(Portions of text and tables not shown are unaffected by the errata)

#### THIRD PRINTING (Updated April 15, 2020)

#### CHAPTER 2 DEFINTIONS

EXIT ACCESS STAIRWAY. A stairway within the exit access portion of the means of egress system.

FABRICATED ITEM. Structural, load-bearing or lateral load-resisting members <u>or</u> <del>of</del> assemblies consisting of materials assembled prior to installation in a building or structure, or subjected to operations such as heat treatment, thermal cutting, cold working or reforming after manufacture and prior to installation in a building or structure. Materials produced in accordance with standards referenced by this code, such as rolled structural steel shapes, steel reinforcing bars, masonry units and wood structural panels, or in accordance with a referenced standard that provides requirements for quality control done under the supervisions of a third-party quality control agency, are not "fabricated items."

## (Note: This definition was deleted in the 2<sup>nd</sup> printing. It should not have been deleted. No change to the definition. A version is used in the emergency escape and rescue openings in the exception to Section 1030.2.)

**GRADE FLOOR OPENING.** A window or other opening located such that the sill height of the opening is not more than 44 inches (1118 mm) above or below the finished ground level adjacent to the opening.

**[BS] START OF CONSTRUCTION.** The date of <u>permit</u> issuance for new construction and *substantial improvements* to *existing structures*, provided the actual start of construction, *repair*, reconstruction, rehabilitation, *addition*, placement or other improvement is within 180 days after the date of issuance. The actual start of construction means the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of a slab or footings, installation of pilings or construction of columns.

Permanent construction does not include land preparation (such as clearing, excavation, grading or filling), the installation of streets or walkways, excavation for a *basement*, footings, piers or foundations, the erection of temporary forms or the installation of accessory buildings such as garages or sheds not occupied as *dwelling units* or not part of the main building. For a *substantial improvement*, the actual "start of construction" means the first *alteration* of any wall, ceiling, floor or other structural part of a building, whether or not that *alteration* affects the external dimensions of the building.

(Portions of text and tables not shown are unaffected by the errata)

#### SECOND PRINTING (Updated October 22, 2015)

#### CHAPTER 2 DEFINITIONS

#### SECTION 202 DEFINITIONS

**[RB] GRADE FLOOR OPENING.** A window or other opening located such that the sill height of the opening is notmore than 44 inches (1118 mm) above or below the finished ground level adjacent to the opening.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated June 23, 2015)

#### CHAPTER 2 DEFINITIONS

**COMMON PATH OF EGRESS TRAVEL.** That portion of the *exit access* travel distance measured from the most remote point within a *story* to that point where the occupants have separate <u>and distinct</u> access to two *exits* or *exit access* doorways.

**[BS] PORCELAIN TILE.** Tile that conforms to the requirements of ANSI <u>137.1.3</u> <u>A137.1 Section 3.0</u> for ceramic tile having an absorption of 0.5 percent or less in accordance with ANSI <u>137.4.1 A137.1 Section 4.1</u> Class Table and <u>ANSI 137.1.6.1</u> Allowable Properties by Tile Type-<u>Section 6.1</u> Table 10.

[BS EB] REROOFING. The process of recovering or replacing an existing *roof covering*. See "Roof recover" and "Roof replacement."

**SMOKEPROOF ENCLOSURE.** An *exit stairway* or *ramp* designed and constructed so that the movement of the products of combustion produced by a fire occurring in any part of the building into the enclosure is limited.

(Portions of text and tables not shown are unaffected by the errata)

#### 1ST PRINTING (Updated August 11, 2014)

#### CHAPTER 2 DEFINITIONS

**AMBULATORY CARE FACILITY**. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing or similar care on a less than 24-hour basis to <u>individuals persons</u> who are rendered *incapable of self-preservation* by the services provided.

**[F] AUTOMATIC WATER MIST SYSTEM**. A system consisting of a water supply, a pressure source, and a distribution piping system with attached nozzles, which, at or above a minimum operating pressure, defined by its listing, discharges water in fine droplets meeting the requirements of NFPA 750 for the purpose of the control, suppression or extinguishment of a fire. Such systems include wet-pipe, dry-pipe and pre-action types. The systems are designed as engineered, pre-engineered, local-application or total flooding systems.

**[BS] EXISTING STRUCTURE.** A structure erected prior to the date of adoption of the appropriate code, or one for which a legal building *permit* has been issued. For application of provisions in *flood hazard areas*, an existing structure is any building or structure for which the start of construction commenced before the effective date of the community's first flood plain management code, ordinance or standard.-

**[BS]** FIBER-REINFORCED POLYMER. A polymeric composite material consisting of reinforcement fibers, such as glass, impregnated with a fiber-binding polymer which is then molded and hardened. Fiber-reinforced polymers are permitted to contain cores laminated between fiber-reinforced polymer facings.

**FIRE PROTECTION RATING.** The period of time that an opening protective will maintain the ability to confine a fire as determined by tests specified in Section 715 716. Ratings are stated in hours or minutes.

**[BS] FLOOD HAZARD AREA SUBJECT TO HIGH VELOCITY WAVE ACTION.** Area within the *flood hazard area* that is subject to high-velocity wave action, and shown on a Flood Insurance Rate Map (FIRM) or other flood hazard map as Zone V, VO, VE or V1-30.

**[BS]** FOLDING AND TELESCOPIC SEATING. Tiered seating having an overall shape and size that is capable of being reduced for purposes of moving or storing and is not a building element.

**[BS]** GUARD. A building component or a system of building components located at or near the open sides of elevated walking surfaces that minimizes the possibility of a fall from the walking surface to a lower level.

[BS] HANDRAIL. A horizontal or sloping rail intended for grasping by the hand for guidance or support.

