Heat pumps can be either “ground source” or “air source”

## **Do they work in our cold winters?**

Yes: new “cold climate” heat pumps work in temps down to -22°F.

## **Are they actually cleaner, given the fossil fuels on our grid?**

Yes: even with today’s grid. They are ~3x more efficient than gas furnaces.

## **Can our grid handle the increased load?**

Yes: our grid was built for high summer cooling load.

## **What happens in a power outage?**

They won’t work (but neither will gas furnaces or gas water heaters)



# ***ELECTRIC-PREFERRED RANKING***

## **Mild**

**Just electric ready  
(wiring and panel  
capacity) as  
required by State  
law**

## **Medium**



## **Aggressive**

**All-electric  
heating and water  
heating for most  
residential,  
multifamily, and  
commercial  
buildings**



# *ADDITIONAL ITEMS*



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# ***ADDITIONAL ITEMS***

## **Cool roofs for commercial buildings**

Same cost as black roof

Still allows solar, skylights, decks, equipment, etc.

Benefit is reduced heat island & reduced smog (little impact on energy)

## **Horticulture lighting**

No cost for greenhouses, 3-year payback for indoor facilities

Approved for 2024 IECC by Commercial Consensus Committee

**Selected from a wide array of other amendments (neighboring communities, 2024 IECC, etc.)**





# ***ADDITIONAL ITEM RANKING***

## **Mild**



## **Medium**

**Amendments to prescriptive tables and corresponding decreases to other paths**

## **Aggressive**

**Residential and commercial net zero appendices (RC and CC)**



# 2021 IECC COST DISCUSSION

## CLIMATE ZONE 5B

Pacific Northwest National Labs for Department of Energy (Dec. 2021):

| Increased First Cost (vs 2015) | Mortgage Increase | Annual Energy Savings | Net Savings | Years to Positive Savings | Lifecycle Cost Savings |
|--------------------------------|-------------------|-----------------------|-------------|---------------------------|------------------------|
| \$3,376                        | \$122             | \$161                 | \$20/yr     | 9                         | \$1,247                |

**PNNL analysis preferred: no profit motive, robust peer-reviewed methodology**

**Majority of cost increase is insulation**

**Natural gas prices have doubled since study (per EIA), improving savings**



# ***UPFRONT COST STUDIES***

## ***(CLIMATE ZONE 5B)***

**U.S. DOE (via PNNL, Dec. 2021): \$3,376**

**ICF International: \$3,651-\$4,809**

**PNNL for Louisville using NAHB 19% inflation/supply chain adder and increased house size: \$5,118**

**NAHB (via Home Innovation Research Lab): \$9,435-\$11,900**

**City of Louisville (*via Group 14*): \$6,450 (\*2018 amended to 2021 IECC unamended)**

**Diverge Homes (new homes in Marshall Fire area): \$8,000**



# ***ADDITIONAL COST CONSIDERATIONS***

**Home purchase price determined largely by market, location, features, amenities**

**Energy bills are an important component of affordability**

**Retrofitting a home later to allow climate-friendly equipment costs homeowners many times more than including this capability upfront**

**NEW incentives and rebates for efficiency and/or electrification from Colorado, Inflation Reduction Act, Xcel**



# ***KEY EQUITY CONSIDERATIONS***

**Low-income advocates are active in code development and strongly supportive of energy codes**

**Renters have very little control over energy costs. They are “stuck with” the insulation levels, windows, mechanical systems, etc.**

Highlights importance of building right the first time

**Building pollution, heat island, climate change, and climate-related disasters disproportionately harm people with low-incomes and people of color**



# CLIMATE IMPACT OF AMENDMENTS

Depends on adoption rates by builders/homeowners,  
but for an average-sized household:

- **Solar-ready:** PV system reduces CO<sub>2</sub>e by 11,200 lbs/yr compared to grid (2022)
- **EV-ready:** New EV reduces CO<sub>2</sub>e 8,175 lbs/year compared to new gas car (63% reduction)
- **Electric-ready (1):** Air source heat pump reduces CO<sub>2</sub>e 5,887 lbs/year compared to gas furnace (58% reduction)
- **Electric-ready (2):** Heat pump water heater reduces CO<sub>2</sub>e 1,289 lbs/year compared to gas water heater (69% reduction)
- **Horticulture lighting:** luminaires 1.9 mol/J vs 1.6 mol/J (16% reduction)
- As grid gets cleaner, EVs and electric get better (but solar gets less impactful)



# *STANDARD AMENDMENTS*



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# ***CONSISTENCY AMENDMENTS***

**Fees**

**Appeals**

**Violations and enforcement**

**Cross-referencing**





# ***HIGHLIGHTED AMENDMENTS OF NOTE***

- **Sprinkler requirements for multifamily closets and storage spaces on balconies**
- **Table R301.2 Climate & Geographic Design Criteria – added Manual J Design Criteria**
- **Deletions of Articles 9, 12 and 14**
  - Articles 9 and 12 administered by State
  - Article 14 – at request of NMFR



# ***PATH TO NET ZERO***

**Code Cohort process expresses a desire for communities to be net zero by 2030**

**Aligns with new State law HB22-1362 requiring low energy and carbon code by 2030**

**Attached to the staff memo is draft resolution prepared by the Code Cohort process**

**Council could elect to adopt this resolution at the time of adoption of the 2021 IBCs**



# ***RECOMMENDATION***

**Staff is seeking consensus from Council to move forward with scheduling the adoption of the 2021 IBCs.**



# QUESTIONS?

## Co-Presenters:

- Brook Svoboda, Director of Planning & Development
- Dan Wester, Building Official, SAFEbuilt
- Christine Brinker, Southwest Energy Efficiency Project
- Hope Medina, Shums Coda

