



## AN ORDINANCE ADOPTING NEW BUILDING SAFETY CODES

### STRATEGIC FOCUS AREAS



*Safe, Active, and  
Engaged Community*



*Recognizable and Well-Planned  
Community*

### BACKGROUND

- ▶ The current building safety codes were adopted in February of 2013 and are becoming antiquated.
- ▶ The National Uniform Code adoption agencies create new codes in a 3 year cycle after public input and many hearings.
- ▶ The City has been using separate administrative sections for each code adopted. To streamline and increase efficiency, we need to adopt one section that deals with the administration of all building safety codes.
- ▶ All codes have been carefully reviewed by City and Fire District staff.
- ▶ Amendments have been carefully considered and written by City and Fire District staff.

### INTENT

- ▶ This code adoption is both an update and new code introduction.
- ▶ The building division is prepared to educate and work with our customers for success in compliance with any code changes.
- ▶ For added safety we are introducing the International Swimming Pool and Spa code to the City's requirements. This will assure a safe installation of water recreation facilities.

### PATHWAY TO IMPLEMENTATION

- ▶ After the ordinance has been adopted, we will allow for submittal under the current building safety codes until January 1, 2021.
- ▶ Any project under construction at this date will be allowed to continue under the code the project was permitted under.
- ▶ After adoption, production builders may choose to submit master plans for review and approval under the new code at any time. Some of these builders are already starting to draw new designs in anticipation of this adoption.

### MAJOR CHANGE CONCERNS

- ▶ The Ordinance has amended the International Residential Code concerning required fire sprinklers in one and two family dwellings. The adoption has amended this section using the term "may" instead of "shall" to allow the builder the option of either installing or not installing these systems.
- ▶ The International Energy Conservation Code has been amended to allow for visual inspection instead of mechanical system inspection for the final building energy loss.

## ORDINANCE

- ▶ Repeal of the current code:
  - ▶ This is necessary to prevent any conflicts between the newly adopted codes and the previous version.

## ORDINANCE

- ▶ Administrative Code
  - ▶ Each code has separate administrative sections, so combining these creates one management device to prevent any confusion and make easier access for our customers to understand any requirements pertaining to which code to follow and any exceptions or amendments.

## ORDINANCE

- ▶ Definitions
  - ▶ This section is for reference during interpretation of the code.

## ORDINANCE

- ▶ 15-2-40 Conflicting Provisions
  - ▶ This is to clarify that the intent of all adopted codes are to meet minimum standards.

## ORDINANCE

- ▶ 15-2-50 Alternate Materials and Methods of Construction
  - ▶ This allows for alternate construction materials when they meet the minimum standard set forth in the code.

## ORDINANCE

- ▶ 15-2-60 Modifications
  - ▶ This allows for limited modification to construction materials and techniques when justifiable cause is found, while meeting the intent of the code.

## ORDINANCE

- ▶ 15-2-70 Tests
  - ▶ This is for the allowance of testing materials by outside agencies such as UL, ICCES or other testing as deemed necessary.

## ORDINANCE

- ▶ 15-2-80 Organization and Enforcement Authority
  - ▶ This section establishes the Building Division as the agency that enforces the codes laid out in the ordinance.

## ORDINANCE

- ▶ 15-2-90 Power and Duties of the Chief Building Official
  - ▶ This section authorizes the CBO to enforce the adopted codes in this ordinance.

## ORDINANCE

- ▶ 15-2-100 Unsafe Buildings, Structures or Building Service Equipment
  - ▶ This section describes what may constitute an unsafe condition and what methods may be used to correct the condition.

## ORDINANCE

- ▶ 15-2-110 Board of Appeals
  - ▶ This establishes a Board of Appeals, appointed by the City Council, to hear appeals to the interpretation of the code by the Building Official.
  - ▶ It also lists the type of experience that board members are required to have.

## ORDINANCE

- ▶ 15-2-120 Permits and Inspections
  - ▶ This sets rules and requirements related to the issuance and inspection of construction or required permits.

## ORDINANCE

- ▶ 15-2-130 Application for Permit
  - ▶ Establishes the application process.

