



Meeting Date: November 7, 2023

AGENDA MEMORANDUM

To: Honorable Mayor and Members of Town Council

Through: David L. Corliss, Town Manager

From: Tara Vargish, P.E., Director, Development Services
Jon White, Chief Building Official

Title: An Ordinance Amending Chapter 15.12 Of The Castle Rock Municipal Code, Adopting By Reference As A Primary Code The 2023 Edition Of The National Electrical Code With Amendments; And Amending Chapter 15.28 Of The Castle Rock Municipal Code, Adopting By Reference Miscellaneous Codes Relating To Conveyances And Accessible Buildings And Facilities

Executive Summary

The ordinance was approved on first reading on November 7, 2023 with a vote of 7-0, with no changes.

The Development Services Building Division staff have been working as a team for the last year on updates to the Title 15- Buildings, Construction and Public Improvements. Staff is proposing adoption of the most up to date National Electrical Code to be in compliance with State adoption of this same code. In addition, staff is proposing updates to the Elevator code sections for clarity, as well as other minor editorial amendments.

Specifically, staff is proposing amendments to the Town's Ordinance, Title 15 Chapter 15.12, which would adopt by reference the 2023 National Electrical Code; Title 15 Chapter 15.28-Miscellaneous Codes, which would adopt by reference the ASME A17.1-2019 Safety Code for Elevators and Escalators, ASME A18.1-2017, Safety Standard for Platform Lifts and Stairway Chairlifts, along with local amendments to these codes. Staff is also proposing in making minor editorial amendments to Chapters 15.12 and 15.28 for clarity and consistency.

Discussion

The Town's Electrical Code that is currently adopted is the 2017 Edition of National Electrical Code, and has been in place since August 1, 2019. The Town's Elevator Codes currently adopted are American Society of Mechanical Engineers (ASME) A17.1-2013 Safety Code for Elevators and Escalators, ASME A18.1-2011 Safety Standard for Platform Lifts and Stairway Chairlifts, ASME A17.3-2005 Safety Code for Existing Elevators and Escalators, and the American Society of Civil Engineers (ASCE) 21-13,

Parts 1-4 Automated People Mover Standards. These adopted codes have been in place since January 1, 2013 in Castle Rock.

Electrical Code:

The State of Colorado Department of Regulatory Agencies Electrical Board has adopted the 2023 National Electrical Code as of August 1, 2023. The National Electrical Code is developed by the National Fire Protection Association's (NFPA) committee on the National Electrical Code, which consists of twenty code-making panels and a technical correlating committee. The National Electrical Code is approved as an American national standard by the American National Standards Institute (ANSI). It is formally identified as ANSI/NFPA 70.

First published in 1897, the National Electrical Code is updated and published every three years, with the 2023 edition being the most current. Most states adopt the most recent edition within a few years of its publication. The National Electrical Code is model code that may be adopted with amendments by jurisdictions to address their local or regional needs and requirements.

Proposed Electrical Code Changes

The 2023 edition of the National Electrical Code has a variety of updates and changes from previous codes. Following is a list of what staff believes are the significant or noteworthy changes found in the 2023 National Electrical Code:

- 210.8(A)(5) - Requirement; Dwelling Unit Basements, all 125-volt through 250-volt receptacles supplied by a single phase branch circuits rated 150 volts or less to ground installed in any and all dwelling unit basements require ground-fault circuit-interrupter (GFCI) protection for personnel.

For comparison, the 2017 NEC required Ground Fault Circuit Interrupters only in unfinished areas.

Anticipated cost impact: Minor, Combination Type AFCI (ARC-Fault Circuit Interrupter)/GFCI Breakers required. \$30-\$50 increase for required combination breaker.

- 210.8(A)(6) – Requirement; Dwelling Unit Kitchen, all 125-volt through 250-volt receptacles supplied by a single phase branch circuits rated 150 volts or less to ground installed in kitchen areas require ground-fault circuit-interrupter (GFCI) protection for personnel. GFCI protection would be required for all receptacles in a kitchen area as defined by the NEC. These receptacles would include any cord and plug connected equipment in the kitchen.

For comparison, the 2017 NEC requirement required GFCI protection where receptacles are installed to serve the countertop surface only.

Anticipated cost impact: Moderate, \$100-\$150 increase per residential new and remodel of a kitchen for required GFCI Breakers.

