



## 2021 CODES SIGNIFICANT CHANGE HANDOUT

Please note that this list is not a complete list of all changes in the various Codes

### 2021 IRC

R301.1.4 - added section for Intermodal shipping containers that are repurposed for use as building or structure needing to be designed based on structural provisions of section 3115 of the International Building Code.

R301.2 - wind design will now be required to follow design guidelines in the ASCE 7 -16

R302.5 - Added language to clarify that the door between house and garage also needs to be self-latching.

R303.1 - Now requires local exhaust for kitchens that do not have openable outside windows in the kitchen area.

R308.4.5 - Added language to clarify that any glazing under 60" high and within 60" horizontally from shower or bath will need to be safety glazing.

R310.1 - added language to require a 36" minimum width open path that leads to a public right-of-way outside of emergency escape and rescue openings.

R310.2 - modified language to require the maximum height of the bottom of the opening of the emergency escape and rescue window to be no higher than 44' above floor instead of measuring to the sill. This is already in the current BMC amendments.

R310.4, 310.5, and 310.6 - modifications to required size of emergency escape and rescue openings in existing alterations

R311.7.7 - we will propose an amendment to add language that the stair landing at grade needs to be solid and stable.

R312.2 - modified language to measure the maximum height of the bottom of the opening for Window Fall protection to the bottom of the window opening instead of sill. This already in the current BMC amendments

R314.3 - added requirement for location of smoke alarms where there is change of elevation in ceiling heights of 24" or more outside bedrooms - this is already in the current BMC.

R326 - the section for Habitable Attics has been modified and expanded.

R507.10 - added language on how guard posts need to be attached to deck framing



### 2021 IBC

406.2.4 - reinstated requirement for sloping floors in S-2 parking garages

503.1.4 - clarified that occupied roofs are not included in determining allowable height or number of stories and clarifies that the occupancy of the occupied roof can be different that level immediately below as long as there is occupant notification system if that is required elsewhere in building

Numerous changes in Chapter 5 and 6 and Table 705.5 due to adding three types of construction under Type IV - IV A, IV B, and IV C.

506.3.2 - modified how to do allowable area frontage increases.

508.5 - Live Work unit section 419 has been relocated to Chapter 5 - 508.5 - no technical changes.

510.2 - now allows interior exit stairways to be combustibile construction in the lower level of podium design buildings - as long as the added specific requirements are met.

707.5 - now technically allows a 1 or 2 hour rated horizontal assembly as ceiling of a horizontal exit passageway.

708.1 , 708.4.1 - added allowance to not require supporting construction to not be rated under fire partitions for ambulatory care facilities separation to other occupancies, walls separating dwelling units in R-1 and R-2 occupancies, and vestibules.

717.2.3 and 717.6.2.1 - added language to clarify that static radiation dampers need to be able to automatically shut down in event of fire

911 - will now require a Fire Command Center for any F-1 or S-1 occupancy that exceeds 500,000 s.f..

1006.3 - additional requirements for egress from occupied roofs.

1008.2.1 - has changed the stairway illumination from 1 foot candle to 10 footcandle.

1009.2.1 - will now require an accessible elevator to serve an occupied roof if it is on top of building with more than 4 stories above grade - example would be existing 4 story and then adding occupied roof if square footage of occupied roof exceeds 3,000 s.f.

1104.4 - has deleted the 3,000 s.f. threshold for not requiring an accessible route to upper level with 4 or more dwelling units - example would be the main level is retail and second



floor is 4 dwelling units - the second level would not need an accessible route unless an accessible unit is shown on main level.

1105.5.1 - now requires automatic doors at the required accessible public entries with larger occupant loads as per table 1105.1.1

1107.2 - added section for accessibility requirements for vehicle charging stations.

1108.5 and 1110.2 - added requirements for assisted toileting and bathing

1110.6 - added requirement that bottle filling stations would need at least one to meet accessibility requirements.

