

2015 IBC Update



Goal

- The goal is to familiarize building officials, fire officials, plans examiners, inspectors, design professionals, contractors, and others in the construction industry with many of the important changes in the 2015 International Building Code® (IBC®).



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Description

- Overviews the changes from the 2012 to the 2015 IBC®.
 - Identifies changes in organization and code requirements and the applicability of these requirements to design, plan review and inspection.



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Objectives

Upon completion of this seminar, participants will be better able to:

- Identify the most significant differences between the 2012 IBC and the 2015 IBC.
- Explain the differences between the current and previous edition.
- Identify key changes in organization and code requirements.



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Topics

- Administration, Chapters 1 and 2
- Building Planning, Chapters 3 through 6
- Fire Protection, Chapters 7 through 9
- Means of Egress, Chapter 10
- Accessibility, Chapter 11
- Building Envelope, Structural Systems and Construction, Chapters 12 through 26
- Building Services, Special Devices, and Special Conditions, Chapters 27 through 34



2015 IBC Significant Changes

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Chapter 1 Scope and Administration

2015 2012

Modification

111.1 Change of Use of Occupancy

- A change in a building's use, or a portion of a building's use, with no change in its occupancy classification now requires that a new certification of occupancy be issued by the building official.



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Chapters 1-6

General Issues

6

202 Private Garage

CHANGE TYPE: Addition

- **202. Private Garage.** A building or portion of a building in which motor vehicles used by the tenants of the building or buildings on the premises are stored or kept, without provisions for repairing or servicing such vehicles for profit.



2015 IBC Significant Changes

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Chapter 3 Use and Occupancy Classification

| 2015 | 2012 | 304.1 Food Processing Facilities and Commercial Kitchens |
|----------|------|--|
| Addition | | |

- **304.1 Business Group B.** Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following: ...
- (Added) Food processing establishments and commercial kitchens not associated with restaurants, cafeterias and similar dining facilities not more than 2500 square feet (232 m²) in area.



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Chapter 3 Use and Occupancy Classification

| 2015 | 2012 | 308.3 Groups I-1 Occupancy Classification |
|--------------|------|---|
| Modification | | |

- The uses permitted in a Group I-1 custodial care facility have been expanded to include care recipients who may need a limited degree of verbal or physical assistance if responding to a fire or other emergency situation.



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Chapter 3 Use and Occupancy Classification

| 2015 | 2012 | 304.1 Training and Skill Development Facilities |
|---------------|------|---|
| Clarification | | |

- Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following: ...
- (Added) Training and skill development not in a school or academic program (this shall include, but not be limited to, tutoring centers, martial arts studios, gymnastics and similar uses regardless of the ages served, and where not classified as a Group A occupancy).



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Chapter 3 Use and Occupancy Classification

| 2015 | 2012 | 308.4 Group I-2 Occupancy Classification |
|--------------|------|--|
| Modification | | |

- Two basic conditions of Group I-2 medical care uses that have previously been regulated together as a single category have been created, dividing the classification into short-term care facilities, such as hospitals, and long-term care facilities, such as nursing homes.



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Chapter 3 Use and Occupancy Classification

2015 2012

Modification 310.6 Group R-4 Lodging Houses

- The uses permitted in a Group R-4 custodial care facility have been expanded to include care recipients who may need a limited degree of verbal or physical assistance while responding to a fire or other emergency situation.



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Chapter 4 Special Detailed Requirements Based on Use and Occupancy

2015 2012

Clarification 404.9, 404.10 Egress Travel through an Atrium

- The three distinct travel distance conditions that could potentially occur for areas open to an atrium are now each addressed individually in order to clarify their application.



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Chapter 3 Use and Occupancy Classification

2015 2012

Modification 311.11 Classification of Accessory Storage Spaces

- Storage rooms less than 100 square feet in floor area are not to be classified as Group S, but rather as the same occupancy as the portion of the building to which they are accessory.



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Chapter 4 Special Detailed Requirements Based on Use and Occupancy

2015 2012

Modification 406.3.1 Private Garage Floor-Area Limitation

- A Group U private garage is now limited to a maximum floor area of 1000 square feet; however, multiple Group U private garages are permitted in the same building where they are compartmentalized by minimum 1-hour fire separations.

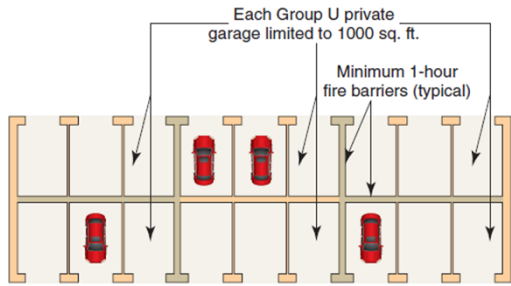


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406.3.1 Private Garage Floor-Area Limitation



Example: If non-sprinklered building of Type VB construction, total allowable area limited to 5500 sq. ft. plus any applicable frontage increase



2015 IBC Significant Changes

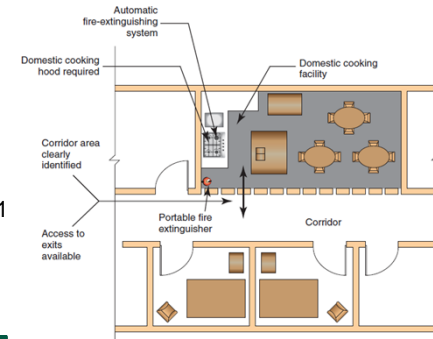
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Chapter 4 Special Detailed Requirements Based on Use and Occupancy

| 2015 | 2012 |
|----------|------|
| Addition | |

407.2.6 Group I-2 Cooking Facilities

- A room or space containing a cooking facility with domestic cooking appliances is now permitted to be open to the corridor in a Group I-2, Condition 1 nursing home provided 13 specific conditions are met.



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Chapter 4 Special Detailed Requirements Based on Use and Occupancy

| 2015 | 2012 |
|----------|------|
| Addition | |

407.2.5 Group I-2 Shared Living Spaces

- Shared living spaces, group meeting areas, and multipurpose therapeutic spaces are now permitted to be open to corridors in Group I-2, Condition 1 nursing homes provided five specific conditions are met.