## ORDINANCE

- ▶ 15-2-140 Plans and Specification
  - ▶ Establishes requirements for submittals in the application process.

## ORDINANCE

- ▶ 15-2-150 Permit Issuance
  - ▶ Establishes requirements for the issuance of permits, validity of the permit, retention of records, and plans.

## ORDINANCE

- ▶ 15-2-160 Fees
  - ▶ Gives directions for the calculation of fees from the Adopted Fee Schedule of the City.

## ORDINANCE

- ▶ 15-2-170 Inspections
  - ▶ This establishes a method and requirements for the inspection process.

## ORDINANCE

- ▶ 15-2-180 Required Building Service Equipment Inspections
  - ▶ This establishes requirements for inspections of equipment such as Rooftop Air Conditioners, Boilers, Generators and other equipment that is installed for the operation of buildings and their uses.

## ORDINANCE

- ▶ 15-2-190 Special Inspections
  - ▶ This establishes requirements for Special Inspections such as structural steel, large roofing, special construction and required observation during construction.
- ▶ 15-2-200 Duties and Responsibilities of the Special Inspector
  - ▶ This establishes the requirements and duties of the Special Inspector.

## ORDINANCE

- ▶ 15-2-210 Site Maintenance
  - ▶ This is to allow the connection of site equipment to energy sources during construction.

## ORDINANCE

- ▶ 15-2-220 Certificate of Occupancy
  - ▶ This section establishes the requirements and restriction during the issuance of the Certificate of Occupancy.

## ORDINANCE

- ▶ 15-2-230 Foundation only Permit
  - ▶ This allows for a permit to be issued to start the foundation without full building permit. This allows the applicant to get a project started sooner to maintain their timeline.

## INTERNATIONAL BUILDING CODE

- ▶ 15-4-10 Code adoption
  - ▶ Governs the construction of Commercial, Industrial and any other building that is not included in the IRC



## INTERNATIONAL BUILDING CODE

### SIGNIFICANT CHANGES:

- ▶ Accessory storage spaces of any size are now permitted to be classified as part of the occupancy to which they are accessory.
- ▶ New code sections have been introduced addressing medical gas systems and higher education laboratories.
- ▶ Use of fire walls to create separate buildings is now limited to only the determination of permissible types of construction based on allowable building area and height.
- ▶ Where an elevator hoist way door opens into a fire-resistance-rated corridor, the opening must be protected in a manner to address smoke intrusion into the hoist way.

## INTERNATIONAL BUILDING CODE

### SIGNIFICANT CHANGES:

- ▶ The occupant load factor for business uses has been revised to one occupant per 150 square feet from 100 square feet.
- ▶ Live loads on decks and balconies increase the deck live load to one and one-half times the live load of the area served.
- ▶ The minimum lateral load that fire walls are required to resist is five pounds per square foot.
- ▶ Wind speed maps updated. Ultimate design wind speeds now called basic design wind speeds.

## INTERNATIONAL BUILDING CODE

- ▶ Five-foot tall wood trusses requiring permanent bracing must have a periodic special inspection to verify that the required bracing has been installed.
- ▶ New alternative fastener schedule for construction of mechanically laminated decking is added giving equivalent power-driven fasteners for the 20-penny nail.
- ▶ Solid sawn lumber header and girder spans for the exterior bearing walls reduce span lengths to allow #2 Southern Pine design values.

## INTERNATIONAL BUILDING CODE

### Amendments:

- ▶ 15-4-40 Establish reference to Building Official and Building Code to be one and the same with any reference to the authority having jurisdiction and the building code as adopted.
- ▶ Establishes rules governing refunds.

## INTERNATIONAL BUILDING CODE

### Amendments:

- ▶ 15-4-50 Snow Loads
  - ▶ Establishes Snow Loads that are exclusive to our jurisdiction.

## INTERNATIONAL BUILDING CODE

### Amendments:

- ▶ 15-4-60 Wind Loads
  - ▶ Establishes Wind Loads that are exclusive to our jurisdiction.

## INTERNATIONAL BUILDING CODE

### Amendments:

- ▶ 15-4-70 Seismic Design Category
  - ▶ Establishes Earthquake Zone for our jurisdiction.

