Important Changes to the 2009 International Building Code and International Fire Code©

Prepared by Marshall A. Klein & Associates, Inc.

The following Tables provide valuable information on what appear to be significant changes in the 2009 editions of the International Building Code (IBC) and the International Fire Code (IFC) that NMHC Members and their design teams should be aware of for future projects (and existing buildings) where these editions of the Codes have been, or will be, adopted. These Tables are not intended to replace the referenced Codes and Standards. Final project compliance with the applicable codes is the ultimate responsibility of the owner and his/her design professionals.

Important Changes to the *2009 IBC* (International Building Code) that Relate to R-2 Occupancies			
Section(s) & Issue(s)	**Type of Change**	**Potential Cost**	**Comment**
IBC 502.1 Definition of "Basement" IBC 202 Definition of "Story above Grade Plane"	Revised definitions	None	Clarification and coordination of definitions to simplify design and understanding. Now a "story above grade plane" cannot be considered to be a basement under any condition. When a story's finished floor surface is not entirely above "grade plane", the floor would then be evaluated under the definition for "story above grade plane". If the story does not qualify as a "story above grade plane", its default is a "basement".

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IBC 310.1 R-2 Live/Work Units IBC 419 Live/Work Units IBC 1103.2.13 Accessibility for Live/Work Units	New	May be some cost increase for inclusion of accessibility provisions into the dwelling unit	Provisions for the design of Live/Work units. A live/work unit is a dwelling unit or sleeping unit in which a significant portion of the space includes a nonresidential use (≥10%) that is operated by the tenant and shall comply with Section 419.
IBC 403.6.1 & IBC 3007 Fire Service Access Elevators	New	New requirement with considerable cost impact on buildings >120 ft above lowest level of Fire Department Access.	One will be required in high rise building with occupied floor >120' above the lowest level of fire department vehicle access. Two required in the 2012 IBC.
IBC 403.4.8.1(6) Emergency Power Loads	New	Don't know at this time	Fire Pumps in High-Rise Buildings now need to be connected to the Emergency Power, not the Standby Power.
IBC 406.1.5 Automatic Garage Door Openers	New	Don't know at this time	Automatic garage door openers in private garages are required to be listed in accordance with UL325.
IBC 420.2 Separation Walls IBC 420.3 Horizontal	Revisions	None	Requires one hour separation between dwelling units and other occupancies in a building. These new requirements take

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Separation			precedence over the allowances in Sections 508.2, "Accessory Occupancies", and Section 508.3, "Non-separated Occupancies".
IBC 501.2 Address Identification	Revised to address existing buildings	Cost increase	Requirement for address numbers on new and existing buildings. Building identification needs to be visible from the street with numbers a minimum of 4" high.
IBC 506.5 Mixed Occupancy Area Determination	Revisions	None	The allowable area calculations for mixed-occupancies multi-story buildings have been clarified through a more comprehensive explanation of the procedure. It is possible to use different mixed occupancy options on various stories of a building.
IBC 508.2.5 Incidental Accessory Occupancies	Revisions	None	Previously regulated as "incidental use areas", but now are limited to ≤ 10% of the area of the story.
IBC Table 508.2.5 Incidental Accessory Occupancies	Revisions	None	Parking garages and storage rooms deleted from the table. Fire pump rooms added to table.
IBC 509.2 Horizontal Separation of	Revisions	Allows more flexibility	Clarifications to provisions on podium/pedestal structures. R-2 units now

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Buildings			permitted in podium/pedestal portion.
IBC 509.9 Multiple Buildings Above Parking Garages	New	Allows more flexibility	Clarifies application of existing special provisions Sections 509.2, 509.3 or 509.8. 2012 edition of the IBC further revised this section to address the other permitted uses besides parking garages.
IBC 602.1 Fire Resistance Ratings Based on Construction Type	Revision	None	Clarifies that opening protectives are not required for fire rated assemblies under Table 602 unless required by other provisions in the Code.
IBC 703.6 Marking and Identification of Fire Resistance and/or Smoke Resistance Walls	New	Increase only in areas with removable decorative ceilings	Only required in R-2 occupancies where the walls have a removable decorative ceiling that permits access to the concealed space. Such ceilings (i.e. suspended, lay-in ceiling tiles) may usually be provided in common areas of R-2 occupancies, not usually within the dwelling units.
IBC 704.3 Exception Protection of the Primary Structural Frame Other Than Columns	New (old Section 714.2.1 “Individual Protection”)	Cost savings	New exception permits the fire proofing to be omitted at the interface of the floor deck and the girder supporting the floor.