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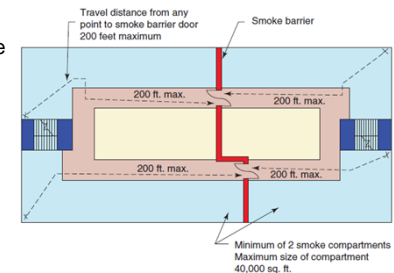
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Chapter 4 Special Detailed Requirements Based on Use and Occupancy

| 2015 | 2012 |
|--------------|------|
| Modification | |

407.5 Maximum Size of Group I-2 Smoke Compartments

- The maximum allowable smoke compartment size for Group I-2, Condition 2 hospitals and similar occupancies has been increased to 40,000 square feet.



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Chapter 4 Special Detailed Requirements Based on Use and Occupancy

| 2015 | 2012 |
|----------|------|
| Addition | |

423.3 Storm Shelters Serving Critical Emergency Operations Facilities

- The construction of complying storm shelters is now required in critical emergency operations facilities where such facilities are located in geographical areas where the shelter design wind speed for tornadoes is at its highest.



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Chapter 5 General Building Heights and Areas

| 2015 | 2012 |
|---------------|------|
| Clarification | |



503 General Building Height and Area Limitations

- The provisions regulating building height and area limitations have been extensively revised with no change in technical application in order to provide an increased degree of user-friendliness and technical consistency.



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Chapter 4 Special Detailed Requirements Based on Use and Occupancy

| 2015 | 2012 |
|----------|------|
| Addition | |

423.4 Storm Shelters Serving Group E Occupancies

- Storm shelters are now required in Group E occupancies located in those areas of the United States where the shelter design wind speed for tornadoes is at its highest.



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Chapter 5 General Building Heights and Areas

| 2015 | 2012 |
|--------------|------|
| Modification | |

Tables 504.3, 504.4 Building Height and Number of Stories

TABLE 503 504.3^a Allowable Building Heights and Areas in Feet Above Grade Plane

| Occupancy Classification | See Footnotes | Type of Construction | | | | | | | | |
|--------------------------|-------------------|----------------------|-----|---------|----|----------|----|---------|--------|----|
| | | Type I | | Type II | | Type III | | Type IV | Type V | |
| | | A | B | A | B | A | B | HT | A | B |
| A, B, E, F, M, S, U | NS ^b | UL | 160 | 65 | 55 | 65 | 55 | 65 | 50 | 40 |
| | S | UL | 180 | 85 | 75 | 85 | 75 | 85 | 70 | 60 |
| H-1, H-2, H-3, H-5 | NS ^{c,d} | UL | 160 | 65 | 55 | 65 | 55 | 65 | 50 | 40 |
| | S | UL | 160 | 65 | 55 | 65 | 55 | 65 | 50 | 40 |

Note: UL = Unlimited; NS = Buildings not equipped throughout with an automatic sprinkler system; S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1

(Only a portion of Table 504.3 is shown above.)



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Chapter 5 General Building Heights and Areas

2015 2012
Modification Tables 504.3, 504.4 Building Height and Number of Stories

TABLE 503 504.4^{a,b} Allowable Building Heights and Areas Number of Stories Above Grade Plane

| Occupancy Classification | See Foot-Notes | Type of Construction | | | | | | | | | |
|--------------------------|----------------|----------------------|----|---------|---|----------|---|---------|--------|---|--|
| | | Type I | | Type II | | Type III | | Type IV | Type V | | |
| | | A | B | A | B | A | B | HT | A | B | |
| A-1 | NS | UL | 5 | 3 | 2 | 3 | 2 | 3 | 2 | 1 | |
| | S | UL | 6 | 4 | 3 | 4 | 3 | 4 | 3 | 2 | |
| A-2 | NS | UL | 11 | 3 | 2 | 3 | 2 | 3 | 2 | 1 | |
| | S | UL | 12 | 4 | 3 | 4 | 3 | 4 | 3 | 2 | |
| A-3 | NS | UL | 11 | 3 | 2 | 3 | 2 | 3 | 2 | 1 | |
| | S | UL | 12 | 4 | 3 | 4 | 3 | 4 | 3 | 2 | |

Note: UL = Unlimited; NS = Buildings not equipped throughout with an automatic sprinkler system; S = Buildings equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1

(Only a portion of Table 504.4 is shown above.)



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Chapter 5 General Building Heights and Areas

2015 2012
Modification 510.2 Horizontal Building Separation

- In the special provisions of Section 510.2 addressing pedestal buildings, there is no longer a limit of one story above grade plane for that portion of the structure that occurs below the 3-hour horizontal separation.



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Chapter 5 General Building Heights and Areas

2015 2012
Modification Table 509 Incidental Uses

- A more detailed analysis of various support spaces within a healthcare or ambulatory care facility is now possible due to modifications to Table 509 regulating incidental uses.

TABLE 509 Incidental Uses

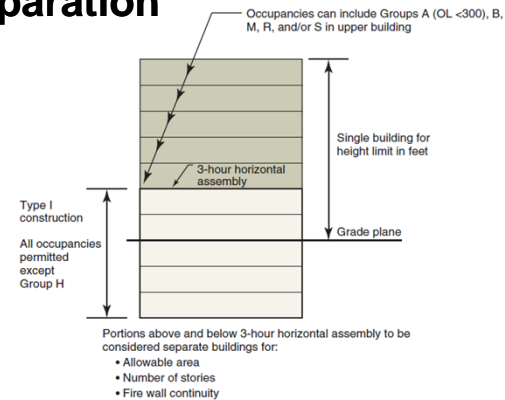
| Room or Area | Separation and/or Protection |
|--|---|
| Furnace room where any piece of equipment is over 400,000 Btu per hour input. | 1 hour or provide automatic sprinkler system |
| Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower | 1 hour or provide automatic sprinkler system |
| Refrigerant machinery room | 1 hour or provide automatic sprinkler system |
| Hydrogen cutoff fuel gas rooms, not classified as Group H | 1 hour in Group B, E, M, S, and U occupancies |



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510.2 Horizontal Building Separation



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Chapter 6 Types of Construction

| 2015 | 2012 |
|--------------|------|
| Modification | |

602.4.2 Cross-Laminated Timber in Exterior Walls

- Cross-laminated timber is now permitted within the exterior walls of Type IV buildings where protected by one of three specified materials.



