

The purpose *Significant Changes to the International Codes 2012 Edition* is to familiarize the development construction industry with the important changes in the 2012 International Code Series. It is intended to assist those code users in identifying the specific code changes that have occurred and, more important, understanding the reason behind the change as well as a valuable resource for the jurisdiction in their code adoption process.

The changes selected were identified for their frequency of application, special significance, or change in application.

2012 International Building Code (IBC)

Chapter 2

New definition of ambulatory care facility – buildings or portion thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24 hour basis who are rendered incapable of self preservation.

New definition of L rating – air leakage of a through penetration fire stop system or a fire resistive joint system.

A number of new definitions related to care facilities have been added and some existing definitions have been revised to provide clarity and consistency.

Chapter 3

Section 303.3 – Group A-2 (food and/or drink consumption) now includes associated commercial kitchens which are a part of restaurants, cafeterias, and similar dining facilities.

Section 308.4 Institutional Group I-2 – this occupancy is now only applicable to those medical facilities where six or more individuals are incapable of self -preservation and are receiving care. If 5 or fewer you it shall be classified as an R-3 or the IRC can be used with approved fire sprinkler system installed.

Section 310.5 – Group R-3 now includes care facilities that provide accommodations for five or fewer persons.

Section 310.6 Residential Group R-4 – the allowance for constructing Group R-4 under the IRC has been eliminated.

Chapter 4

Section 403.6.1 Fire Service Access Elevator – this section will now require no fewer than two or all – whichever is less – to meet fire service access elevators in buildings with occupied floors more than 120 feet above level of fire department vehicle access. Previously only one was required.

Section 422 with requirements for ambulatory care facilities and will be classified as a B occupancy has been modified. This section applies when there is the potential of four or more recipients who are rendered incapable of self-preservation. Space needs to be separated by fire partitions and if space is greater than 10,000 square foot on single story needs to be within smoke compartments. Section 903.2.2 requires fire sprinkler system installed throughout the entire floor containing the ambulatory care facility – when four or more are rendered incapable of self preservation or when one or more care recipients are located at other than the level of exit discharge. Fire alarm systems are required as per Section 907.2.2.1,

Chapter 5

Section 507 has new exception that allows other occupancies within unlimited buildings if they meet the accessory provisions in section 508.2.

Section 509 gives requirements for incidental uses which are ancillary functions associated with a given occupancy and generally pose a greater level of risk to that occupancy and are limited to those listed in Table 509.

Chapter 7

Section 708 is now section 712 and called vertical openings instead of shaft openings. This is a part of a significant reformatting of Chapter 7 and the emphasis on the presence of vertical openings rather than on shaft enclosures. Shaft enclosures are just one of many acceptable methods addressing any hazards related to vertical openings.

Section 714.4.1.1.2 Through-penetration fire stop system has new exception to not require a T rating for floor penetrations by floor drains, tub drains, or shower drains and located within the concealed space of a horizontal assembly.

Section 714.4.1.2 Membrane penetrations has new exception 7 which allows the ceiling membrane of fire rated floor/ceiling or roof/ceiling assembly to be interrupted by a double wood top plate as long as all penetrating items are fire stopped and the fire rating of the wall is no less than that of the horizontal assembly.

Section 718.2.1 Fireblocking now allows the use of cellulose insulation as long as product has been tested as a fire block.

Chapter 9

Section 903.2.7 Group M – now requires fire sprinkler when use is for display and sale of upholstered furniture and mattress and size exceeds 5,000 s.f. – previously there was not a size threshold.

Section 903.2.11.1.3 will now require a basement that exceeds 1,500 s.f. and has walls, partitions, or other obstructions that restrict the application of water from hose streams to be fire sprinklered. This section still requires fire sprinklers when any portion of basement is located more than 75 feet from openings to exterior.

Section 908.7 will now require carbon monoxide alarms in Group I and R occupancies which contain fuel burning appliances or attached garages. Colorado State law already requires this which is similar to the IRC.

Chapter 10

Section 1001.4 was added and requires a Fire safety and evacuation plan for all occupancies when required by the Fire Code.

Section 1005 Means of Egress sizing has been added and gives all requirements for sizing means of egress systems in on section. No technical changes have been made.