1110.13.2 - added accessibility requirement for service windows - with section for customer service

### 2021 IFC

105.5.1 - added a requirement for an operational permit for industrial additive manufacturing (3D printing)

508.1 - added requirement for a fire command center in Group F-1 and S-1 occupancies with a building footprint greater than 500,000 square feet (synchronized with IBC)

604.6 - added section that requires for owners to provide elevator car door keys and up to three fire service keys to the fire code official

903.2.4.2 - added a requirement to provide fire sprinklers throughout all Group F-1 fire areas used for the manufacture of distilled spirits

903.2.4.3 - added a requirement to provide fire sprinklers throughout all Group F-1 fire areas exceeding 2,500 square feet used for the manufacture of upholstered furniture or mattresses

903.2.9.3 - added a requirement to provide fire sprinklers throughout all Group S-1 fire areas used for the bulk storage of distilled spirits or wine

903.2.9.4 - added an exception to allow the elimination of fire sprinklers from Group S-1 self-storage facilities where upholstered furniture or mattresses are stored when such facilities are not greater than one story above grade plane and where all storage spaces can be accessed directly from the exterior



907.2.10 - added the requirement for a manual fire alarm system in Group S-1 public- and self-storage occupancies three stories or more in height for interior corridors and interior common areas, also clarifying that visual notification appliances are not required within the storage units themselves

1008.2.1 - added a sentence requiring that along exit access stairways, exit stairways and at their required landings, that the illumination level of the means of egress shall not be less than 10 footcandles when the stairway is in use

1010.1.3 - added new language pertaining to the maximum forces required to unlatch, open and/or set in motion interior egress doors of various types

1023.11 - added a new section to require tactile floor-level signs (signs with visual characters, raised characters, and braille) at each floor-level landing when floor-level signs are provided in interior exit stairways and ramps

1031 - added several sections to specify minimum size, area, height and configuration requirements for emergency escape and rescue openings in Groups R-2, R-3, and R-4 occupancies.

1103.5.4 - added retroactive fire sprinkler requirements for certain unsprinklered high-rise buildings (none of which would be applicable to any structures in Broomfield)

1204 - added a section regulating the use, operation, and maintenance of portable generators

1206 & 1207 - major rewrite of code requirements pertaining to stationary fuel cell power systems and electrical energy storage systems (ESS) to maintain pace with emerging technologies

2203 & 2204 - major re-write to the provisions for dust explosion prevention and dust explosion screening tests pertaining to all combustible dust-producing operations

3303.2 - added a requirement for a detailed daily fire safety inspection, including documentation, to be conducted by a project's side safety director for all construction and demolition projects

3313 - added language clarifying the volume of water required to be available for firefighting when combustible building materials are delivered to a construction site and when vertical construction commences

Chapter 40 - an entirely new chapter providing specific requirements for the storage of distilled spirits and wines, clarifying that these occupancies are not Group H (hazardous)



occupancies but, rather are either Group S-2 or S-1 dispensing on the percent of alcohol content in the beverages being stored.

### 2021 IEBC

Numerous code sections added language for I-2 occupancies to meet NFPA 99 including medical gas.

307.1 - added section to require smoke alarms to be added to existing I-1 and R occupancies when doing alteration, addition, or change of occupancy (other than Level 1 alterations).

307.2 - added section to require carbon monoxide detection to existing I-1, I-2, I-3, I-4, R and classrooms of Group E occupancies (other than level 1 alterations, installation or alteration of plumbing or mechanical systems that are not gas burning, or work on exterior surface of buildings - including window or door hangouts which we are considering to amend out which will match the amendment in the IRC.

502.6 / 1101.4- added section to require enhanced classroom acoustics when classroom additions that have a volume of 20,000 cubic feet or less - and shall comply with requirements in A117.1

905.4 - added section to install a two way communication as per IBC section 1009.8 - when doing an Level 3 alteration.

Various changes in Change of Occupancy chapter

### 2021 IPC

606.1 - will now require an individual tenant water shut off valve

903.1.3 - will now have details for vent terminations on roofs for solar panels and architectural roof features.