[BS] HURRICANE-PRONE REGIONS. Areas vulnerable to hurricanes defined as:

- The U. S. Atlantic Ocean and Gulf of Mexico coasts where the ultimate design wind speed, V<sub>ult</sub>, for Risk Category <u>II</u> buildings is greater than 115 mph (51.4 m/s);
- 2. Hawaii, Puerto Rico, Guam, Virgin Islands and American Samoa.

**[BS] LOWEST FLOOR.** The floor of the lowest enclosed area, including *basement*, but excluding any unfinished or flood resistant enclosure, usable solely for vehicle parking, building access or limited storage provided that such enclosure is not built so as to render the structure in violation of Section 1612.-

**[BS]** PLASTIC LUMBER. A manufactured product made primarily of plastic materials (filled or unfilled) which is generally rectangular in cross section.

[BS] RESTRICTED ENTRANCE. An entrance that is made available for *common use* on a controlled basis, but not public use, and that is not a *service entrance*.

[BS EB] ROOF RECOVER. The process of installing an additional *roof covering* over a prepared existing *roof covering* without removing the existing *roof covering*.

(Portions of text and tables not shown are unaffected by the errata)

[**BS EB**] **ROOF REPAIR.** Reconstruction or renewal of any part of an existing roof for the purposes of its maintenance.

[**BS EB**] **ROOF REPLACEMENT.** The process of removing the existing *roof covering*, repairing any damaged substrate and installing a new *roof covering*.

**[BS]** SKYLIGHT, UNIT. A factory-assembled, glazed fenestration unit, containing one panel of glazing material that allows for natural lighting through an opening in the *roof assembly* while preserving the weather-resistant barrier of the roof.

[BS] SKYLIGHTS AND SLOPED GLAZING. Glass or other transparent or translucent glazing material installed at a slope of 15 degrees (0.26 rad) or more from vertical. Glazing material in skylights, including *unit skylights, tubular daylighting devices*, solariums, *sunrooms*, roofs and sloped walls, are included in this definition.

**[BS] SPECIAL INSPECTION.** Inspection of construction requiring the expertise of an *approved special inspector* in order to ensure compliance with this code and the *approved construction documents*.

**Continuous special inspection.** Special inspection by the *special inspector* who is present <u>continuously</u> when and where the work to be inspected is being performed.

**Periodic special inspection.** Special inspection by the *special inspector* who is intermittently present where the work to be inspected has been or is being performed.

**[BS]** SPLICE. The result of a factory and/or field method of joining or connecting two or more lengths of a *fire-resistant joint system* into a continuous entity.

[BS] START OF CONSTRUCTION. The date of issuance for new construction and *substantial improvements* to *existing structures,* provided the actual start of construction, *repair,* reconstruction, rehabilitation, *addition,* placement or other improvement is within 180 days after the date of issuance. The actual start of construction means the first placement of permanent construction of a building (including a manufactured home) on a site, such as the pouring of a slab or footings, installation of pilings or construction of columns.

Permanent construction does not include land preparation (such as clearing, excavation, grading or filling), the installation of streets or walkways, excavation for a *basement*, footings, piers or foundations, the erection of temporary forms or the installation of accessory buildings such as garages or sheds not occupied as *dwelling units* or not part of the main building. For a *substantial improvement*, the actual "start of construction" means the first *alteration* of any wall, ceiling, floor or other structural part of a building, whether or not that *alteration* affects the external dimensions of the building.

[BS] STEEL MEMBER, STRUCTURAL. Any steel structural member of a building or structure consisting of a rolled steel structural shape other than cold-formed steel, or steel joist members.

**[BS]** STORM SHELTER. A building, structure or portions thereof, constructed in accordance with ICC 500 and designated for use during a severe wind storm event, such as a hurricane or tornado.

Community storm shelter. A storm shelter not defined as a "Residential storm shelter."

**Residential storm shelter.** A storm shelter serving occupants of *dwelling units* and having an *occupant load* not exceeding 16 persons.

**[BS]** SUBSTANTIAL DAMAGE. Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.

**[BS]** SUBSTANTIAL IMPROVEMENT. Any *repair*, reconstruction, rehabilitation, *alteration*, *addition* or other improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the improvement or repair is started. If the structure has sustained *substantial damage*, any *repairs* are considered substantial improvement regardless of the actual *repair* work performed. The term does not, however, include either:

#### 2015 International Building Code Errata (Portions of text and tables not shown are unaffected by the errata)

- Any project for improvement of a building required to correct existing health, sanitary or safety code violations identified by the *building official* and that are the minimum necessary to assure safe living conditions.
- 2. Any *alteration* of a historic structure provided that the *alteration* will not preclude the structure's continued designation as a historic structure.

**VEHICLE BARRIER.** A component or a system of components, near open sides <u>or walls</u> of a garage floor floors or ramp ramps or building walls that act as <u>a restraints restraint</u> for vehicles.

WILDLAND-URBAN INTERFACE AREA. That geographical area where structures and other human development meets or intermingles with wildland or vegetative fuels.

[BS] WIND-BORNE DEBRIS REGION. Areas within hurricane-prone regions located:

- 1. Within 1 mile (1.61 km) of the coastal mean high water line where the ultimate design wind speed,  $V_{ult}$ , is 130 mph (58 m/s) or greater; or
- 2. In areas where the ultimate design wind speed is 140 mph (63.6 m/s) or greater; or Hawaii.

For *Risk Category* II buildings and structures and *Risk Category* III buildings and structures, except health care facilities, the wind-borne debris region shall be based on Figure 1609.3.(1). For *Risk Category* IV buildings and structures and *Risk Category* III health care facilities, the windborne debris region shall be based on Figure 1609.3(2).