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IBC Table 705.8 Maximum Area of Exterior Wall Openings	Revisions/Reformatted Table	None	Modified to correlate with Table 602
IBC 707.3.9 Separation of Fire Areas	Clarification	None	Clarified that in a mixed occupancy building that the most restrictive occupancy involved establishes the fire rated value in Table 707.2.9
IBC 903.3.1.2.1 Sprinkler Protection of Residential Balconies and Decks	Clarification	None	Clarified that under Type V Construction, sprinklers are not required over exterior balconies and decks that do not have a roof or deck above.
IBC 903.3.1.3 NFPA 13D Sprinkler Systems	Revision	None.	Townhouses are permitted to be sprinklered per NFPA 13D. Use with caution because certain sprinkler incentives ("tradeoffs") are not given for NFPA 13D systems under the IBC Code. Under 2009 IRC for townhouses three or less stories in height sprinklers are now required, however the separation between dwelling units can be reduced from 2 hours to 1 hour.
IBC and IFC 906 Portable Fire	Revisions	Potential cost savings for compliance with	The IFC provisions on fire extinguishers have been added to the IBC Code. The

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Extinguishers		new provisions in ***2012 IBC*** that allow option for placement of fire extinguishers within the dwelling units.	addition of these requirements was for jurisdictions that adopted the IBC but do not adopt the IFC. The 2012 IBC has further improvements to this Section with a new exception to Section 906.1 that will permit each dwelling unit to have a fire extinguisher in lieu of placing them in the common corridors.
IBC 907.2 Exception #2 Manual Fire Alarm Box in R-2 Occupancies	New	Increase cost if required by fire official.	Can require a single manual pull station to initiate an alarm during a sprinkler system impairment event if required by the fire code official.
IBC 912.3.2 Clear Space around Fire Dept. Connections IBC 912.3.3. Physical Protection of Fire Dept. Connections	New	Don't know at this time	Requires a minimum 3' width, 3' depth and 6½' high around FDC. Also, where the FDC is subject to impact by a vehicle, impact protection is required.
IBC 913 Fire Pumps 913.2.1 Protection of Fire Pump Rooms	New	Cost increase	Requires room housing a fire pump in a building to be fire rated (Minimum 2 hours for high rise building, minimum 1 hour for all

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			other buildings).
IBC 914 Emergency Responder Safety Features	New	None	Correlates with the existing requirements in the IFC for the identification of shaftway hazards and the location of fire protection systems in a building.
IBC 915 Emergency Responder Radio Coverage	New	Increase cost impact for buildings with steel or concrete frame.	Requires signal coverage of public safety radio systems in new and existing buildings in accordance with new IFC Section 510. Usually not a problem for typical wood frame building. Impact on buildings with steel or concrete frame.
IBC 1002.1 Definition of "Level of Exit Discharge"	Revised	None	Definition now deemed to be the entire story, not just the horizontal plane within the story. Definition will now correlate with NFPA 101 definition. Helps resolve misapplication of code sections that relied on this definition such as fire alarm requirements under Section 907.2.9, and elevator requirements under Section 1007.2.1.

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IBC 1005.1 Minimum Required Egress Width	Revised	For the larger buildings, may be cost increase for additional stairs or stair widths.	Eliminated the allowance for a reduction in the minimum required means of egress width/occupant for sprinklered buildings. Went from 0.2”/occupant to 0.3”/occupant on stairways, and from 0.15”/occupant to 0.2”/occupant on level egress components. All buildings are now calculated for minimum egress width the same, regardless of the presence of a sprinkler system.
IBC 1007.8 Two-Way Communication	New	Cost increase	Required even in multi-story buildings in which areas of refuge are not provided.
IBC 1008.9.3 Locks and Latches Exception #5	New	Don’t know at this time	This new exception recognizes UL Listed double fire door assemblies that do not have bottom rods that latch at the bottom of fire door assemblies to the floor. UL listing provides for the double doors to have a built-in "pin-drop" that will latch the doors together when the temperature on either side of the door is too high to permit safe egress through the doors. Technical term is "Exitless bottom rods" since the "pin-drop" between the two doors replaces the bottom rods in a fire doors assembly. The problem with fire door bottom rods is that they are hard to maintain over the life of the building.

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IBC 1008.1.9.8 Electromagnetically Locked Egress Doors	New	Cost increase if incorporated	Doors can be electromagnetically locked if equipped with the listed hardware that incorporates a built-in switch meeting specified conditions.
IBC 1009.12 Handrails Exception #5	Revised	Cost savings	Handrail not required within dwelling unit where there are ≤ 3 risers.
IBC 1009.14 Roof Access to Elevator Equipment	New	Cost increase	Consistent with ASME 17.1 requirements, a stairway must be provided to roof elevator equipment or elevator equipment penthouses. A ladder access is no longer acceptable.
IBC 1012.3 Handrail Graspability	New	None	Within dwelling units, additional complying handrail shapes (Type II handrails) are now provided.
IBC 1013.1 Guards	Revised	No cost increase for guards on the interior of dwelling units. Could impact guards on exterior in specific situations.	Added language requires the height of the walking surface above the finished ground to be based on the lowest point within 3'horizontally from the edge of the deck.
IBC 1013.2 Guard Height	Revised	No cost increase for dwelling units. Could have a cost implication for decks	The minimum 42' guard height must now be measured from the surface of fixed in place seating next to the guard.