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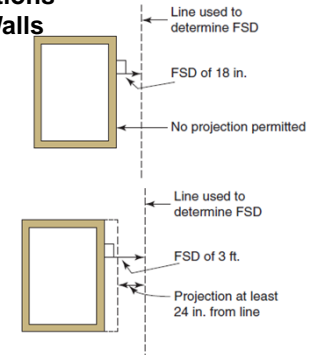
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Chapter 7 Fire and Smoke Protection Features

| 2015 | 2012 |
|--------------|------|
| Modification | |

705.2 Projections at Exterior Walls

- The minimum required separation between the leading edge of a projection and the line used to determine the fire separation distance has been modified in a manner that provides for a significant increase in the separation required.



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Chapters 7 through 9

Fire Safety

30

Chapter 7 Fire and Smoke Protection Features

| 2015 | 2012 |
|--------------|------|
| Modification | |

705.2 Projections at Exterior Walls

TABLE 705.2 Minimum Distance of Projection

| Fire Separation Distance (FSD) | Minimum Distance from Line Used to Determine FSD |
|---|--|
| 0 feet to less than 2 feet | Projections not permitted |
| Greater than 2 feet to less than 5 feet 3 feet | 24 inches |
| 5 feet or Greater than 3 feet to less than 30 feet | 40 inches 24 inches plus 8 inches for every foot of FSD beyond 3 feet or fraction thereof |
| 30 feet or greater | 20 feet |

For SI: 1 foot = 304.8 mm; 1 inch = 25.4 mm.



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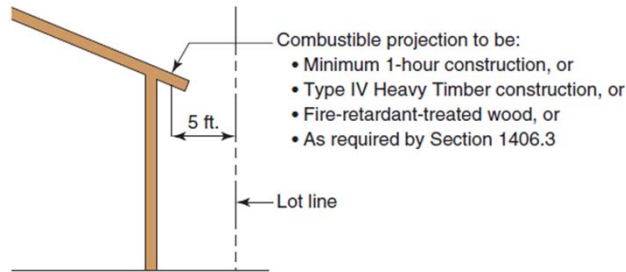
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Chapter 7 Fire and Smoke Protection Features

| 2015 | 2012 |
|--------------|------|
| Modification | |

705.2.3 Combustible Projections



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Chapter 7 Fire and Smoke Protection Features

| 2015 | 2012 |
|--------------|------|
| Modification | |

706.2 Structural Stability of Fire Walls



- The reference to NFPA 221 for fire wall design and construction has been expanded to permit the use of the “tied” and “cantilevered” options addressed in the standard.

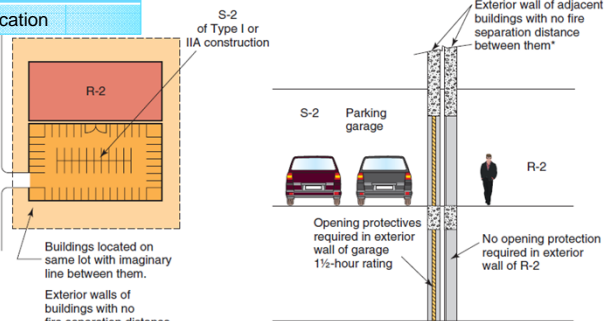


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705.3 Buildings on the Same Lot

| 2015 | 2012 |
|--------------|------|
| Modification | |



*Generally, would require a fire wall or exterior walls with no openings.



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Chapter 7 Fire and Smoke Protection Features

| 2015 | 2012 |
|--------------|------|
| Modification | |

711, 712 Horizontal Assemblies and Vertical Openings

- The reorganization of Sections 711 and 712 has been continued such that Section 711 now contains only the construction requirements for floor and roof assemblies, and Section 712 only contains the requirements related to the protection of vertical openings.



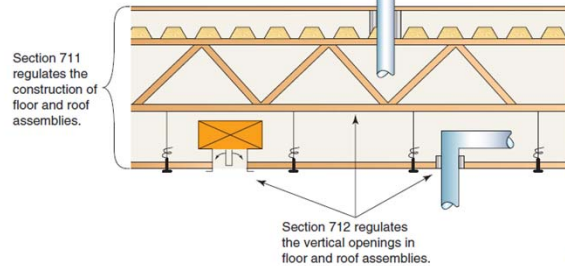
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Chapter 7 Fire and Smoke Protection Features

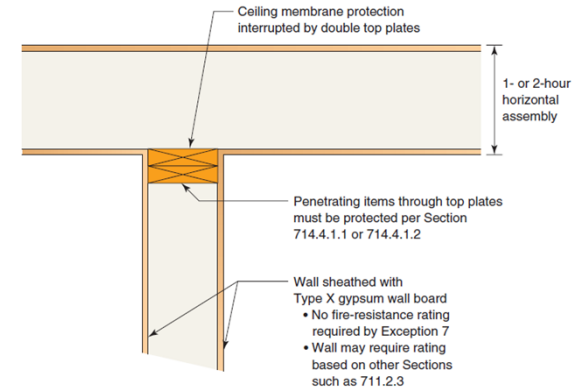
| | | |
|--------------|------|--|
| 2015 | 2012 | 711, 712 Horizontal Assemblies and Vertical Openings |
| Modification | | |



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714.4.2 Membrane Penetrations



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Chapter 7 Fire and Smoke Protection Features

| | | |
|--------------|------|-------------------------------|
| 2015 | 2012 | 714.4.2 Membrane Penetrations |
| Modification | | |

- Where the double top plates of a wall interrupt the ceiling membrane of a horizontal assembly, the wall must now be sheathed only with Type X gypsum wallboard. The wall will not require a fire-resistance rating unless needed due to some other code requirement.