(Portions of text and tables not shown are unaffected by the errata)

#### SECTION 307 HIGH-HAZARD GROUP H

#### [F] TABLE 307.1(2) MAXIMUM ALLOWABLE QUANTITY PER CONTROL AREA OF HAZARDOUS MATERIAL POSING A HEALTH HAZARD<sup>a, c, f, h, i</sup>

		STORAC	€E <sup>b</sup>				-OPEN TEMS <sup>♭</sup>	
MATERIA L	Solid pounds <sup>d,</sup>	Liquid gallons (pounds) <sup>d,</sup> <sup>fe</sup>	Gas cubic feet at NTP (pounds) <sup>d</sup>	Solid pounds <sup>d</sup>	Liquid gallons (pounds) <sub>d,e</sub>	– Gas cubic feet at NTP (pounds) <sup>d</sup>	Solid pounds d	Liquid gallons (pounds) <sup>d</sup>
Corrosives	5,000	500	Gaseous 810 <sup>e, f</sup> Liquefied (150)	5,000	500	Gaseous 810 <sup>e</sup> Liquefied (150)	1,000	100
Highly Toxic	10	(10)	Gaseous 20 <sup>g</sup> Liquefied (4) <sup>g</sup>	10	(10)	Gaseous 20 <sup>g</sup> Liquefied (4) <sup>g</sup>	3	(3)
Toxic	500	(500)	Gaseous 810 <sup>e</sup> Liquefied (150) <sup>e</sup>	500	(500)	Gaseous 810 <sup>e</sup> Liquefied (150) <sup>e</sup>	125	(125)

**[F] 307.7 High-hazard Group H-5.** Semiconductor fabrication facilities and comparable research and development areas in which hazardous production materials (HPM) are used and the aggregate quantity of materials is in excess of those listed in Tables 307.1(1) and 307.1(2) shall be classified as Group H-5. Such facilities and areas shall be designed and constructed in accordance with Section 415.10 405.11.

#### SECTION 310 RESIDENTIAL GROUP R

**310.6 Residential Group R-4.** Residential Group R-4 occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive *custodial care*. Buildings of Group R-4 shall be classified as one of the occupancy conditions specified in Section 310.6.1 or 310.6.2. The persons receiving care are capable of self-preservation. This group shall include, but not be limited to, the following:

Alcohol and drug centers Assisted living facilities Congregate care facilities *Group homes* Halfway houses Residential board and care facilities Social rehabilitation facilities

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code.

(Portions of text and tables not shown are unaffected by the errata)

#### THIRD PRINTING (Updated April 15, 2020)

#### CHAPTER 4 SPECIAL DETAILED REQUIREMENTSBASED ON USE AND OCCUPANCY

**406.4 Public parking garages.** Parking garages, other than private garages, shall be classified as public parking garages and shall comply with the provisions of Sections <u>406.4.2</u> <u>406.4.1</u> through 406.4.8 and shall be classified as either an open parking garage or an enclosed parking garage. Open parking garages shall also comply with Section 406.5. Enclosed parking garages shall also comply with Section 406.6. See Section 510 for special provisions for parking garages.

**407.4 Means of egress.** Group I-2 occupancies shall be provided with means of egress complying with Chapter 10 and Sections 407.4.1 through 407.4.4. The fire safety and evacuation plans provided in accordance with Section 1001.4 shall identify the building components necessary to support a *defend-in-place* emergency response in accordance with Sections 404 <u>403</u> and 408 <u>404</u> of the *International Fire Code*.

**[F] 415.11.11 Automatic sprinkler system protection in exhaust ducts for HPM.** An *approved automatic sprinkler system* shall be provided in exhaust ducts conveying gases, vapors, fumes, mists or dusts generated from HPM in accordance with Sections 415.11.11.1 through 415.10.11.3 415.11.11.3 and the *International Mechanical Code*.

**422.3.1 Means of egress.** Where ambulatory care facilities require smoke compartmentation in accordance with Section 422.3, the fire safety evacuation plans provided in accordance with Section 1001.4 shall identify the building components necessary to support a *defend-in-place* emergency response in accordance with Sections <u>403 and</u> 404 <del>and 408</del> of the *International Fire Code*.

**424.4 Separation.** Children's play structures shall have a horizontal separation from building walls, partitions and from elements of the *means of egress* of not less than 5 feet (1524 mm). Children's playground play structures shall have a horizontal separation from other children's play structures of not less than 20 feet (6090 mm).

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated June 23, 2015)

#### CHAPTER 4 SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

**[F] 407.8 Automatic fire detection.** *Corridors* in Group I-2, Condition 1, occupancies, long-term care facilities, *detoxification facilities* and spaces permitted to be open to the *corridors* by Section 407.2 shall be equipped with an automatic fire detection system.

Group I-2, Condition 2, occupancies shall be equipped with smoke detection as required in Section 407.2.

#### **Exceptions:**

- 1. *Corridor* smoke detection is not required where sleeping rooms are provided with *smoke detectors* that comply with UL 268. Such detectors shall provide a visual display on the *corridor* side of each sleeping room and an audible and visual alarm at the care provider's station attending each unit.
- 2. *Corridor* smoke detection is not required where sleeping room doors are equipped with automatic door-closing devices with integral *smoke detectors* on the unit sides installed in accordance with their listing, provided that the integral detectors perform the required alerting function.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 4 SPECIAL DETAILED REQUIREMENTS BASED ON USE AND OCCUPANCY

**[F] 403.4.8 Standby and emergency power.** A standby power system complying with Section 2702 and Section 3003 shall be provided for the standby power loads specified in Section 403.4.8.3. An emergency power system complying with Section 2702 shall be provided for the emergency power loads specified in Section 403.4.8.4.

**403.5.1 Remoteness of interior exit stairways.** Required *interior exit stairways* shall be separated by a distance not less than 30 feet (9144 mm) or not less than one-fourth of the length of the maximum overall diagonal dimension of the building or area to be served, whichever is less. The distance shall be measured in a straight line between the nearest points of the enclosure surrounding the *interior exit stairways*. In buildings with three or more *interior exit stairways*, no fewer than two of the *interior exit stairways* shall comply with this section. Interlocking or *scissor* stairways shall be counted as one *interior exit stairway*.

