

2012 CODES – SIGNIFICANT CHANGES

2012 IBC

1. Section 303.4 – added language that includes commercial kitchens which are associated with restaurants, cafeterias, and similar dining facilities to be classified as A-2 occupancy.
2. Section 305.2 and 308.6- added language to clarify when day care occupancies are classified as E occupancy or I-4 occupancy.
3. Section 310.5 – added laundry list of types of uses allowed in an R-3 occupancy – Transient (10 or fewer) and non-transient (16 or fewer) boarding houses, Care facilities (new definition in section 202 and five or fewer persons), Congregate living facilities – transient (10 or fewer) and non-transient (16 or fewer).
4. Section 310.5 – allows care facilities with five or fewer to be located within single family dwellings and built under the IRC if fire sprinkler is installed.
5. Section 310.6 – Residential Group R-4 – has been modified to not allow Group R-4 occupancies to be built under the IRC with fire sprinkler.
6. Section 403.6.1 – High rise buildings – Fire service access elevators – now requires at least two fire service access elevators, or all elevators, whichever is less.
7. Section 419 – Live Work - has added clarification to require means of egress to be designed in accordance with Chapter 10 for the function served, accessibility to be designed in accordance with Chapter 11 for the function served, and the non residential area to be provided with the minimum plumbing fixtures as specified in Chapter 29, based on the function of the non residential area.
8. Section 422 – Ambulatory Care Facilities – has expanded language that clarifies that it is used when 4 or more care recipients are incapable of self preservation at any time. It added requirement to install a fire partition between the ambulatory care area and other occupancies. It also clarifies that when there are one or more ambulatory care facilities that total 10,000 square feet in one story, they need to be separated into separate smoke compartments which do not exceed 22,500 square feet each.
9. Section 507.1 – Unlimited Area Buildings – has added exception that allows accessory occupancies in accordance with the provisions of Section 508.2 – accessory occupancies – and limits area to basic allowable areas based on Table 503.
10. Section 509 – Incidental Uses – has been added. Incidental uses are ancillary functions associated with a given occupancy that general pose a greater level of risk to that occupancy and are limited to those uses listed in Table 509 – This used to be Table 508.2.5 – Incidental Accessory

- Occupancies. This new section makes it clear that there is a difference between accessory uses and incidental uses with different requirements.
11. Section 701.2 – Multiple use fire assemblies – has been added and clarifies that when there are fire assemblies that serve multiple purposes they are required to comply with all of the requirements that are applicable for each of the individual fire assemblies.
 12. Section 703.4 – Automatic sprinklers – was added and will not allow a fire resistance rating to be established with the use of fire sprinklers or any other fire suppression system under the prescriptive fire resistance requirements.
 13. Section 709.4 – Continuity of smoke barriers – has been modified so that smoke barriers do not need to extend from outside wall to outside wall. This makes it easier to design elevator lobbies and areas of refuge located in interior locations of buildings.
 14. Section 714.1.1.2 – Through penetration fire-stop systems – has a new exception that allows floor penetrations by floor drains, tub drains, or shower drains contained and located within the concealed space of a horizontal assembly to not require a T rating.
 15. Section 714.4.1.2 – Membrane penetrations – has a new exception that allows the ceiling membrane of a 1 or 2 hour rated assembly to be interrupted by a double wood top plate as long as the penetrations are protected with approved fire stop system and the wall has a fire rating that matches the rating of the horizontal assembly.
 16. Section 718.2.1 – Fire-blocking materials – now allows cellulose insulation that is tested as fire blocking to be used as fire-blocking.
 17. Section 903.2.2 – Ambulatory care facilities will now require fire sprinklers throughout the entire floor where such care is provided as well as all floors below, and all floors between the level of ambulatory care and the nearest level of exit discharge, including the level of exit discharge.
 18. Section 903.2.4 – Group F-1 – will now require fire sprinklers in Group F-1 occupancy used for the manufacture of upholstered furniture or mattresses that exceed 2,500 s.f. – also changed in the IFC.
 19. Section 903.2.7 – Group M – has added language that will require fire sprinklers in Group M occupancy used for the display or sale of upholstered furniture or mattresses that exceed 5,000 s.f. – previously there was not a threshold – also changed in the IFC.
 20. Section 903.2.9 – Group S-1 – has added language that will require fire sprinklers in Group S-1 when used for storage of upholstered furniture or mattresses that exceed 2,500 s.f. – also changed in the IFC.
 21. Section 903.2.11.1.3 – Basements – has added language that will require fire sprinklers in basements that exceed 1,500 s.f. when there are walls, partitions, or other obstructions installed that restrict the application of water from hose streams. Installing door openings will typically not resolve this issue – also changed in the IFC.