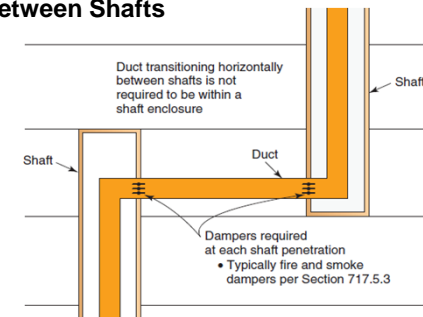
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Chapter 7 Fire and Smoke Protection Features

| | | |
|---------------|------|--|
| 2015 | 2012 | 717.1.1 Ducts Transitioning between Shafts |
| Clarification | | |

- Ducts are now expressly allowed to exit a shaft, transition horizontally, and then enter another shaft without continuous shaft construction.



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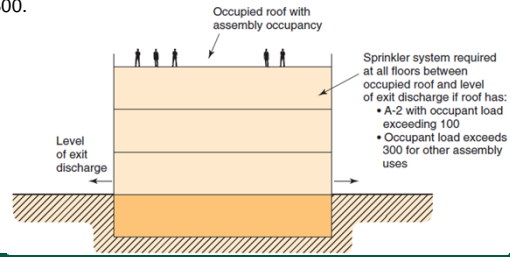
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Chapter 9 Fire Protection Systems

| | | |
|----------|------|--|
| 2015 | 2012 | 903.2.1.6 Sprinkler Systems— Assembly Occupancies |
| Addition | | |

- An automatic sprinkler system is now required to be installed in a building when the roof is used for a Group A-2 assembly occupancy with an occupant load exceeding 100, as well as for other Group A occupancies where the occupant load exceeds 300.

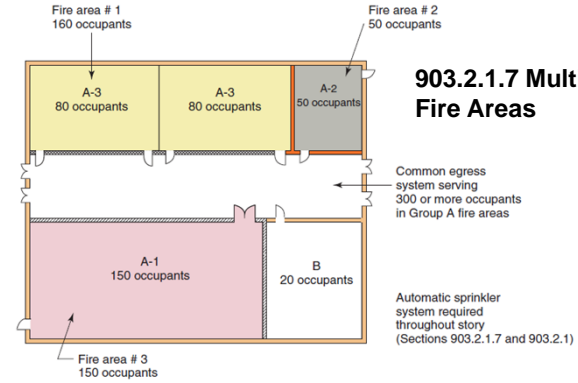


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Chapter 9 Fire Protection Systems

| | | |
|--------------|------|--------------------------------------|
| 2015 | 2012 | 903.2.1.7 Multiple Fire Areas |
| Modification | | |



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Chapter 9 Fire Protection Systems

| | | |
|----------|------|--------------------------------------|
| 2015 | 2012 | 903.2.1.7 Multiple Fire Areas |
| Addition | | |

- Where small Group A fire areas share a common means of egress, the occupant load of the spaces must now be added together to determine if a sprinkler system is required.



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Chapter 9 Fire Protection Systems

| | | |
|--------------|------|---|
| 2015 | 2012 | 903.2.8 Sprinkler Systems— Group R Occupancies |
| Modification | | |

- Sprinkler requirements for Group R-4 occupancies are now dependent on the capabilities of the occupants. In buildings where occupants require limited assistance when responding to an emergency condition, additional sprinkler protection is required for attic spaces.



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Chapter 9 Fire Protection Systems

903.2.8 Sprinkler Systems— Group R Occupancies

| | |
|--------------|------|
| 2015 | 2012 |
| Modification | |

R-4 Condition 1
NFPA 13D sprinkler system required

R-4 Condition 2
Attic protected by one of two options depending on its use
NFPA 13R sprinkler system required

(a) Attic used for living purposes, storage or fuel-fired equipment
Protected throughout with NFPA 13R sprinkler system

(b) Attic not used for living purposes, storage or fuel-fired equipment
R-4 Condition 2 attic protection options
Protected with one of the following:

- Heat detectors that activate building fire alarm system
- Constructed of noncombustible materials
- Constructed of fire-retardant wood framing
- NFPA 13R sprinkler system

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Chapter 9 Fire Protection Systems

903.3.8 Limited Area Sprinkler Systems

| | |
|--------------|------|
| 2015 | 2012 |
| Modification | |

- Additional restrictions have been placed on limited area sprinkler systems, including a reduction in the system size to a maximum of six sprinklers within a single fire area.

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Chapter 9 Fire Protection Systems

903.3.1.2.2 Open-Ended Corridors

| | |
|---------------|------|
| 2015 | 2012 |
| Clarification | |

Wall and fire door eliminated by Section 1027.6 Exception 3

Exterior stairway (typical)

"open-ended corridor" (Per Section 1027.6 Exception 3)

Stairways separated and protected per Sections 1023.2 and 1023.7

Open-ended corridors are permitted, provided:

- Building is sprinklered throughout (NFPA 13 or 13R system)
- Specific provision in Section 903.3.1.2.2 requires that sprinklers must be provided in the open-ended corridors and associated exterior stairway. (Overrides general NFPA 13R exemption for these areas.)

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903.3.8 Limited Area Sprinkler Systems

Limited area sprinkler system shall not exceed 6 sprinklers in any fire area

Separation of fire areas per Table 707.3.10

Limited area sprinkler system permitted only in areas classified by NFPA 13 as:

- Light hazard, or
- Ordinary hazard (Group 1)

Limited area sprinkler system supplied by standpipe system if building has automatic wet standpipe.
 - Permitted to be supplied by plumbing system if:

- Building is without automatic wet standpipe
- System is capable of providing domestic and sprinkler water flow demand

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Chapter 9 Fire Protection Systems

| | | |
|----------|------|---|
| 2015 | 2012 | 904.13 Domestic Cooking Systems in Group I-2 Condition 1 |
| Addition | | |

- Requirements for domestic appliances installed within commercial facilities but used only for domestic cooking have been clarified, including provisions for an appropriate fire-extinguishing system for domestic cooking equipment in nursing homes, assisted living facilities and similar buildings.