- 210.8(A) (11) – Dwelling Unit Laundry Area, all 125-volt through 250-volt receptacles supplied by a single phase branch circuits rated 150 volts or less to ground installed in laundry areas require ground-fault circuit-interrupter (GFCI) protection for personnel. This requirement would include the dryer. 2017 NEC requirement only included GFCI protection for 15amp and 20amp, 125-volt receptacles to be GFCI protected in a laundry room.

The 2017 NEC does not have this requirement.

Anticipated cost impact: Moderate, \$100 increase per dryer receptacle in all residential new and remodeled laundry rooms for additional GFCI breakers

- 210.52(C)(2) and (3) – Dwelling Unit Island and Peninsula Receptacles, receptacle outlets are not required to be installed at time of construction, however if one is not installed, provisions shall be provided at island or peninsula location for future addition. 210.(C)(3) no longer allows receptacles to be installed below countertop or worktop surfaces. Receptacles shall be installed in or above surfaces of countertop and worktop.

The 2017 NEC requirement for island and peninsula receptacles required at least one receptacle be installed at each location and receptacles were allowed to be installed below surface of countertop.

Anticipated cost impact: None, as code now states that a receptacle is not required to be installed at these locations, requirements for receptacle placement is for if receptacle installation if chosen.

- 215.18, 225.42 and 230.67-Surge Protection, requirements to install Type 1 or 2 Surge Protection Devices for services or feeders that supplies dwelling units, guest rooms of hotels and motels, and sleeping rooms/areas of nursing homes and limited care facilities. Voltages surges can damage important sensitive equipment, such as smoke alarms, Arc Fault and Ground Fault Circuit Interrupters (AFCI/GFCI).

The 2017 NEC did not require surge suppression at services or feeders.

Anticipated cost impact: Minor to moderate, \$50 - \$150 per device required to be installed at locations listed above. For residential dwellings, only one device is required.

The addition of Ground-Fault Circuit-Interrupters protection requirements to Code for the lifesaving capabilities cannot be overstated. These required devices have saved thousands of lives and significantly reduced the number of home electrocutions since they were first introduced into the National Electrical Code in 1975. Overall, these additional requirements for GFCI protection that have occurred in the code over the years, from bathrooms only in 1975, to what the GFCI requirements are in 2023, are put in place for the safety and protection of our community.

Neighboring Jurisdictions Electrical Codes:

Several of our surrounding jurisdictions have either adopted the 2023 National Electrical Code or are anticipated to adopt them soon. Staff anticipates a smooth transition to the updated codes. The table below shows Castle Rock and the surrounding jurisdiction's current year of the electrical code they are operating under, and dates or anticipated dates of adopting the 2023 NEC.

With the adoption of the 2023 NEC by the State of Colorado on August 1, 2023, the Town of Castle Rock shall adopt or adhere to the minimum standards of the Code within 12 months of the state adoption date, pursuant to Colorado Revised Statute, Article 115.

Jurisdiction	Current Year of Electrical Codes	Anticipated/ Adoption of 2023 NEC
Douglas County	2023	Adopted in 2023
Parker	2020	Anticipated in 2024
Centennial	2020	Anticipated in 2024
Greenwood Village	2017	Anticipated in 2024
Lone Tree	2020	Anticipated in 2024
Castle Rock	2017	Proposed for Jan 1, 2024

Staff's proposal to adopt the 2023 NEC will put Castle Rock in line with Douglas County's adopted Electrical Code, as well as be in alignment with the anticipated code adoptions of surrounding jurisdictions.

Proposed Elevator Code Changes:

The Colorado Division of Oil and Public Safety Conveyance Regulations establish rules for the design, installation, registration, construction, operation, maintenance and inspection of conveyances, and for the licensing of conveyance mechanics, contractors and inspectors. The purpose of these regulations is to ensure that elevators and other automated conveyances, accessible to the general public, are correctly and safely installed and operated within the Town of Castle Rock.

The Colorado Division of Oil and Public Safety Conveyance Regulations currently have the following adopted codes: ASME A17.1-2019 Safety Code for Elevators and Escalators, ASME A18.1-2017, Safety Standard for Platform Lifts and Stairway Chairlifts, ASME A17.3-2005 Safety Code for Existing Elevators and Escalators, and ASCE 21-13, Automated People Mover Standards.

Staff is proposing changes to Chapter 15.28-Miscellaneous Codes to modify the description language to be consistent with the codes adopted by the State of Colorado Division of Oil and Public Safety Conveyance Regulations. The previous Code description titled all of the following codes as "Elevator Codes". This modification will provide more clarity to the purpose of each listed code.