**403.5.4 Smokeproof enclosures.** Every required *interior exit stairway* serving floors more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access shall be a *smokeproof enclosure* in accordance with Sections 909.20 and 1023.11.

**405.7.2 Smokeproof enclosure.** Every required *stairway* serving floor levels more than 30 feet (9144 mm) below the finished floor of its *level of exit discharge* shall comply with the requirements for a *smokeproof enclosure* as provided in Section 1023.11.

**407.2 Corridors continuity and separation.** *Corridors* in occupancies in Group I-2 shall be continuous to the *exits* and shall be separated from other areas in accordance with Section 407.3 except spaces conforming to Sections 407.2.1 through 407.2.6.

**407.4.1 Direct access to a corridor.** Habitable rooms in Group I-2 occupancies shall have an *exit access* door leading directly to a *corridor*.

#### **Exceptions:**

- 1. Rooms with *exit* doors opening directly to the outside at ground level.
- 2. Rooms arranged as *care suites* complying with Section 407.4.4.

**419.9 Plumbing facilities.** The nonresidential area of the *live/work unit* shall be provided with minimum plumbing facilities as specified by Chapter 29, based on the function of the nonresidential area. Where the nonresidential area of the *live/work unit* is required to be *accessible* by Section 1107.6.2.1, the plumbing fixtures specified by Chapter 29 shall be *accessible*.

#### SECTION 425 HYPERBARIC FACILITIES

**425.1 Hyperbaric facilities.** Hyperbaric facilities shall meet the requirements contained in Chapter 14 of NFPA 99.

### Errata

(Portions of text and tables not shown are unaffected by the errata)

#### THIRD PRINTING (Updated April 15, 2020)

#### CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS

#### **TABLE 506.2**

ALLOWABLE AREA FACTOR (At = NS, S1, S13R, S13D or SM, as applicable) IN SQUARE FEET <sup>a, b</sup>

(Portions of the table and footnotes not shown remain unchanged)

a. See Chapters 4 and 5 for specific exceptions to the allowable height area in this chapter.

**507.1 General.** The area of buildings of the occupancies and configurations specified in Sections 507.1 through 507.12 507.13 shall not be limited. Basements not more than one story below grade plane shall be permitted.

**507.8.1 Allowable area.** The aggregate floor area of Group H occupancies located in an unlimited area building shall not exceed 10 percent of the area of the building or nor the area limitations for the Group H occupancies as specified in Section 506 based on the perimeter of each Group H floor area that fronts on a *public way* or open space.

### **Errata**

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 5 GENERAL BUILDING HEIGHTS AND AREAS

**505.3 Equipment platforms.** Equipment platforms in buildings shall not be considered as a portion of the floor below. Such equipment platforms shall not contribute to either the building area or the number of stories as regulated by Section 503.1. The area of the equipment platform shall not be included in determining the fire area in accordance with Section 903. Equipment platforms shall not be a part of any mezzanine and such platforms and the walkways, stairs stairways, alternating tread devices and ladders providing access to an equipment platform shall not serve as a part of the means of egress from the building.

**507.1.1 Accessory occupancies.** Accessory occupancies shall be permitted in unlimited area buildings in accordance with the provisions of Section 508.2, otherwise the requirements of Sections <u>507.2-507.3</u> through <u>507.12-507.13</u> shall be applied, where applicable.

**507.4 Sprinklered**, **one-story buildings**. The area of a Group A-4 building no more than one *story above* grade plane of other than Type V construction, or the area of a Group B, F, M or S building no more than one story above grade plane of any construction type, shall not be limited where the building is provided with an *automatic sprinkler system* throughout in accordance with Section 903.3.1.1 and is surrounded and adjoined by *public ways* or *yards* not less than 60 feet (18 288 mm) in width.

#### **Exceptions:**

Buildings and structures of Type I or II construction for rack storage facilities that do not have access by the public shall not be limited in height, provided that such buildings conform to the requirements of Sections 507.3 507.4 and 903.3.1.1 and Chapter 32 of the *International Fire Code*.
 The *automatic sprinkler system* shall not be required in areas occupied for indoor participant sports, such as tennis, skating, swimming and equestrian activities in occupancies in Group A-4, provided that both of the following criteria are met:

- 2.1.1 Exit doors directly to the outside are provided for occupants of the participant sports areas.
- 2.1.2 The building is equipped with a *fire alarm system* with *manual fire alarm boxes* installed in accordance with Section 907.

**507.4.1 Mixed occupancy buildings with Groups A-1 and A-2.** Group A-1 and A-2 occupancies of other than Type V construction shall be permitted within mixed occupancy buildings of unlimited area complying with Section 507.3 507.4, provided all of the following criteria are met:

1. Group A-1 and A-2 occupancies are separated from other occupancies as required for separated occupancies in Section 508.4.4 with no reduction allowed in the *fire-resistance rating* of the separation based upon the installation of an *automatic sprinkler system*.

2. Each area of the portions of the building used for Group A-1 or A-2 occupancies shall not exceed the maximum allowable area permitted for such occupancies in Section 503.1.

3. *Exit* doors from Group A-1 and A-2 occupancies shall discharge directly to the exterior of the building.

**507.8 Group H-2, H-3 and H-4 occupancies.** Group H-2, H-3 and H-4 occupancies shall be permitted in unlimited area buildings containing Group F or S occupancies in accordance with Sections 507.3 507.4 and 507.4 507.5 and the provisions of Sections 507.8.1 through 507.8.4.