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Chapter 9 Fire Protection Systems

| | | |
|--------------|------|--|
| 2015 | 2012 | 907.2.3 Fire Alarms—Group E Occupancies |
| Modification | | |

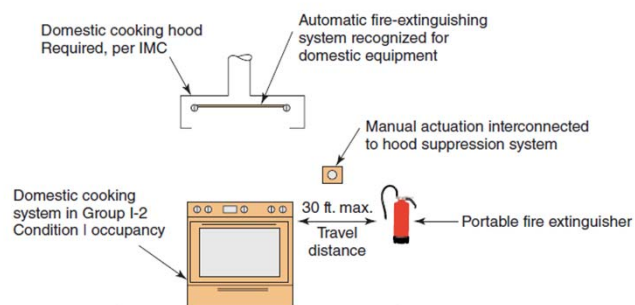
- The threshold for alarm systems in Group E occupancies has been increased such that a manual fire alarm is required where the occupant load exceeds 50, and an emergency voice/alarm communication (EVAC) system must only be provided where the occupant load exceeds 100.



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904.13 Domestic Cooking Systems in Group I-2 Condition 1



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Chapter 9 Fire Protection Systems

| | | |
|--------------|------|--|
| 2015 | 2012 | 907.2.11.3, 907.2.11.4 Smoke Alarms Near Cooking Appliances and Bathrooms |
| Modification | | |

- Requirements from the NFPA 72 standard addressing the installation of smoke alarms near cooking appliances and bathrooms have been introduced to the IBC in order to provide direct guidance on the placement of smoke alarms.



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907.2.11.3, 907.2.11.4 Smoke Alarms Near Cooking Appliances and Bathrooms

Unless it prevents placement of required smoke alarm, locate as shown:

- Ionization alarm—20 ft. min.
- Ionization alarm with silencing switch—10 ft. min.
- Photoelectric alarm—6 ft. min.

Permanently installed cooking appliance

Countertop microwave or toaster oven

Bathtub or shower

3 ft. min. unless it prevents placement of required smoke alarm

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909.21.1 Elevator Hoistway Pressurization, Exception 1,2

Exception 1: Elevator landing

Exception 2: Elevator lobby

Pressure permitted to be measured between hoistway and residential units
-Not at landing adjacent to hoistway

Pressure permitted to be measured between hoistway and space outside of lobby
-Not at landing within the lobby

Exceptions 1 and 2 to pressurization requirement

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Chapter 9 Fire Protection Systems

| 2015 | 2012 | 909.21.1 Elevator Hoistway Pressurization |
|--------------|------|---|
| Modification | | |

- Viable alternatives to the general elevator hoistway pressurization requirements are now available where pressurization is provided in lieu of an enclosed elevator lobby or an additional door.

(Lower pressure) Elevator landing

(Higher pressure) Hoistway
Water column +0.10 in. min. +0.25 in. max.

- Pressure measured at mid point height of doors at all floors
- Doors closed on all floors except level of recall

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909.21.1 Elevator Hoistway Pressurization, Exception 3, 4

Exception 3: Hoistway pressure measured relative to interior point for:

- Floor above fire floor
- Fire floor
- Two floors below fire floor

Hoistway pressure measured relative to outdoor atmosphere on other floors

Pressure difference not regulated at elevator recall floor (Exception 4)

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Chapter 9 Fire Protection Systems

| 2015 | 2012 |
|--------------|------|
| Modification | |

910 Smoke and Heat Removal

- The format and technical requirements for smoke and heat removal systems have been revised, including a new allowance permitting a mechanical smoke removal system as an alternative to smoke and heat vents.



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Chapter 9 Fire Protection Systems

| 2015 | 2012 |
|--------------|------|
| Modification | |

915 Carbon Monoxide Detection

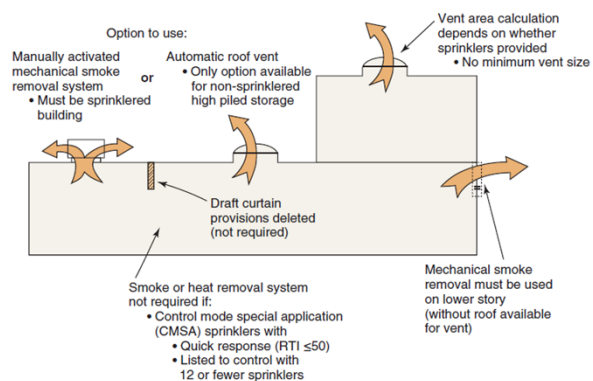
- The carbon monoxide (CO) alarm provisions have been relocated, reformatted and revised; the scope has been modified to exclude Group I-3 occupancies while adding Group E occupancies.



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910 Smoke and Heat Removal



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Chapter 10

Means of Egress

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Chapter 10 Means of Egress

| 2015 | 2012 |
|--------------|------|
| Modification | |

- Provisions addressing the minimum required number of means of egress and their arrangement for rooms and space as well as stories have been reformatted and relocated.

- Section ~~1015~~-1006 Numbers of Exits and Exit Access Doorways
- ~~Section 1021~~ Number of Exits and Exit Configuration
- Section 1007 Exit and Exit Access Doorway Configuration
- Section ~~1007~~-1009 Accessible Means of Egress



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Chapter 10 Means of Egress

| 2015 | 2012 |
|---------------|------|
| Clarification | |

1009.8 Two-Way Communication Systems

- It has been clarified that a two-way communication system may serve multiple elevators and that the systems are not required at service elevators, freight elevators or private residence elevators.



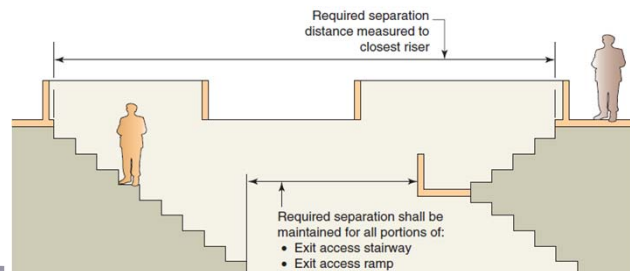
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Chapter 10 Means of Egress

| 2015 | 2012 |
|--------------|------|
| Modification | |

1007.1 Exit and Exit Access Doorway Configuration



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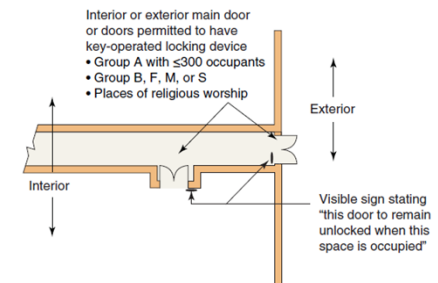
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Chapter 10 Means of Egress

| 2015 | 2012 |
|--------------|------|
| Modification | |

1010.1.9 Door Operations—Locking Systems

- Numerous revisions throughout the locking provisions now help clarify requirements and their application through the use of consistent terminology.