Section 1008.1.2 has new language that clarifies that the total occupant load within a room will determine door swing requirements.

Section 1011.2 Floor level exit signs in R-1 has been added and will require floor level exit signs in all areas serving guestrooms in R-1 occupancies.

Section 1012.2 will now allow transition fittings on continuous handrails to be higher than the maximum 38”.

Section 1013.3 has lowered guard height from 42” minimum to 36” minimum for R-3 occupancies and within R-2 occupancies.

Section 1013.8 Window sills has been changed to require the bottom of window openings in R-2 and R-3 occupancies to be at least 36” above floor when it is more than 72” above exterior grade or surface. Previously the requirement was 24”.

Chapter 11

Section 1104.3.1 now exempts up to 1,000 s.f. work area from meeting accessible circulation paths – previously it was 300 s.f.

Section 1109.2 and 1109.5 will now allow toilet facilities and drinking fountains used primarily for children’s use to be installed at lower heights.

Chapter 12

Section 1203.1 will now require a mechanical means of ventilation when air infiltration rate is less than 5 air changes per hour. The IECC requires that this infiltration rate to be less than 5 air changes per hour.

Section 1210 now has water closet compartment and urinal partition requirements – relocated from Chapter 29.

Chapter 14

Section 1403.5 Vertical and lateral flame propagation – this is a new section that will require exterior walls on buildings of Type I, II, III, or IV and greater than 40’ above grade plane and include a combustible water resistive barrier to have the barrier comply with acceptance criteria NFPA 285.

Chapter 15

Section 1505.8 Photovoltaic systems – new section that will require photovoltaic systems that are adhered or attached to the roof covering or photovoltaic modules/shingles installed as roof coverings to be labeled to identify their fire classifications.

Section 1509.7 Photovoltaic systems and Section 1511 – new sections that gives requirements for photovoltaic systems – wind, fire classification, installation, and testing criteria.

Chapter 16

Section 1604.5 has the term Occupancy Category changed to Risk Category to better reflect intended meaning and to coordinate with terminology used in ASCE-10.

Chapter 24

Section 2406 Hazardous locations – entire section has been changed to be more “user friendly” – some technical changes have been made for glazing adjacent to stair landings – previously needed safety

glazing when bottom of glass was 60" or less above floor and now it is only needed when bottom of glass is 36" or less above floor.

2012 International Residential Code (IRC)

Section R302.2.2 will now not allow any openings or penetrations in the roof within 4 feet of a townhouse party wall when a parapet is not installed.

Section R302.5.1 will now require the door between the dwelling unit and the garage to be self closing.

Section R303 will now require a whole house mechanical ventilation system when blower door test has an air infiltration rate of less than 5 air changes per hour. Natural ventilation - openable doors and windows are still allowed.

Section R308.4 Hazardous Locations for Glazing has been reformatted. The major technical change is to require safety glazing adjacent to stairs and landings when bottom edge is less than 36" above floor where previously it was 60".

Section R310.1 has been clarified so that you would measure the 44" maximum height of egress window to the bottom of opening of window instead of the sill.

Section R310.2.2 is new section that will require proper drainage for window wells – connected to foundation drainage system or other approved method.

Section R312 now has the requirements for window fall protection which was relocated from Chapter 6.

Section R501.3 has been added and will require floor assemblies to be provided with ½" drywall, 5/8" wood panel, or equivalent to be installed on the underside of floor framing unless fire sprinklers are installed or floor framing is 2 X 10 dimensional lumber or larger.

Section R507 Decks – all deck provisions have been relocated to this new section.

Section R905.2.8.5 will now require drip edge for asphalt shingles.

R907.3 will now allow one layer of asphalt shingles to remain when doing a reroof using asphalt shingles.

Chapter 11 Energy Conservation – this chapter has been replaced with the residential requirements out of the 2012 International Energy Conservation Code.

Section M1502.4 will now require dryer duct supports at 12' maximum instead of the 4'

Section M1506 Exhaust Openings has been added and will provide minimum clearances between air exhaust terminations and openings into buildings – 3' from property lines, 3' from operable and non operable openings and 10' from mechanical air intakes.

Section M2302 is a new section with requirements for photovoltaic solar energy systems.