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		and gazebos.	
IBC 1014.3 Common Path of Egress Travel Exception #4	Revised	Cost savings and allows flexibility in design.	Common path of travel within a dwelling unit that is sprinklered per NFPA 13R was increased from 75' to 125'. Consistent with NFPA 101.
IBC 1015.1(1) Exits from R-2 Dwelling Units Exception	New	Cost savings	The occupant load for a single means of egress from a dwelling unit was increased from 10 to 20, based on the maximum 200 gross sq. ft/occupant load in Table 1004.1.1. Must also comply with common path of travel within the dwelling unit per Section 1014.3 (See Row above on Section 1014.3 Exception #4) Change allows for single exit design in apartments over 2000 sq ft.
IBC 1018.4 Maximum Length of Dead Ends in Corridor Exception #2	Revised	Cost savings	When building is sprinklered per NFPA 13, dead ends were increased from 20' to 50'.

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IBC Section 1021.2 & Table 1021.2 Single Exits from Individual Stories	Revised	Cost savings	2003 IBC Table for ***Buildings*** with One Exit was revised in the 2009 IBC to address ***Stories*** with One Exit. The 2012 IBC has further improvements to these requirements that will permit the elimination of 2 hour fire walls between single exit R-2 occupancies every 4 dwelling units.
IBC 1022.8 Exit Enclosure Floor Identification Signs	New	Cost increase	ID signs at floor landings in exit enclosures connection >3 stories designating the floor level, the terminus of the top and bottom of the enclosure, etc.
IBC 1106.5 Accessible Van Parking Spaces Serving Group R-2 Occupancies Exception	New	Cost savings	Van Parking within private garages can be a minimum vertical clearance of 7' instead of ICC A117.1's requirement of 8'-2".
IBC Table 1607.1 (5) Balconies Live Load	Revised	Cost savings	Decks and balconies now have the same live load as the occupancy they serve.
3104.5 Exception #1 Fire Barriers between Pedestrian Walkways & Buildings	Revised	Cost savings	Clarification to the application of Exception #1 requirements to permit elimination of the wall's fire rating and opening protectives when the wall is capable of resisting the passage of smoke. This exception was also limited to walkways having a maximum

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			height above grade plane of 3 stories or 40', or 5 stories or 55' where sprinklered.
IBC 3110 Automatic Vehicular Gates	New	Cost increase if security gates are installed.	New requirements for automatically operated gates ***not*** intended for use by pedestrian traffic. See also revisions to IFC Sections 503.5 & 503.6 and IFC Appendix D103.5 in IFC Table below
IBC 3401.5 Alternative Compliance	New	Cost savings	Use of the International Existing Building Code (IEBC) for renovating existing buildings is now permitted as an alternative to the use of IBC's Chapter 34's requirements.

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IFC 315.1 Storage Beneath Overhead Projections	Revised	If sprinklers required, it could be a cost increase for projects near building entrances. Not an issue for typical apartment buildings.	Relates to sprinklering under projects attached to sprinklered buildings such as porte-cocheres (See also 2007 NFPA #13 Section 8.15.7 since it is referenced by 2009 IFC). In most common cases where the building and the porte-cochere are wood frame (combustible) construction, NFPA 13 will require sprinklers.
IFC 503.5 Required Gates or Barricades IFC 503.6 Security Gates IFC Appendix D103.5 Fire Apparatus Access Road Gates	Revised	Cost increase if security gates are installed.	New requirements for automatically operated gates installed across fire department access roads into projects. Gates are now required to comply with ASTM F 2200-05, "Standard Specifications for Automated Vehicular Gate Construction", and UL 325-02, "Door, Drapery, Gate, Louver, and Window Operators and Systems, with revisions through Feb. 2006. The intent of the changes is to reduce the life safety hazards associated with automatic vehicular gates.

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IFC 510 Emergency Responder Radio Coverage	New	Increase cost impact for buildings with steel or concrete frame.	Requirements for signal coverage of public safety radio systems in new and existing buildings. Usually not a problem for typical wood frame building. Impact on buildings with steel or concrete frame.
IFC 603.3.2 Fuel Oil Storage Inside Buildings	New	Don't know at this time	Up to 3000 gallons of fuel for fuel burning or generator equipment is permitted when protected aboveground storage tanks are used.
IFC 701.2 Unsafe Conditions	New	No cost increase for maintained property.	Requirement to correct unsafe conditions caused by lack of fire resistance construction or assemblies in existing buildings.
IFC Chapter 46	New	May affect costs because items that were not previously enforced may now become an issue.	Without any technical changes, consolidates requirements for existing buildings into one chapter. Requirements apply to all existing buildings.