22. Section 908.7 – Carbon Monoxide Alarms will be required in all Group R and I occupancies in buildings that contain fuel burning appliances or attached garages. They will also need to be installed within 15' of all bedrooms or sleeping rooms as per State of Colorado legislation – this has also been added to the IFC.
23. Section 1001.4 – Fire safety and evacuation plans – will require fire safety and evacuation plans for all occupancies when required by the IFC – see IFC for details.
24. Section 1005 – Means of egress sizing – this section has been added and consolidated all the requirements for sizing the means of egress – also changed in the IFC.
25. Section 1011.2 – Floor level exit signs in Group R-1 – will require floor level exit signs at same locations as normal exit signs in all R-1 occupancies – also changed in the IFC.
26. Section 1012.2 – Handrail Height – will now allow the continuous transition fittings between flights of stairs to exceed the 38" maximum height.
27. Section 1013.3 – Guard Height – will now allow the maximum height of a guard in R-3 and R-2 occupancies not more than 3 stories to be 36" high.
28. Section 1013.8 – Window sills – requirements for minimum height of bottom of openable windows when 6' or more above outside grade has been relocated from Chapter 14 to this section for guards. The minimum height above floor level has also been changed from 24" to 36" above floor level.
29. Section 1104.3.1 – Employee Work Areas – changed the exception for requiring common use circulation paths within employee work areas from 300 square feet to 1,000 square feet.
30. Sections 1109.2 and 1109.5 has now added language and requirements for accessible children's facilities and the 2009 ANSI Standards have the requirements on how to construct these facilities.
31. Section 1203.1 – Mechanical Ventilation is now required in dwelling units where air infiltration rates are less than 5 air changes per hour.
32. Section 1507.17 and 3111 have new requirements for Photovoltaic Systems.
33. Section 2406 Hazardous Locations for safety glazing has been completely reformatted. One major change is that glazing that is adjacent to stairs, landings, and ramps needs to be safety glazing when bottom edge is lower than 36" above walking surface – previously the requirement was for any glazing that was lower than 60" above walking surface.

2012 IRC

1. Section R302.1- has been modified to allow reduced fire separation distances when approved fire sprinklers are installed and Table R302.1(2) has been added which shows the reduced dimensions.
2. Section R302.2.2 #2 exception - Parapets- will now not allow any openings in the 4' horizontal distance on either side of the fire rated party walls for townhouses when installing the FRT plywood roof sheathing or 5/8" type X drywall.
3. Section R302.5.1 Opening protection - will now require doors between house and garage to be equipped with a self-closing device.
4. Section R303.5 - Intake openings - the minimum vertical clearance between a contaminant source and outside air intake has increased from 2 feet to 3 feet.
5. Section R308.4.6 and R308.4.7 - Glazing adjacent to stairs and ramps - will now require safety glazing when bottom exposed edge of glazing is less than 36" above the plane of the walking surface where previously the requirement was when bottom exposed edge of glazing was less than 60". This new dimension is much less restrictive.
6. Section R310.1 - Emergency escape and rescue required - will now require the 44" maximum height above floor level to be measured to the bottom of the clear opening rather than the sill.
7. Section R310.2.2 - Drainage - will now require window wells to be designed for proper drainage by connecting to the buildings foundation drainage system or by an approved alternative method.
8. Section R311.3.1 - Floor elevations at the required egress door - this section will now only allow the drop down of up to 7 3/4" on the exterior side of the door.
9. Section R314.1 - Smoke detection and notification - will now require smoke alarms to meet the provisions of NFPA 72.
10. Section R317.4 - Wood/plastic composites - will now require wood/plastic composites used in in exterior deck boards, stair treads, handrails, and guardrail systems to be labeled to show compliance ASTM D 7032 and includes allowable load and maximum span.
11. Section R405.1 - Concrete and Masonry foundations - now has specific requirements on how to install perimeter drain piping.
12. Section R408.3 - Unvented crawl space - now has specific requirements n how to install the vapor retarder in an unvented crawl space.
13. Section R501.3 - Fire protection of floors - this is new section that will require floor systems that are not dimensional lumber to be protected by 1/2" drywall (at minimum) or 5/8" wood sheathing or area would need to have approved fire sprinklers unless the area is over a crawl space with no storage or fuel fired appliances. Fire retardant engineered floor joists

