

# Significant Changes for Contractors

## Adoption of 2021 International Building Codes (Commercial)

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### 2021 International Building Code (IBC) and Fire Code (IFC)

#### IBC 202 Definitions

Modified and added definitions of Change of Occupancy, Puzzle Room, and Special Amusement Area

#### IBC 1006.3.4 Single exit from stories

Instead of using Common Path of Travel, total travel to an exit is now used to determine when 2 exits are required from a story

#### IBC 1008.2.1 Egress illumination

Increases the amount of lighting for along stairs and landings from 1 foot-candle to 10 foot-candles while stairs are in use

#### IBC 1107.2 Vehicle charging stations

Now requires 5% of charging spaces to be van accessible parking spaces

#### IBC 1210.3 Restroom privacy

New requirement to provide privacy screening at entrances to public restrooms designed for more than one occupant

#### IBC 3115 Shipping containers

IBC now recognizes shipping containers as buildings if they comply with certain standards

#### IFC 405 Emergency drills

The frequency of training and participation in fire drills and evacuation drills are revised. The use of defend-in-place or staged evacuation strategies are included with specific criteria for each.

#### IFC 708 Maintenance of spray fire-resistant materials

Maintenance requirements for spray fire-resistant materials and intumescent fire-resistant materials are added to the code

#### IFC 808.5 Play structures

Play structures added to existing buildings must comply with the requirements of the IBC

#### IFC 1010.2 Locking arrangements in educational occupancies

Exit door locks for protection from intruders are allowed in Group E occupancies, Group B educational occupancies and Group I-4 occupancies. When remote operation is provided, the door must still be unlockable from outside the room.

#### IFC 1010.2.9 Panic hardware and fire exit hardware

Panic or fire exit hardware is now required in electrical rooms with equipment greater than 800 amperes rather than 1,200 amperes, and in refrigeration machinery rooms exceeding than 1,000 square feet.

#### IFC 1103.7.5.1 Group R-1 hotel and motel fire alarm system

The requirements for retrofitting a fire alarm system in existing hotels and motels is reformatted and a new requirement for retrofitting unsprinklered single story hotels and motels is added.

#### IFC 3305.5 Fire watch

Requirements are added for fire watch during non-working hours at building construction sites

### 2021 International Mechanical Code (IMC)

#### IMC 307.2.1.1 Condensate drainage

New language clarifies where condensate discharge and drain connections are and aren't allowed

#### IMC 502.20 Manicure and pedicure stations

The controls for these systems must operate continuously while the space is occupied

#### IMC 1105.9 Machinery room means of egress

To be consistent with the IBC, the IMC specifies that machinery rooms larger than 1000 square feet shall have at least two exits

#### IMC 1107-1110 Refrigerant piping

The code sections on refrigerant piping have been completely rewritten

### 2021 International Existing Building Code (IEBC)

#### IEBC 503.4 Existing structural elements carrying lateral load

Additional equipment may be added to a roof without a full structural analysis when the equipment weighs less than 400 pounds and is less than 10% of the total roof dead load

#### IEBC Chapters 8 and 9

Sprinkler requirements for Level 2 and Level 3 alterations are revised for higher hazard areas

### 2021 International Plumbing Code (IPC)

#### IPC 403.2 Multi-user multi-gender toilet facility privacy measures

Sets standards for stall in multi-user restrooms designed to serve all genders and stipulates that urinals must be in stalls or in a separate area

#### IPC 407.2 Bathtub waste outlets and overflows

Overflows are no longer required for bathtubs

#### IPC 606.1 Location of full-open valves

In multiple tenant buildings, where a common water supply piping system is installed, a main shutoff valve shall be provided for each tenant

#### IPC 609.2 Group I-2, Condition 2 health care facilities (hospitals)

Two separate water services are required. A tracer wire is now required for underground non-metallic water service piping

#### IPC 708.1.6 Removable fixture traps as cleanouts

Removable traps and fixtures that are removable without disturbing concealed piping can be used as substitutes for cleanouts