915.1 - will now allow a food waste disposer to tie into a combination waste and vent system.

### 2021 IMC



401.2 and 403.1 - will now require mechanical ventilation for all dwelling units - no matter how many stories

502.20 - will now require manicure and pedicure station exhaust systems to be continuously on during business hours.

504.4.1 - added language that if the dryer manufacturer's installation book does not specify require separation of exhaust termination from openings it shall be 3' minimum.

### 2021 ISPSC

305 - will now require construction fencing around the new pool location from when the hole is excavated for the new pool until a permanent pool barrier is installed and inspected.

305.2.4.1 - now requires that a mesh fence used as a barrier needs to be at least 20" from the edge of water of a pool or spa.

305.2.9 - now requires a clear zone of not less than 36" from the outside of a pool barrier to any equipment.

305.8 - has added language to require Means of Egress as per IBC Chapter 10 for the outdoor public pools.

### 2021 IECC

R401.2.5 - requires one out of five potential additional energy efficiency measures under both prescriptive and performance paths as outlined in section 408.2

R401.3 - expanded what the energy efficiency certificate needs to include

R402.1.3 - Prescriptive R-Values and Fenestration have changed - added SHGC for fenestration, ceiling R-Value increased to R-60, Wood framed walls added continuous insulation requirement, floors now R30 without exception, exposed slab edge increased to 4' below grade - R-10, Basement/crawl increased to R15 continuous or R19 cavity  
If installing R-60 blown in fiberglass in attics the ½" drywall will need to be able to carry the estimated 2 pounds per square foot that amount of insulation weighs -

R402.4.1.2 - Maximum air leakage increased to 5 ACH for performance path but remains at 3 ACH for prescriptive path.

R403.3.5 - All heating and cooling ducts must now be pressure tested for leakage.



R404.1 - will now require all permanently installed lighting both interior and exterior to be high-efficacy - 2018 was at 90%.

R404.2 and R404.3 - will now require lighting controls by various listed means.

R405.2 - will now require the performance path to meet maximum R-values out of the 2009 IECC.

R408 - Additional Efficiency Package Options - see requirements in R401.2.5

C401.3 - will now require a thermal envelope certificate to be completed and posted in the building.

All tables for R-Values and fenestration - Minimum r-values have been modified

C402.1.1 - added section on greenhouses

C402.5.1.5 - will now require Building envelope performance verification

C402.5.2 - provides details for testing of multifamily units for the building thermal envelope.

C402.5.3 - provides the specific details for the building thermal envelope testing.

C402.5.11 - will now require operable openings to be interlocked with HVAC system controls

C405.1.1 - will now require not less than 90% of permanently installed lighting serving dwelling units to be high efficacy.

C405.3.2 - Interior lighting power allowance tables have all been modified and are now more restrictive.

C405.11 - will now require at least 50% of receptacles installed in various areas of offices.

C405.12 - will now require energy monitoring for new buildings with conditioned area of 25,000 s.f or larger

C406 - Additional Efficiency Requirements have been modified and expanded.

C406.1.1 - modified section on tenant finishes to require a minimum number of 5 credits.

Potential strengthening amendments based on City Council direction



### A117.1-2017 Standard for Accessibility

Various sections now have requirements for New Buildings and Facilities and for existing Buildings and Facilities -

Requires a 67" diameter circular space in new buildings and facilities and allows 60" in existing buildings and facilities, New requirements for 90 degree turns, passing spaces

309 - expanded the section for Operable Parts to include the various items that need to comply - other sections will now reference back to this section.

402.3 - expanded items under components of Accessible Routes.

Chapter 6 - various changes for plumbing fixtures, grab bars, etc.

703 - added requirements for "Non Glare Finish" on various signage.

808 - added requirements for Enhanced Acoustics for Classrooms when required by IBC

904 - added Windows when used for sales/customer service transactions.