could be considered as an approved alternate after Building Division review.

14. Table 507.2.1 – Placement of lag screws and bolts in deck ledgers and band joists – this is a new table which gives requirements on size and placement of lag screws and bolts for deck ledgers into the house band joist. There is also a new Figure R507.2.1(1) which shows visually the locations – the important dimension is the 2” minimum from ends.
15. Section R903.2.1 – Roof flashing locations – will now require a flashing to be installed that will divert water away from where the eave of a sloped roof intersects a vertical side wall.
16. Section R905.2.8.5 – drip edge – will now require drip edge flashing on rakes and eaves when installing asphalt shingles. This will now match the requirements in the IBC.
17. Section R907 – reroofing – will now allow one layer of new asphalt shingles to be installed on one existing layer when doing reroofing. All provisions related to hail have been removed.
18. Section M1506 – exhaust openings – has new requirement for air exhaust openings being more than 3 feet away from property lines and operable and non-operable openings, and 10 feet away from mechanical air intakes except where the opening is 3 feet above the air intake.
19. Section M1507 – Whole house mechanical system – new section added that gives requirements on designing and installing whole house mechanical systems.
20. Section P2503.5.1 – rough plumbing tests – will not allow the use of air when testing plastic DWV piping.
21. Chapter 11 – Energy Efficiency – has been modified and is now just copied out of the 2012 IECC for residential energy provisions.

2012 IECC COMMERCIAL REQUIREMENTS

1. Section C101.3 Intent – has added language that states that intent of this code is to regulate the design and construction of buildings for the effective use and conservation of energy over the useful life of each building. The code does not appear to give any direction as to how to determine the useful life of a building.
2. Section C303.1.3 – fenestration product rating – now has requirement for visible transmittance (VT) for fenestration products and Table C303.1.3(3) has the minimum values. There is also a new definition in Chapter 2.
3. Table C402.2 – opaque thermal envelope requirements has more restrictive insulation requirements for most assemblies. This table also now requires slab edge insulation for all types of buildings (not just R) – R-10 minimum for unheated slabs 24” or less.
4. Section C402.3 – fenestration – will now only allow a maximum 30% of the gross above grade wall area to be fenestration. You would have to use ASHRAE 90.1. utilize or daylighting provisions to increase this percentage to 40%. Skylight area is limited to 3% of gross roof area but can be increased to 5% with daylighting controls. Table 402.3 will now limit metal framed fixed storefront windows to .38 U factor and skylights to .5 U factor.
5. Section R402.3.2 now gives requirements for minimum skylight fenestration area – if space is greater than 10,000 s.f. and has ceiling height greater than 15’ the total daylight zone under skylights will need to be at least half of the floor area as well as having daylighting controls.
6. Section 402.4.1.2 now gives requirements for a continuous air barrier on all commercial buildings.
7. Section C403.2.9 – will now require mechanical systems to be commissioned and completed in accordance to section C408.2
8. Section C405.1 will now allow dwelling units within commercial buildings that have at least 75% of permanently installed lights being high efficacy lamps to not have to meet sections C405.2 through C405.5.
9. Section C405.2 – lighting controls – has been modified to add more lighting control requirements including occupancy sensors in various occupancies.
10. Section C406 will require that new buildings comply with at least one of the options – efficient HVAC performance (C406.2), efficient lighting system (C406.3), or On site supply of renewable energy (C406.4). Individual tenant spaces will need to comply with C406.2 or C406.3 unless documentation can be provided that entire building is in compliance with C406.4.