### Errata

(Portions of text and tables not shown are unaffected by the errata)

#### 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 fuel gas rooms, not classified as Group H	1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.
Incinerator rooms	2 hours and provide automatic sprinkler system
Paint shops, not classified as Group H, located in occupancies other than Group F	2 hours; or 1 hour and provide automatic sprinkler system
In Group E occupancies, laboratories and vocational shops not classified as Group H	1 hour or provide automatic sprinkler system
In Group I-2 occupancies, laboratories not classified as Group H	1 hour and provide automatic sprinkler system
In ambulatory care facilities, laboratories not classified as Group H	1 hour or provide automatic sprinkler system
Laundry rooms over 100 square feet	1 hour or provide automatic sprinkler system
In Group I-2, laundry rooms over 100 square feet	1 hour
Group I-3 cells and Group I-2 patient rooms equipped with padded surfaces	1 hour
In Group I-2, physical plant maintenance shops	1 hour
In ambulatory care facilities or Group I-2 occupancies, waste and linen collection rooms with containers that have an aggregate volume of 10 cubic feet or greater	1 hour
In other than ambulatory care facilities and Group I-2 occupancies, waste and linen collection rooms over 100 square feet	1 hour or provide automatic sprinkler system
In ambulatory care facilities or Group I-2 occupancies, storage rooms greater than 100 square feet	1 hour
Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons for flooded lead-acid, nickel cadmium or VRLA, or more than 1,000 pounds for lithium-ion and lithium metal polymer used for facility standby power, emergency power or uninterruptable power supplies	1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.

For SI: 1 square foot =  $0.0929 \text{ m}^2$ , 1 pound per square inch (psi) = 6.9 kPa, 1 British thermal unit (Btu) per hour = 0.293 watts, 1 horsepower = 746 watts, 1 gallon = 3.785 L, 1 cubic foot =  $0.0283 \text{ m}^3$ .

**510.7.1 Fire separation.** *Fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711 between the parking occupancy and the upper occupancy shall correspond to the required *fire-resistance rating* prescribed in Table 508.4 for the uses involved. The type of construction shall apply to each occupancy individually, except that structural members, including main bracing within the open parking structure, which is necessary to support the upper occupancy, shall be protected with the more restrictive fire-resistance-rated assemblies of the groups involved as shown in Table

(Portions of text and tables not shown are unaffected by the errata)

601. *Means of egress* for the upper occupancy shall conform to Chapter 10 and shall be separated from the parking occupancy by *fire barriers* having not less than a 2-hour *fire-resistance rating* as required by Section 707 with *self-closing* doors complying with Section 716 or *horizontal assemblies* having not less than a 2-hour *fire-resistance rating* as required by Section 711, with *self-closing* doors complying with Section 716. *Means of egress* from the *open parking garage* shall comply with Section 406.5.

### **Errata**

(Portions of text and tables not shown are unaffected by the errata)

#### THIRD PRINTING (Updated April 15, 2020)

#### CHAPTER 6 TYPES OF CONSTRUCTION

	TABL	.E 601			
FIRE-RESISTANCE RATING	<b>REQUIREME</b>	NTS FOR BUI	LDING ELEME	NTS (HO	URS)

BUILDING ELEMENT	ΤΥΡΕΙ		TYPE II		TYPE III		TYPE IV	TYP	PE V
	Α	В	Α	В	Α	В	HT	Α	В
Primary structural frame <sup>f</sup> (see Section 202)		2ª	1	0	1	0	HT	1	0
Bearing walls Exterior <sup>e, f</sup> Interior	3 3ª	2 2ª	1 1	0 0	2 1	2 0	2 1/HT	1 1	0 0
Nonbearing walls and partitions Exterior		See Table 602							
Nonbearing walls and partitions Interior <sup>d</sup>	0	0	0	0	0	0	See Section <u>602.4.6</u> <u>602.4.8</u>	0	0
Floor construction and associated secondary members (see Section 202)	2	2	1	0	1	0	HT	1	0
Roof construction and associated secondary members (see Section 202)	1 <sup>1</sup> /2 <sup>b</sup>	1 <sup>b,c</sup>	1 <sup>b,c</sup>	0c	1 <sup>b,c</sup>	0	HT	1 <sup>b,c</sup>	0

**603.1 Allowable materials.** Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with Sections 603.1.1 through 603.1.3:

19. Heavy timber as permitted by Note c to Table 601 and Sections 602.4.7 602.4.9 and 1406.3. (*Other items not changed*)

### **Errata**

(Portions of text and tables not shown are unaffected by the errata)

#### SECOND PRINTING (Updated October 22, 2015)

#### CHAPTER 6 TYPES OF CONSTRUCTION

**603.1 Allowable materials.** Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with Sections 603.1.1 through 603.1.3:

1. through 17. (no change)

18. Nailing or furring strips as permitted by Section 803.11 803.13.
19. through 26. (*no change*)

### Errata

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 6 TYPES OF CONSTRUCTION

#### Table 602 FIRE-RESISTANCE RATING REQUIREMENTS FOR EXTERIOR WALLS BASED ON FIRE SEPERATION DISTANCE a, d, g

	-		-	
FIRE SEPARATION DISTANCE = X (feet)	TYPE OF CONSTRUCTION	OCCUPANCY GROUP H <sup>e</sup>	OCCUPANCY GROUP F-1, M, S-1 <sup>f</sup>	OCCUPANCY GROUP A, B, E, F-2, I, R, S-2, U <sup>h</sup>
X < 5 <sup>b</sup>	All	3	2	1
5 □ X < 10	IA Others	3 2	2 1	1 1
10 □ X < 30	IA, IB IIB, VB Others	2 1 1	1 0 1	1° 0 1°
X 🗆 30	All	0	0	0

For SI:1 foot = 304.8 mm.

a. Load-bearing exterior walls shall also comply with the fire-resistance rating requirements of Table 601.

b. See Section 706.1.1 for party walls.

c. Open parking garages complying with Section 406 shall not be required to have a fire-resistance rating.

d. The fire-resistance rating of an exterior wall is determined based upon the fire separation distance of the exterior wall and the story in which the wall

is located. e. For special requirements for Group H occupancies, see Section 415.6.

f. For special requirements for Group S aircraft hangars, see Section 412.4.1.

g. Where Table 705.8 permits nonbearing exterior walls with unlimited area of unprotected openings, the required fire-resistance rating for the exterior walls is 0 hours.

h. For a building containing only a Group U occupancy private garage or carport, the exterior wall shall not be required to have a fire-resistance rating where the fire separation distance is 5 feet (1523 mm) or greater.