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Chapter 10 Means of Egress

2015 **2012**
Modification **1016.2, 1020.6 Egress through Intervening Spaces and Corridor Continuity**

- A means of egress is now permitted through an elevator lobby provided access to at least one exit is available without passing through the lobby.



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Chapter 10 Means of Egress

2015 **2012**
Modification **1017.2.2 Travel Distance Increase for Groups F-1 and S-1**

- **TABLE 1016.2 1017.2** Exit Access Travel Distance^a

| Occupancy | Without Sprinkler System (feet) | With Sprinkler System (feet) |
|----------------------|---------------------------------|------------------------------|
| A, E, F-1, M, R, S-1 | 200 | 250 ^b |
| F-2, S-2, U | 300 | 400 ^c |

For SI: 1 foot = 304.8 mm.

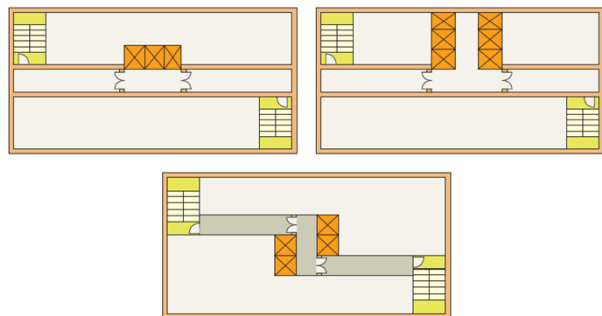
- See the following sections for modifications to exit access travel distance requirements:
Section 412.7: For the distance limitations in aircraft manufacturing facilities.
Section 1017.2.2: For increased distance limitation in Groups F-1 and S-1.
- Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where automatic sprinkler systems are permitted in accordance with Section 903.3.1.2.
- Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.



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1016.2 Egress through Intervening Spaces



Exit access is permitted through an enclosed elevator lobby provided:

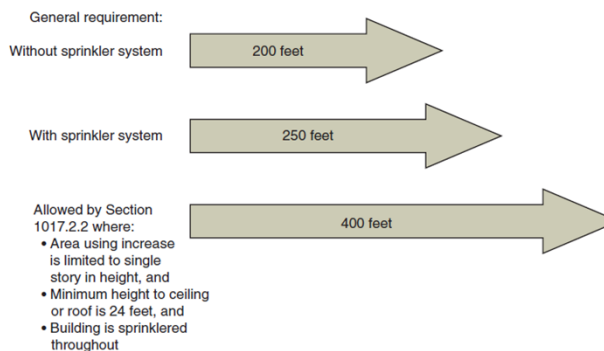
- Access to at least one exit shall be provided without travel through the lobby.
- Protection required for lobby is not required to extend to exit unless access to the exit is required by other sections (e.g., fire service access elevator lobby requires direct access to an exit stairway per Section 3007.6.1).



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1017.2.2 Travel Distance Increase for Groups F-1 and S-1



2015 IBC Update

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2015 IBC Update

Chapter 10 Means of Egress

| 2015 | 2012 | 1029.13.2.2.1 Stepped Aisle Construction Tolerances |
|--------------|------|---|
| Modification | | |

Stepped aisle

Nonuniform riser height designed to maintain sightline (per Section 1029.13.2.2 Exception 1)

Designed equal riser height

Construction tolerance:

- $\frac{3}{8}$ in. max. between adjacent risers if treads are less than 22 in. depth
- $\frac{3}{4}$ in. max. between adjacent risers if treads are 22 in. or more in depth

Construction tolerance:

- $\frac{3}{16}$ in. max. between adjacent risers

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Chapter 11 Accessibility

| 2015 | 2012 | 1103.2.8 Areas in Places of Religious Worship |
|--------------|------|---|
| Modification | | |

- Small areas used for religious ceremonies are now exempt from the access requirements.

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Chapter 11 Accessibility

70

Chapter 11 Accessibility

| 2015 | 2012 | 1107.3, 1107.4 Accessible Spaces and Routes |
|--------------|------|---|
| Modification | | |

- The provisions for connecting all spaces within a building have been modified to clearly identify the distinction for those with a change of elevation between stories or mezzanines.

Accessible space provisions of Section 1107.3 address accessibility

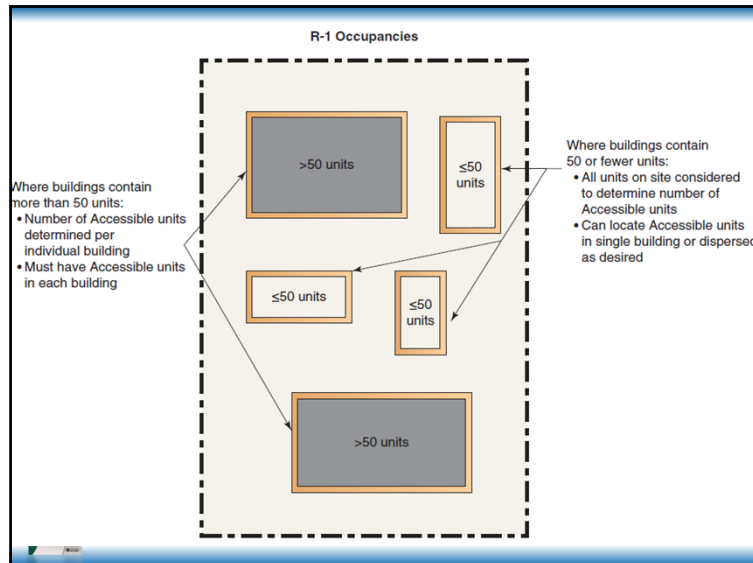
- Within a story level

Accessible route provisions of Section 1107.4 address vertical route accessibility

- Between stories and mezzanines

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2015 IBC Update

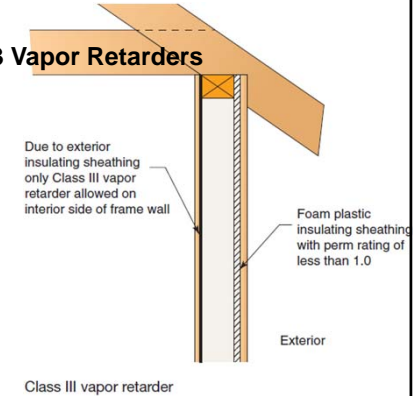


Chapter 14 Exterior Walls

| 2015 | 2012 |
|--------------|------|
| Modification | |

1405.3 Vapor Retarders

- The required types and locations appropriate for each class of vapor retarder have been revised to also indicate where certain vapor retarders are not allowed to be installed.