11. Table C406.3 – reduced interior lighting power – has all the numbers reduced for all occupancies.
12. Section C408 – system commissioning – has been added and gives the requirements for commissioning building mechanical systems and electrical power and lighting systems.

2012 IECC RESIDENTIAL REQUIREMENTS

1. Table R402.1.1 – insulation and fenestration requirements by component – has higher insulation values for ceiling (R-49), basement wall (15/19), crawl space wall (15/19) and lower U-factor for fenestration (.32) and skylights (.55).
2. Table R402.4.1.1 – air barrier and insulation requirements – has been modified to give better installation details.
3. Section R402.4.1.2 will now require a blower door test to show maximum air leakage rate to not exceed 3 air changes per hour. This testing is changed from testing for leakage to the outdoors to total duct leakage.
4. Section R403.4.2 has new requirements for pipe insulation for most service hot water piping.
5. Section R404 – lighting equipment – will now require a minimum of 75% of lamps in permanently installed lighting fixtures to be high efficacy – previously the requirement was 50%.

2012 IPC

1. Table 403.1 – Minimum number of plumbing fixtures – has new exception to not require a service sink in Group B and M occupancies where occupant load is 15 or less. This is also changed in IBC Table 2902.1
2. Section 403.2 – Separate facilities – will now allow a single bathroom when occupant load is 100 or less – previously the threshold was 50 or less. This is also changed in IBC Chapter 29.
3. Section 403.3.2 is added and has same limitation as the IBC which does not allow toilet rooms to open directly into a room used for the preparation of food for service to the public.
4. Section 405.3.1 has reduced clearance to 56” for depth for wall hung water closets which will match the requirements in the ANSI accessibility standards.

5. Section 410 – minimum number of drinking fountains – this is added section that has same requirements as IBC to require at least two drinking fountains – one for accessible height and one for standing persons.
6. Section 607.2 – Hot or tempered water lengths – has reduced from 100' to 50' the maximum allowed distance between a hot water supply source and all fixture served by the source.
7. Section 802.3 – Waste receptors – the list of locations where waste receptors are not allowed has been expanded to include plenums, crawl spaces, attics, and interstitial spaces above ceilings and below floors.
8. Section 915.2 – Combination waste and vent system sizing – added language that says that the horizontal length of combination waste and vent systems is unlimited.

2012 IMC

1. Section 102.3 – Maintenance – has added language to require maintenance of HVAC systems as per ASHRAE/ACCA/ANSI standard 180.
2. Table 403.3 foot note H – minimum ventilation for nail saloons – has been changed to require nail salons to have source capture system at each nail station.
3. Section 505.1 – domestic kitchen exhaust systems – will not require domestic kitchen exhaust duct to be independent of all other exhaust systems.
4. Section 506 – commercial kitchen exhaust hoods and ducts – numerous changes have been made for grease ducts – reservoirs and duct cleanout openings.
5. Section 506.3.11.2 – field applied grease duct enclosures – has added language that will not allow a field applied grease duct enclosure system to be installed in order to reduce clearances to combustibles.
6. Section 507.2.1.1 – operation of Type I hoods – will now require a method to keep the pilot burner on the gas cooking appliance from being extinguished when the interlock goes off.
7. Section 507.10 – hoods penetrating a ceiling – field applied grease duct enclosures will not be allowed to be used as enclosure over the top of Type I hoods that penetrate a ceiling.
8. Section 1101.10 – Locking access port caps – has added language that allows alternate method to restrict access in some fashion instead of installing the port caps.

2012 IFGC

1. Section 308.1 – clearance to combustible materials – has added language that includes gypsum board as being considered combustible material when determining clearance requirements to combustible materials.
2. Section 404.2 – CSST piping systems – new section that gives direction to install CSST piping systems in accordance to the listing and manufacturer's installation instructions.