602.4.3 Columns. Wood columns shall be sawn or glued laminated and shall be not less than 8 inches (203 mm), nominal, in any dimension where supporting floor loads and not less than 6 inches (152 mm) nominal in width and not less than 8 inches (203 mm) nominal in depth where supporting roof and ceiling loads only. Columns shall be continuous or superimposed and connected in an approved manner. Protection in accordance with Section 704.2 is not required.

(Portions of text and tables not shown are unaffected by the errata)

#### THIRD PRINTING (April 15, 2020)

#### CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES

708.1 General. The following wall assemblies shall comply with this section.

- 1. Separation walls as required by Section 420.2 for Groups I-1, R-1, R-2 and R-3.
- 2. Walls separating tenant spaces in covered and open mall buildings as required by Section 402.4.2.1.
- 3. Corridor walls as required by Section 1020.1.
- 4. Elevator lobby separation as required by Section 3006.2.
- 5. Egress balconies as required by Section <u>1019.2 1021.2</u>.

#### Note: Italicize term

**714.4.1.2 Through-penetration firestop system.** *Through penetrations* shall be protected by an *approved through-penetration firestop system* installed and tested in accordance with ASTM E 814 or UL 1479, with a minimum positive pressure differential of 0.01 inch of water (2.49 Pa). The system shall have an Frating/T rating of not less than 1 hour but not less than the required rating of the floor penetrated.

#### **Exceptions:**

1. Floor penetrations contained and located within the cavity of a wall above the floor or below the floor do not require a T rating.

2. Floor penetrations by floor drains, tub drains or shower drains contained and located within the concealed space of a *horizontal assembly* do not require a T rating.

3. Floor penetrations of maximum 4-inch (102 mm) nominal diameter penetrating directly into metal-enclosed electrical power switchgear do not require a T rating.

**TABLE 716.5** 

OOF ADU IEO

DATINGS AND MADIZINGS

OPENING FIRE PROTECTION ASSEMBLIES, RATINGS AND MARKINGS								
TYPE OF	REQUIRED WALL ASSEMBLY	MINIMUM FIRE DOOR AND FIRE	DOOR VISION	FIRE- RATED GLAZING MARKING	MINIMUM SIDELIGHT/TRANSOM ASSEMBLY RATING (hours)		FIRE-RATEI MARI SIDELIGHT/ PAN	KING /TRANSOM
ASSEMBLY	RATING (hours)	SHUTTER ASSEMBLY RATING (hours)	PANEL SIZE <sup>b</sup>	DOOR VISION PANEL <sup>d</sup>	Fire protection	Fire resistance	Fire protection	Fire resistance
Enclosures for shafts, interior exit stairways and interior exit ramps.	2	1-1/2	100 sq. in.º	□ 100 sq. in. = D-H- 90 > 100 sq. in.= D- H-T-W-90	Not Permitted	2	Not Permitted	W-120

c. Except where the building is equipped throughout with an automatic sprinkler and the fire-rated glazing meets the criteria established in Section 716.5.5.

(Note: Add Note c to the 4<sup>th</sup> column as indicated. The remainder of the table remains unchanged.)

MATERIAL	ITEM NUMB ER	O FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTIT	т	MINII FINIS HICK	MUM SHED (NES) D-FA(	S
			4 hou	3 hou	2 hou	1 ho

## TABLE 721.1(2) RATED FIRE-RESISTANCE PERIODS FOR VARIOUS WALLS AND PARTITIONS a, o, p

# 2015 International Building Code Errata (Portions of text and tables not shown are unaffected by the errata)

			rs	rs	rs	ur	
	16-1.1ª	2" × 4" wood studs at 16" centers with double top plates, single bottom plate; interior side covered with $\frac{5}{8}$ " Type X gypsum wallboard, 4" <u>4</u> ' wide, applied horizontally unblocked, and fastened with $2^{1}/_{4}$ " Type S drywall screws, spaced 12" on center, wallboard joints covered with paper tape and joint compound, fastener heads covered with joint compound. Exterior covered with $\frac{3}{8}$ " wood structural panels, applied vertically, horizontal joints blocked and fastened with 6d common nails (bright) — 12" on center in the field, and 6" on center panel edges. Cavity to be filled with $\frac{3}{2}$ " mineral wool insulation. Rating established for exposure from interior side only.				<b>4</b> <sup>1</sup> / <sub>2</sub>	
16. Exterior walls rated for fire resistance from the inside only in accordance with Section 705.5.	16-1.2ª	2" × 6" wood studs at 16" centers with double top plates, single bottom plate; interior side covered with $\frac{5}{8}$ " Type X gypsum wallboard, 4" <u>4'</u> wide, applied horizontally or vertically with vertical joints over studs and fastened with $\frac{21}{4}$ " Type S drywall screws, spaced 12" on center, wallboard joints covered with paper tape and joint compound, fastener heads covered with joint compound, exterior side covered with $\frac{7}{16}$ " wood structural panels fastened with 6d common nails (bright) spaced 12" on center in the field and 6" on center along the panel edges. Cavity to be filled with $\frac{51}{2}$ " mineral wool insulation. Rating established from the gypsum-covered side only.	_		_	6 <sup>9</sup> /1 6	
	16-1.3ª	2" × 6" wood studs at 16" centers with double top plates, single bottom plates; interior side covered with $\frac{5}{8}$ " Type X gypsum wallboard, $\frac{4"}{4'}$ wide, applied vertically with all joints over framing or blocking and fastened with $\frac{21}{4}$ " Type S drywall screws spaced 7" on center. Joints to be covered with tape and joint compound. Exterior covered with $\frac{3}{8}$ " wood structural panels, applied vertically with edges over framing or blocking and fastened with 6d common nails (bright) at 12" on center in the field and 6" on center on panel edges. R-19 mineral fiber insulation installed in stud cavity. Rating established from the gypsum-covered side only.				6 <sup>1</sup> / <sub>2</sub>	