## INTERNATIONAL BUILDING CODE

### Amendments:

- ▶ 15-4-80 Single Family Fire Suppression
  - ▶ Allows for one and two family dwellings to be constructed without fire sprinkler systems, with the exception for the requirements in Development Agreements and PUD.

## INTERNATIONAL BUILDING CODE

### Amendments:

- ▶ 15-4-90 and 15-4-100 Plumbing Fixtures
  - ▶ Allows for smaller occupancy (less than 25) to delete the requirement for a drinking fountain.

## NATIONAL ELECTRIC CODE (NFPA 70)

- ▶ This is being adopted without amendments.
- ▶ We refer to the State of Colorado Electrical Board for any provisions that are amended and the City is required to enforce.
- ▶ This adoption follows statutory requirements to adopt the most recent version of this code.



## CONTRACTOR LICENSING

- ▶ There are no changes to the City's contractor licensing requirements.

## INTERNATIONAL FIRE CODE

- ▶ This Code is administered by the Fire District and has been amended to reflect the requirements of the District.



## INTERNATIONAL FIRE CODE

- ▶ In this cycle the adoption includes Appendix "D" which details requirements for Fire Apparatus Access Roads.

## INTERNATIONAL FIRE CODE

### SIGNIFICANT CHANGES:

- ▶ New provisions address hazards related to outdoor pallet storage, higher education laboratories, mobile food trucks and plant processing and extraction activities.
- ▶ Mass Notification Requirements for college and university buildings have been added to the code.
- ▶ Sprinkler protection is now required in existing Group A-2 occupancies having an occupant load of 300 or more where alcoholic beverages are consumed.
- ▶ A new chapter has been added to address issues related to Energy Systems.
- ▶ Integrated testing requirements for fire protection and life safety systems have been added for high rise buildings and smoke control systems.
- ▶ The requirements for gas detection systems have been revised throughout the code to be more reflective of industry practice.

## INTERNATIONAL FIRE CODE

### SIGNIFICANT CHANGES:

- ▶ Required sprinkler protection of Group E occupancies has been expanded through the introduction of a new thresholds related to fire areas.
- ▶ Manual fire alarm systems in Group A occupancies are now required not only when the occupant load is 300 or more but also where the occupant load exceeds 100 above or below the lowest level of exit discharge.
- ▶ A manual fire alarm system and an automatic smoke detection system are no longer required in Group R-4 occupancies.
- ▶ New provisions require illumination for the exit discharge path of travel to the public way or to a safe dispersal area for all occupancies.

## INTERNATIONAL FIRE CODE

### SIGNIFICANT CHANGES:

- ▶ Provisions have been added to address the hazards associated with outdoor assembly events, indoor trade shows and exhibitions.
- ▶ The fire watch requirements for construction and demolition activities have been enhanced.
- ▶ The provisions for the maintenance of fire and smoke protection features in Chapter 7 have been enhanced and reorganized.
- ▶ The applicability of the decorative materials requirements in Chapter 8 have been clarified.

## INTERNATIONAL RESIDENTIAL CODE

15-28-10 Adoption of the International Residential Code for One and Two Family Dwellings

- ▶ This code is for construction of single family, two family (duplex) and townhouses (up to four units)



## INTERNATIONAL RESIDENTIAL CODE

### AMENDMENTS:

- ▶ Residential Fire Sprinklers are amended to be optional except where required by land use regulations.
- ▶ Air leakage, testing and visual inspection option are amended to allow for an additional pathway for energy code compliance. This eliminates the requirement for engineer testing at completion of construction.

## INTERNATIONAL RESIDENTIAL CODE

### SIGNIFICANT CHANGES:

- ▶ An updated seismic map reflects the most conservative Seismic Design Category (SDC).
- ▶ The townhouse separation provisions now include options for using two separate fire-resistant-rated walls or a common wall.
- ▶ An emergency escape and rescue opening is no longer required in basement sleeping rooms where the dwelling has an automatic fire sprinkler system and the basement has a second means of egress or an emergency escape opening.