1. ASME A17.1 – 2019 Safety Code for Elevators and Escalators
2. ASME A18.1 - 2017 Edition, Safety Standard for Platform Lifts and Stairway Chairlifts
3. ASME A17.3 - 2005 Edition Safety Code for Existing Elevators and Escalators
4. ASCE 21 – 2013, Parts 1-4, Automated People Mover Standards

Additional Minor Code Changes:

During the review process of the Castle Rock Municipal Code, Title 15, Chapters 15.12 and 15.28, staff determined areas of the code where there was inconsistent content with other Title 15 chapters as well as code sections that were not consistent with State Law. These changes are not intended to change existing policy, rather to clarify and to remain consistent.

- Chapter 15.12 Title: Amend title from the “National Electric Code” to the “National Electrical Code” to reflect the correct naming of the Code.
- Chapter 15.12.030: Modifying Amendments with addition of “A. 101.1 Title. These provisions shall be known as the Electrical Code of the Town of Castle Rock and shall be sited as such and will be referred to herein as the electrical code.” This modification allows Chapter 15.12 to be consistent with titles of all the codes within Title 15 naming the “Codes of the Town of Castle Rock”
- Chapter 15.28-Miscellaneous Codes; Modify description of ANSI A117.1. Previous code description was incorrect as description was missing information for the Accessibility Code.
 - 1 ANSI A117.1 2009 Edition Accessible and Useable Buildings and Facilities

Public Outreach and Notification

Staff has engaged the development community throughout the process in order to review the proposed regulations and receive their feedback on the changes. The developer/staff team organized by the Castle Rock Chief Building Official met regularly to review updates to Title 15. Stakeholder meetings were held, as well as outreach to building contractors. Dates of these meetings occurred as follows:

- 11/16/2022 - Met with Castle Rock EDC Developer Roundtable to discuss updates to National Electrical Code Update
- 1/18/2023 - Meeting at Townhall with production builders to discuss updates to the National Electrical Code
- 2/15/2023 - Meeting at Townhall with production builders to discuss updates to the National Electrical Code
- 4/19/2023 - Meeting at Townhall with production builders and stakeholders to discuss updates to the National Electrical Code
- 5/17/2023 - Meeting at Townhall with stakeholders to discuss updates to the National Electrical Code
- 6/21/2023 - Meeting at Townhall with production builders, stakeholders and staff to review updates to the National Electrical Code

- 3/6/2023 - Discussed updates with Board of Building Appeals (BOBA)
- 6/5/2023 - Discussed updates with Board of Building Appeals (BOBA), New Members

History of Past Town Council, Boards & Commissions, or Other Discussions

The Town has historically adopted various national building codes that are utilized for all building construction, including codes specific to residential, commercial, mechanical, plumbing, electrical, fuel gas, swimming pools and fire codes, to name a few. As these codes are updated, or new ones created, Town staff reviews them for applicability and over time moves to replace older codes with newer codes. The Town does not always adopt each version as soon as it is published, and in some years may skip a version or two, unless substantial changes have been made or state or other laws require the adoption.

At various Board of Building Appeals and Development Services Contractor Luncheon meetings during 2022 and 2023, Board of Building Appeals members, production builder superintendents and professional engineers provided the following feedback regarding Title 15, Chapter 10.12:

- Update current National Electrical Code to the current adopted State of Colorado Electrical Code cycle
- Allow current amendments to remain unchanged

Budget Impact

No direct cost to the Town is anticipated other than the purchase of new code books, which has been budgeted for 2023.

Recommendation

Staff recommends approval of the ordinance adopting the editions of the codes listed below and to modifications of Chapters 15.12 and 15.28 as outlined in this memo, (ATTACHMENT A).

- 2023 National Electrical Code (NEC)
- ASME A17.1 – 2019 Safety Code for Elevators and Escalators
- ASME A18.1 - 2017 Edition, Safety Standard for Platform Lifts and Stairway Chairlifts

Staff is recommending these updated codes be “effective” January 1, 2024. However, to allow production home buildings and their design professionals time to update construction masterplans, the ordinance will allow them to build off previously approved residential masterplans until July 1, 2024.

Proposed Motion

Option 1: Approval

“I move to approve this Ordinance as introduced by Title, on second reading.”

Alternative Motions

Option 2: Approval with Conditions

“I move to approve this Ordinance as introduced by Title, on second reading with the following conditions; (list conditions)

Option 3: Continue item to next hearing (need more information to make decision)

“I move to continue this item to the next meeting on XXXXXXXX, 2023 to allow time for additional research regarding _____.”

Attachments

Attachment A: Ordinance