Section P2503.5.1 will now not allow air testing of plastic piping in DWV systems.

2012 International Energy Conservation Code (IECC) for COMMERCIAL OCCUPANCIES

Section C303 Table C303.1.3(3) has added requirement for VT (visible transmittance) for fenestration.

Tables C402.1.2 and C402.2 have more restrictive values.

Section C405 has numerous more restrictive requirements for electrical power and lighting systems for commercial projects.

Section C406 will now require building to comply with at least one of the options – efficient HVAC performance in accordance with Section C406.2; or efficient Lighting system in accordance with Section C406.3; or On Site Supply of Renewable Energy in accordance with Section C406.4. Individual tenant spaces will need to comply with section C406.2 (efficient HVAC) or Section C406.3 (efficient lighting system) unless documentation can be provided that entire building complies with Section C406.4 (On site renewable energy).

Section C408 will now require that HVAC and electrical systems be commissioned as per C408.2 and C408.3.

2012 International Energy Conservation Code (IECC) for RESIDENTIAL OCCUPANCIES

Section R303 – Table R303.1.3(3) has added requirements for VT (visible transmittance) for default values for fenestration.

Tables R402.1.1 and R402.1.3 have more restrictive values for U-factors and insulation and fenestration requirements.

Fenestration U factor went from .35 to .32

Ceiling U factor went from .0030 to .0026

Ceiling R-value went from R-38 to R-49

Basement wall U factor went from .0059 to .0050

Basement R-value went from 10/13 to 15/19 (first number would be for continuous insulation on inside or outside of foundation and second number would be for framed wall inside foundation).

Table R402.4.1.1 has more detailed requirements for air barriers.

Section R402.4 has been modified with additional requirements for air leakage. The structure shall be tested and verified as having an air leakage of not exceeding 3 air changes per hour.

Section R404.1 will now require at least 75% of permanently installed lighting fixtures to contain high efficacy lamps.

2012 International Plumbing Code (IPC)

Table 403.1 now has exception to not require a service sink for B and M occupancies with 15 or fewer occupants.

Section 403.2 will now require separate bathrooms for each sex when occupant load exceeds 100.

Section 403.3.2 replicates language already existing in the IBC which does not allow bathrooms to open directly into a room used for the preparation of food for service to the public.

Section 405.3.1 now allows a wall hung water closet in compartment to be 56" in depth which will be aligned with accessibility requirements for wall hung water closet compartments.

Section 410.2 and 410.3 have been added and will give requirements for minimum number of drinking fountains which will match what is in the IBC.

Section 504.7 has added clarity that only storage type water heaters or hot water storage tanks need drain pans and not for tankless type water heaters.

Section 607.2 has changed the maximum distance between a hot water supply source and all fixtures from 100 feet to 50 feet.

Section 607.5 has been added and has requirements for hot water pipe insulation which will match the requirements of the IECC. The first 8 feet of hot water piping out of water storage tanks for hot water recirculating systems will need to be insulated.

2012 International Mechanical Code (IMC)

Table 403.3 will now require that each nail saloon station to have a source capture system capable of exhausting not less than 50 cfm per station.

Section 505.1 will now require domestic kitchen exhaust systems to be independent of all other exhaust systems (not allowed to combine with bathroom or toilet room exhaust systems).

Section 507.10 has added language that field applied grease duct enclosure systems cannot be used to protect Type I exhaust ducts that penetrates ceilings.

Section 928 has been added and provides requirements for evaporative cooling equipment.

Section 1101.10 has added language to allow alternate method to protect refrigerant circuit access ports – example would be if in area that is not accessible to the public.

2012 International Fuel Gas Code (IFGC)

Section 404.2 is added and gives direction to install CSST piping systems in accordance to the terms of their approval, the conditions of listing, the manufacturer's installations and this code.

2012 International Fire Code (IFC)

Section 605.11 is new section and gives requirements for solar photovoltaic power systems. Requirements include marking conduit, enclosures, raceways, cable assemblies, junction boxes, combiner boxes and disconnects. This section also gives requirements for access and pathways for both residential and non residential buildings.

Section 605.11.3.2 appears to apply to one and two family dwellings but based on research the intent is that it is not to apply to one and two family dwellings built under the IRC but only under the IBC.