## INTERNATIONAL RESIDENTIAL CODE

### SIGNIFICANT CHANGES:

- ▶ The exemption for interconnection of smoke alarms in existing areas has been deleted.
- ▶ New girder/header tables have been revised to incorporate the use of #2 Southern Pine in lieu of #1 Southern Pine.
- ▶ New tables address alternative wood stud heights and the required number of full height studs in high wind areas.
- ▶ Commercial Appliances are now allowed in residences with engineering.

## INTERNATIONAL MECHANICAL CODE

- ▶ No amendments have been made to this code.
- ▶ No significant changes in the code should affect our jurisdiction.



## INTERNATIONAL PLUMBING CODE

- ▶ No amendments have been made to this code.
- ▶ There are no significant changes that should affect our jurisdiction.



## INTERNATIONAL ENERGY CONSERVATION CODE

- ▶ Code adoption for conservation of energy in the built environment.



## INTERNATIONAL ENERGY CONSERVATION CODE

- ▶ This code has changed significantly since our last adoption. The previous version was the 2006 IECC and the requirements for energy conservation have increased.
- ▶ A majority of the builders already build to the requirements of the 2018 IECC.
- ▶ This edition has added several different paths to compliance that the most previous versions do not.
- ▶ We have added amendments to allow for alternative pathways for compliance without degrading the intent of the code.

## INTERNATIONAL PROPERTY MAINTENANCE CODE

- ▶ There are no amendments or significant changes.
- ▶ This code is for the enforcement of property maintenance to prevent destabilization of our neighborhoods.
- ▶ The code sets requirements for dilapidation, infestation, hazards, sanitation and fire safety.
- ▶ The code is also used in abatement and removal of hazards.



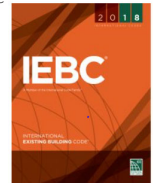
## INTERNATIONAL SWIMMING POOL AND SPA CODE

- ▶ This is a new code for the City.
- ▶ This code sets requirement for the safe design and construction of aquatic recreation equipment to prevent unsafe environments for the users.



## INTERNATIONAL EXISTING BUILDING CODE

- ▶ There are no significant changes or amendments to this code.
- ▶ This code offers alternative construction to existing and historic buildings. This is to allow for compliance without significant structural reconfiguration or prohibitive requirements.



## INTERNATIONAL FUEL GAS CODE

- ▶ There are no amendments or significant changes.
- ▶ This code sets requirements for the installation of natural gas, LP, hydrogen systems and related accessories.
- ▶ This includes piping, fitting, regulators, sizing of equipment and prevention of explosion or fire.



## BRIGHTON ELEVATOR AND CONVEYANCE CODE

- ▶ We are adopting this code to match the regulations adopted by the State of Colorado.
- ▶ The purpose of this Section is to provide a system of regulations and inspections of elevators and conveyances consistent with state law and generally conforming to similar regulations throughout the State.

## FINANCIAL IMPACT

- ▶ Sufficient funding was approved in the 2020 Budget for the necessary books, software and materials used in the implementation of the code cycle.

## STAFF RECOMMENDATION

- ▶ Staff referred the draft ordinance to the Metro Denver Home Builders Association and have not received any formal feedback. We have received positive feedback, verbally, from a member.
- ▶ The Building Code Enforcement Evaluation Report by ISO recommends adoption of the most current code. This is positively reflected in the City's ISO rating that may affect insurance rates.
- ▶ Engineering and Architectural design software is now becoming obsolete in relation to the 2012 codes which may create difficulty for design professionals and developers.
- ▶ State of Colorado Statute requires adoption of the most recent Electrical and Plumbing Code.
- ▶ After review, staff has determined that adoption of this ordinance would be in the best interest of the city.

## NOTICE REQUIREMENTS

- ▶ At the first reading held on September 1, 2020, a public hearing was ordered via the ordinance, which would be held prior to the second reading per State Statutes.
- ▶ Per State Statutes, the public hearing was properly published both at least 15 days and 8 days before the hearing.

## ACTIONS FOR CITY COUNCIL

- ▶ Approve the ordinance as presented;
- ▶ Approve the ordinance with modifications;
- ▶ Continue the public hearing to a date certain; or
- ▶ Not approve the ordinance with specific findings to justify the denial.

## QUESTIONS

- ▶ Both the Building Division and the Fire District are represented tonight for any questions.