#### Balance of table is not changed

Figure 722.5.1(1) Determination of the heated perimeter of structural steel columns Note: Under third figure, add the following formula  $D=2(b_f+d)$ 

722.5.1.3 Sprayed fire-resistant materials. (No change to text) (Equation 7-13)  $R = [C_1(W/D) + C_2] h$ (Change right hand bracket from ) to ])

(Portions of text and tables not shown are unaffected by the errata)

#### SECOND PRINTING (Updated October 22, 2015)

#### CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES

Note for 722.5.1.2: Move 0.75 from inside to outside the brackets.

**722.5.1.2 Gypsum wallboard protection.** The *fire resistance* of structural steel columns with weight-toheated- perimeter ratios (W/D) less than or equal to 3.65 and that are protected with Type X gypsum wallboard shall be permitted to be determined from the following expression:

**R** = 130  $[h(W'/D)^{0.75}/2]^{0.75}$  (Equation 7-12)

where:

*R* = Fire resistance (minutes).

*h* =Total thickness of gypsum wallboard (inches).

D =Heated perimeter of the structural steel column (inches).

W' = Total weight of the structural steel column and gypsum wallboard protection (pounds per linear foot). W' = W + 50hD/144.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated June 23, 2015)

#### CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES

**716.6.7.1 Where 3/4-hour fire protection window assemblies permitted.** Fire-protection-rated glazing requiring 45-minute opening protection in accordance with Table 716.6 shall be limited to *fire partitions* designed in accordance with Section 708 and *fire barriers* utilized in the applications set forth in Sections 707.3.6, <u>707.3.7</u> and <u>707.3.8</u> <u>707.3.9</u> where the *fire-resistance rating* does not exceed 1 hour. Fire-resistance-rated glazing assemblies tested in accordance with ASTM E 119 or UL 263 shall not be subject to the limitations of this section.

(Portions of text and tables not shown are unaffected by the errata)

FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 7 FIRE AND SMOKE PROTECTION FEATURES

TABLE 705.8 MAXIMUM AREA OF EXTRIOR WALL OPENINGS BAED ON FIRE SEPERATION DISTANCE AND DEGREE OF OPENING PROTECTION

FIRE SEPARATION DISTANCE (feet)	DEGREE OF OPENING PROTECTION	ALLOWABLE AREA <sup>a</sup>
	Unprotected, Nonsprinklered (UP, NS)	Not Permitted <sup>k</sup>
0 to less than $3^{b, c, k}$	Unprotected, Sprinklered (UP, S) <sup>i</sup>	Not Permitted <sup>k</sup>
	Protected (P)	Not Permitted <sup>k</sup>
	Unprotected, Nonsprinklered (UP, NS)	Not Permitted
3 to less than 5 <sup>d, e</sup>	Unprotected, Sprinklered (UP, S) <sup>i</sup>	15%
	Protected (P)	15%
	Unprotected, Nonsprinklered (UP, NS)	10% <sup>h</sup>
5 to less than $10^{e, f, j}$	Unprotected, Sprinklered (UP, S) <sup>i</sup>	25%
	Protected (P)	25%
	Unprotected, Nonsprinklered (UP, NS)	15% <sup>h</sup>
10 to less than 15 <sup>e, f, g,j</sup>	Unprotected, Sprinklered (UP, S) <sup>i</sup>	45%
	Protected (P)	45%
	Unprotected, Nonsprinklered (UP, NS)	25%
15 to less than 20 <sup>f, g,j</sup>	Unprotected, Sprinklered (UP, S) <sup>i</sup>	75%
	Protected (P)	75%
	Unprotected, Nonsprinklered (UP, NS)	45%
20 to less than 25 <sup>f, g,j</sup>	Unprotected, Sprinklered (UP, S) <sup>i</sup>	No Limit
	Protected (P)	No Limit
	Unprotected, Nonsprinklered (UP, NS)	70%
25 to less than 30 <sup>f, g,j</sup>	Unprotected, Sprinklered (UP, S) <sup>i</sup>	No Limit
	Protected (P)	No Limit
	Unprotected, Nonsprinklered (UP, NS)	No Limit
30 or greater	Unprotected, Sprinklered (UP, S) <sup>i</sup>	No Limit
	Protected (P)	No Limit

For SI:1 foot = 304.8 mm.

UP, S = Unprotected openings in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

a. Values indicated are the percentage of the area of the exterior wall, per story.

b. For the requirements for fire walls of buildings with differing heights, see Section 706.6.1.

c. For openings in a fire wall for buildings on the same lot, see Section 706.8.

d. The maximum percentage of unprotected and protected openings shall be 25 percent for Group R-3 occupancies.

f. The area of unprotected and protected openings shall not be limited for Group R-3 occupancies, with a fire separation distance of 5 feet or greater.

g. The area of openings in an open parking structure with a fire separation distance of 10 feet or greater shall not be limited.