2015 IBC Significant Changes

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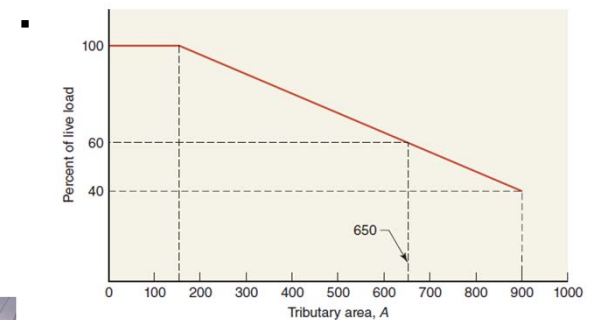
Chapters 12 through 26
Building Envelope, Structural Systems, and Construction Materials

74

Chapter 16 Structural Design

| 2015 | 2012 |
|--------------|------|
| Modification | |

1607.10.2 Alternative Uniform Live Load Reduction



2015 IBC Update

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2015 IBC Update

1607.12 Roof Loads

| 2015 | 2012 |
|----------|----------|
| Addition | Addition |

- The term “vegetative roof” has been defined in Section 202 and a reference to ASTM E 2397 has been added to Section 1607.



2015 IBC Update

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Chapter 16 Structural Design

| 2015 | 2012 |
|----------|------|
| Addition | |

1613.6 Ballasted Photovoltaic Panel Systems

- Seismic requirements for ballasted roof-mounted photovoltaic (PV) solar panels have been added to Section 1613.6.



2015 IBC Significant Changes

79

Chapter 16 Structural Design

| 2015 | 2012 |
|----------|------|
| Addition | |

1607.12.5 Photovoltaic Panel Systems

- Design requirements for roof structures supporting photovoltaic (PV) solar panels and modules have been added to Section 1607.



2015 IBC Update

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Chapter 16 Structural Design

| 2015 | 2012 |
|----------|------|
| Addition | |

1613.5 Amendments to ASCE 7

- An amendment to the diaphragm anchorage requirements of Section 12.11.2 of ASCE 7 clarifies that the 2.5-to-1 aspect ratio applies to wood, wood structural panel or untopped steeldeck- sheathed subdiaphragms.



2015 IBC Significant Changes

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2015 IBC Update

Chapter 17 Special Inspections and Tests

| 2015 | 2012 |
|--------------|------|
| Modification | |

1705.2 Steel Construction

- The special inspection requirements for structural steel elements and cold-formed steel decks have been modified to coordinate the provisions with the new terminology used for structural steel elements within IBC Chapter 22, AISI 360 and the new SDI standard.



2015 IBC Update

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Chapter 17 Special Inspections and Tests

| 2015 | 2012 |
|--------------|------|
| Modification | |

1708.3.2 Static Load Testing

- Static load test requirements have been revised to clarify the intent, the arbitrary factor of two has been removed, and the method for testing components that carry dynamic loads has been specified. Differences influenced by load duration effects when testing wood elements are now also addressed.



2015 IBC Significant Changes

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Chapter 17 Special Inspections and Tests

| 2015 | 2012 |
|----------|------|
| Addition | |

1705.2.3 Open Web Steel Joists and Joist Girders

- Special inspections are now required during the installation of open web steel joists and joist girders, and a new table specifies the type of inspection and applicable referenced standard.



2015 IBC Update

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Chapter 18 Soils and Foundations

| 2015 | 2012 |
|----------|------|
| Addition | |

1804.1 Excavation Near Foundations

- Basic requirements for providing safe and adequate underpinning at excavations have been added because the code was not specific on how to address excavations adjacent to structures.



2015 IBC Significant Changes

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2015 IBC Update

Chapter 18 Soils and Foundations

| 2015 | 2012 | 1810.3 Design and Detailing |
|----------|------|-----------------------------|
| Addition | | |

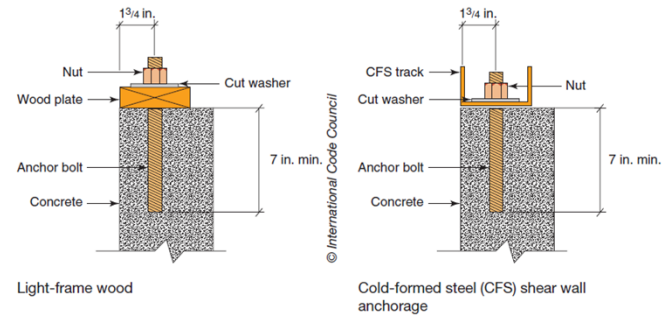
- Provisions addressing structural steel sheet piles have been added and the code provisions and standards related to steel deep foundation systems have been updated to clarify their intent.



2015 IBC Update

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1905.1.8 Modifications to ACI 318, Section 17.2.3



2015 IBC Update

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Chapter 19 Concrete

| 2015 | 2012 | 1901.3 Anchoring to Concrete |
|--------------|------|------------------------------|
| Modification | | |

- Sections 1908 and 1909 of the 2012 IBC, which contain the requirements for anchorage to concrete, have been deleted because they are obsolete and not consistent with current referenced standards. In their place, new provisions on anchoring to concrete have been added to the general provisions found in Section 1901.