2012 IFC

1. Section 605.11 – Solar photovoltaic power systems – has new requirements for access around panels on roofs for residential and non-residential buildings. This does not apply to buildings built under the IRC.
2. Chapter 9 – numerous changes to various requirements for fire sprinkler requirements based on occupancies – see items under the above IBC changes.
3. Section 906.1 – fire extinguishers – will now require portable fire extinguishers in new and existing A, B, and E occupancies even if there is fire sprinkler system.
4. See numerous changes in chapter 10 and listed above under the IBC changes.
5. Chapter 11 – construction requirements for existing buildings – was previously chapter 46 and has consolidated many of the retroactive requirements that were throughout the previous versions into one chapter.

2009 ANSI A117.1 ACCESSIBILITY STANDARDS

1. Section 308.3.2 – side reach – allows the maximum height of a washing machine or dryer to be 36” instead of 34”.
2. Section 404.2.3 – obstructions to the maneuvering clearances at doors – has added language that clarifies that you cannot provide the required maneuvering clearance with just knee and toe clearances – such as wall hung sink.
3. Section 407.2.1.5 – call buttons at elevators – will now have two options to let someone know the activation of elevator has been received.
4. Sections 407.4.6.1 and 407.4.8 – elevator car control locations – will require height to be 48” maximum or require sequential step scanning.
5. Section 603.2 – clearances in toilet and bathing rooms – has added language that will not allow the required turning space to be located within a toilet compartment.
6. Sections 604.5 and 607.4 – grab bar blocking – all requirements for grab bar blocking that are applicable to dwelling units have been relocated to chapter 10 which covers requirements for dwelling units.
7. Section 604.7 and 604.11.7 – toilet paper dispensers – will now have measurement taken from back wall rather from front edge of toilet, addresses relationship to location of grab bar, raises the height, and measures to outlet of dispenser.
8. Section 606.2 – clear floor space for sinks – will now require the parallel clear floor space to be centered on the sink.
9. Section 608.2 – shower compartments – roll in showers will now require seats – folding or non-folding.
10. Section 608.4.1 – controls for transfer type showers – will now require controls to be located closer to front edge of shower.
11. Section 804 – kitchens and kitchenettes in common use spaces and accessible units – numerous changes have been made for the accessibility of a kitchen or kitchenette – clear floor spaces, work surfaces, storage space, and cabinets.
12. Section 903 – benches in locker rooms and fitting/dressing rooms – will now allow the clear floor space to either be in front or at end of bench. There is also a new exception for lower bench height when installed for children’s use.
13. Chapter 10 – grab bar backing – Many of the exceptions and provisions for grab bar backing have been relocated from other chapters to this chapter for dwelling units.
14. Sections 1002.3.2 and 1003.3.2 – turning space – two new exceptions have been added to not require turning spaces in Accessible and Type A units – bathrooms not required to be accessible and closets that are 48” maximum in depth.

15. Sections 1002.9, 1003.9, and 1004.9 – operable parts – electrical panelboards have been added to requirements for operable parts for accessible, Type A, and Type B units – 48” maximum height for any operable part of panel or cover.
16. Section 1002.11.2 and 1003.11.2 – multi bathroom units – will now only require one bathroom in a dwelling unit to be accessible when in an accessible unit – previously all bathrooms were required to be accessible. Another change will allow either a bathtub or shower to serve as the accessible bathing facility.
17. Section 1002.13 and 1003.13 – windows – this section will apply to windows that are required to open for either natural ventilation or egress from a bedroom or sleeping room. These windows would need to have clear floor space and operable controls that meet accessibility requirements for graspability and reach height. This may result in more windows needing to meet these requirements since it would apply to all windows required for natural ventilation rather than previously just one.
18. Section 1005 – Type C (Visitable) units – new section has been added for dwelling units that are not regulated by the FHA – single family homes and townhomes. There are no requirements yet in the IBC to require Type C units – at this time it is typically done at the local jurisdiction level.
19. Chapter 11 – recreational facilities – new chapter that gives requirements for numerous recreational facilities. These would only be used when scoped by IBC Chapter 11 or added local amendments.