## 2020 National Electrical Code (NEC)

### 300.4(G) Protection against physical damage - fittings

Listed metal fittings with smoothly rounded edges were added as options for protection of wires 4 AWG and larger entering boxes, enclosures, or raceways

### 408.4(A) Circuit directory or circuit identification

Allows the circuit directory for a panelboard to be located in an "approved location adjacent" to the panelboard door

### 590.4 Splices for temporary installations

Branch circuits that are permanently installed in framed walls and ceilings may be used for temporary power with GFCI protection

### 645.5(E)(2) Underground wiring

Added additional wiring methods and types installed underground within 5' of swimming pools

### 680.26(B)(2)(c) Equipotential bonding

Now allows a copper bonding grid around a pool perimeter in lieu of bonding rebar or a copper ring.

### 690.13(E) Type of disconnect

Expanded the types of disconnects allowed for PV systems

## 2021 International Energy Conservation Code (IECC) (commercial and residential)

### C/R103.2 Information on construction documents

Must declare what compliance path is used

### C/R401.2.1 Compliance paths

Outlines the 4 compliance paths for commercial buildings

### C401.3 Thermal envelope certificate

Required to post a permanent certificate showing building envelope R-values, U-factors, SHGC, and air leakage ratings

### C402.5.11 Operable openings interlocking

Openings to the outdoors greater than 40 square foot must be interlocked with the HVAC controls

### C403.4.2.3 Automatic start and stop

HVAC controls must be programmable with an automatic start and stop

### Table R402.1.2 Insulation and fenestration requirements

Ceiling R-value has increased from R-38 to R-49

### R402.2.4 Access hatches and doors

Attic access doors shall be at least R-10 and must be weatherstripped

### R403.3.5 Duct testing

Ducts in conditioned spaces are no longer exempt from duct testing

# Significant Changes for Contractors

## Adoption of the 2021 International Building Codes (Residential)

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### 2021 International Residential Code (IRC)

#### **IRC 202 Definition of grade floor emergency escape and rescue opening**

To qualify for the grade-floor reduction in open area, the bottom of the clear opening can't be more than 44" above or below the adjacent grade

#### **IRC 302.5.1 Opening protection**

Doors separating the garage and dwelling must be self-latching in addition to self-closing

#### **IRC 310.1 Emergency escape and rescue openings**

The pathway from an emergency escape and rescue opening out to a public way must be at least 36" wide

#### **IRC 311.7 Stairways**

Stairways not within or attached to a building, porch, or deck are not regulated by this section

#### **IRC 314.3 Smoke alarm location**

Added a new location requirement for smoke alarms to address areas with high ceilings adjacent to hallways serving bedrooms

#### **IRC 315.2.2 Alterations, repairs and additions (carbon monoxide alarms)**

Carbon monoxide alarms shall be installed when there are repairs to, or replacement of, fuel fired mechanical systems

#### **IRC 609.4.1 Garage door labeling**

All garage doors shall have a permanent label provided by the manufacturer to identify the manufacturer, model/series number, wind pressure rating, the installation instructing drawing reference number, and the applicable test standard

#### **IRC G2447.2 Prohibited location**

Commercial cooking appliances are no longer permitted to be installed in a dwelling unit, without exception.

#### **IRC P2503.7 DWV system testing**

The head pressure for a DWV water test has been changed from 5' to 10'. Air vacuum testing is now permitted for plastic piping systems.

#### **IRC P2905.3 Hot water supply to fixtures**

The developed length of hot water piping, from the source of hot water to the fixtures that require hot water, shall not exceed 100'.

#### **IRC E3606.5 Surge protection**

All services shall be provided with a surge-protection device at the service panel (including when service equipment is replaced)

#### **IRC 3901.4.2 Island and peninsular countertops and work surfaces**

The number of required receptacle outlets is based off of the area of the countertop surface

#### **IRC E3902 Ground-fault and arc-fault circuit-interrupter protection**

GFCI protection is now required for damp and wet locations not included in the other 10 areas requiring GFCI protection