2015 IBC Update

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Chapter 22 Steel

| 2015 | 2012 | 2210 Cold-Formed Steel |
|--------------|------|------------------------|
| Modification | | |

- A new Steel Deck Institute (SDI) standard addressing the design and construction of composite concrete slabs and steel decks has been added to IBC Chapter 35.



2015 IBC Significant Changes

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2015 IBC Update

Chapter 23 Wood

| 2015 | 2012 | 2303.1.4 Structural Glued Cross-Laminated Timber |
|----------|------|--|
| Addition | | |

- A new definition for a wood-based product identified as cross-laminated timber (CLT) has been added to Chapter 2. The new manufacturing standard ANSI/APA PRG 320 is now referenced in Chapter 23 and has been added to Chapter 35.



2015 IBC Update

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Chapter 23 Wood

| 2015 | 2012 | 2308 Conventional Light-Frame Construction |
|--------------|------|--|
| Modification | | |

- Section 2308, which contains prescriptive requirements for conventional wood frame construction, has been reformatted and reorganized in its entirety. Significant changes include the introduction of new designations for wall bracing methods similar to those in the IRC as shown in new Table 2308.6.3(1), and reformatted wall bracing requirements set forth in Table 2308.6.1.



2015 IBC Update

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Chapter 23 Wood

| 2015 | 2012 | 2303.1.13 Engineered Wood Rim Board |
|----------|------|-------------------------------------|
| Addition | | |

- A new definition for engineered wood rim board has been added to Chapter 2 and two new standards are now referenced in Chapter 23 and have been added to Chapter 35.



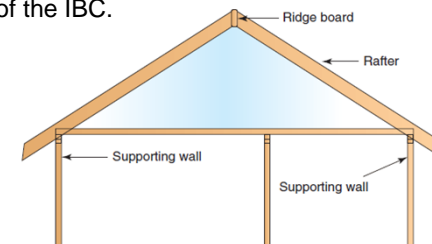
2015 IBC Update

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Chapter 23 Wood

| 2015 | 2012 | 2308.7 Roof and Ceiling Framing |
|--------------|------|---------------------------------|
| Modification | | |

- Ceiling joist and rafter span tables from the IRC have been incorporated into the conventional construction provisions of the IBC.



2015 IBC Update

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2015 IBC Update

Chapter 24 Glass and Glazing

| 2015 | 2012 | 2406.4.7 Safety Glazing Adjacent to Bottom Stair Landing |
|--------------|------|--|
| Modification | | |

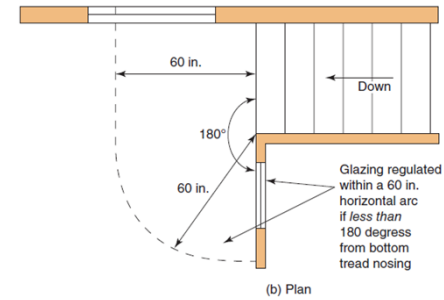
- The height criteria for regulating glazing at the landing at the bottom of a stair has been revised and the method for measuring the horizontal distance has been clarified, now generally requiring safety glazing if located less than 60 inches above the bottom landing of a stair.



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2406.4.7 Safety Glazing Adjacent to Bottom Stair Landing



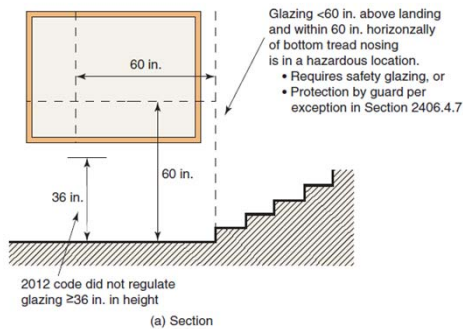
(b) Plan
Requirement for safety glazing adjacent to bottom stairway landing



2015 IBC Update

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2406.4.7 Safety Glazing Adjacent to Bottom Stair Landing



(a) Section



2015 IBC Update

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Chapter 26 Plastic

| 2015 | 2012 | 2612 Plastic Composites |
|----------|------|-------------------------|
| Addition | | |

- New definitions and applicable test standards now address the use of plastic composites for use as exterior deck boards, stair treads, handrails and guards.



2015 IBC Update

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2015 IBC Update

Chapters 27 through 34
Building Services, Special Devices, and Special Conditions

97

Chapter 30 Elevators and Conveying Systems

| 2015 | 2012 |
|----------|------|
| Deletion | |

3004 Elevator Hoistway Venting

- The elevator hoistway venting provisions of Section 3004 have been deleted; such hoistways are no longer required to be vented to the exterior.

2015 IBC Update 99

Chapter 29 Plumbing Systems

| 2015 | 2012 |
|--------------|------|
| Modification | |

2902.3 Public Toilet Facilities

- Limited-size quick-service tenant spaces are no longer required to provide toilet facilities for the public customers.

2015 IBC Update 98

Chapter 30 Elevators and Conveying Systems

| 2015 | 2012 |
|--------------|------|
| Modification | |

3006 Elevator Lobbies

- The elevator lobby requirements have been relocated from Section 713.14.1, where they were previously included with the general shaft enclosure requirements, to Chapter 30, which addresses elevators.

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2015 IBC Update

3006 Elevator Lobbies

Protection of hoistway door opening required. (See exceptions.)
Options to protect include:
• Enclosed elevator lobbies
• Additional door
• Hoistway pressurization

Elevator hoistway connecting more than 3 floors

Hoistway door opening protection is not required in high-rise if elevator travels 75 ft. or less
• 2012 limited to floors 75 ft. or less above fire department vehicle access

<75 ft.

Exterior walkway
Elevator

Protection of hoistway doors not required where hoistway opens to exterior

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FINAL REFLECTION

Final Reflection

This slide will help the learner to reflect on the day and what they will take back to the job and apply.

- **What?** What happened and what was observed in the training?
- **So what?** What did you learn? What difference did this training make?
- **Now what?** How will you do things differently back on the job as a result of this training?

2015 IBC Update 103

Chapter 34 Existing Structures

| 2015 | 2012 |
|----------|------|
| Deletion | |

- Chapter 34 has been deleted from the IBC in its entirety, and existing buildings will now be solely regulated by the *International Existing Building Code (IEBC)*.

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2015 IBC Update 103

2015 IBC Update

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