UP, NS = Unprotected openings in buildings not equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

P = Openings protected with an opening protective assembly in accordance with Section 705.8.2.

e. Unprotected openings shall not be permitted for openings with a fire separation distance of less than 15 feet for Group H-2 and H-3 occupancies.

(Portions of text and tables not shown are unaffected by the errata)

h. Includes buildings accessory to Group R-3.

i. Not applicable to Group H-1, H-2 and H-3 occupancies.

k. For openings between S-2 parking garage and Group R-2 building, see Section 705.3, Exception 2.

**722.1 General.** The provisions of this section contain procedures by which the *fire resistance* of specific materials or combinations of materials is established by calculations. These procedures apply only to the information contained in this section and shall not be otherwise used. The calculated *fire resistance* of concrete, concrete masonry and clay masonry assemblies shall be permitted in accordance with ACI 216.1/TMS 0216. The calculated *fire resistance* of steel assemblies shall be permitted in accordance with Chapter 5 of ASCE 29. The calculated *fire resistance* of exposed wood members and wood decking shall be permitted in accordance with Chapter 16 of ANSI/AWC National Design Specification for Wood Construction (NDS).

j. The area of openings in a building containing only a Group U occupancy private garage or carport with a fire separation distance of 5 feet (1523 mm) or greater shall not be limited.

### Errata

(Portions of text and tables not shown are unaffected by the errata)

FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 8 INTERIOR FINISHES

**[F] 806.3 Combustible decorative materials.** In other than Group I-3, curtains, draperies, fabric hangings and similar combustible decorative materials suspended from walls or ceilings shall comply with Section 806.4 and shall not exceed 10 percent of the specific wall or ceiling area to which such materials are attached. Fixed or movable walls and partitions, paneling, wall pads and crash pads applied structurally or for decoration, acoustical correction, surface insulation or other purposes shall be considered *interior finish* shall comply with Section 803 and shall not be considered *decorative materials* or furnishings.

#### **Exceptions:**

In auditoriums in Group A, the permissible amount of curtains, draperies, fabric hangings and similar combustible decorative materials suspended from walls or ceilings shall not exceed 75 percent of the aggregate wall area where the building is equipped throughout with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1, and where the material is installed in accordance with Section 803.13 of this code.
 In Group R-2 dormitories, within sleeping units and dwelling units, the permissible amount of curtains, draperies, fabric hangings and similar decorative materials suspended from walls or ceiling shall not exceed 50 percent of the aggregate wall areas where the building is equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.

3. In Group B and M occupancies, the amount of combustible fabric partitions suspended from the ceiling and not supported by the floor shall comply with Section 806.4 and shall not be limited.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 9 FIRE PROTECTION SYSTEMS

**[F] 903.2.11.1 Stories without openings.** An *automatic sprinkler system* shall be installed throughout all *stories*, including basements, of all buildings where the floor area exceeds 1,500 square feet (139.4 m<sup>2</sup>) and where there is not provided not fewer than one of the following types of *exterior wall* openings:

- Openings below grade that lead directly to ground level by an exterior *stairway* complying with Section 1011 or an outside ramp complying with Section 1012. Openings shall be located in each 50 linear feet (15 240 mm), or fraction thereof, of *exterior wall* in the *story* on at least one side. The required openings shall be distributed such that the lineal distance between adjacent openings does not exceed 50 feet (15 240 mm).
- 2. Openings entirely above the adjoining ground level totaling not less than 20 square feet (1.86 m<sup>2</sup>) in each 50 linear feet (15 240 mm), or fraction thereof, of *exterior wall* in the story on at least one side. The required openings shall be distributed such that the lineal distance between adjacent openings does not exceed 50 feet (15 240 mm). The height of the bottom of the clear opening shall not exceed 44 inches (1118 mm) measured from the floor.

**[F] 909.5 Smoke barrier construction.** *Smoke barriers* required for passive smoke control and a smoke control system using the pressurization method shall comply with Section 709. The maximum allowable leakage area shall be the aggregate area calculated using the following leakage area ratios:

1. Walls *A*/*Aw* = 0.00100

- 2. Interior exit stairways and ramps and exit passageways: A/Aw = 0.00035
- 3. Enclosed exit access stairways and ramps and all other shafts: A/Aw = 0.00150

4. Floors and roofs: A/AF = 0.00050

where:

A = Total leakage area, square feet (m<sup>2</sup>).

AF = Unit floor or roof area of barrier, square feet (m<sup>2</sup>).

Aw = Unit wall area of barrier, square feet (m<sup>2</sup>).

The leakage area ratios shown do not include openings due to gaps around doors and operable windows. The total leakage area of the *smoke barrier* shall be determined in accordance with Section 909.5.1 and tested in accordance with Section 909.5.2.

**909.20.6.1 Ventilation systems.** Smokeproof enclosure ventilation systems shall be independent of other building ventilation systems. The equipment, control wiring, power wiring and ductwork shall comply with one of the following:

- 1. Equipment, control wiring, power wiring and ductwork shall be located exterior to the building and directly connected to the smokeproof enclosure or connected to the smokeproof enclosure by ductwork enclosed by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both.
- 2. Equipment, control wiring, power wiring and ductwork shall be located within the smokeproof enclosure with intake or exhaust directly from and to the outside or through ductwork enclosed by not less than 2-hour *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both.
- 3. Equipment, control wiring, power wiring and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical equipment, by not less than 2-hour *fire*

# 2015 International Building Code Errata (Portions of text and tables not shown are unaffected by the errata)

barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both.

#### Exceptions:

- 1. Control wiring and power wiring utilizing a 2-hour rated cable.
- 2. Where encased with not less than 2 inches (51 mm) of concrete.
- 3. Control wiring and power wiring protected by a listed electrical circuit protective system with a fire-resistance rating of not less than 2 hours.

# 2015 International Building Code Errata (Portions of text and tables not shown are unaffected by the errata)

#### THIRD PRINTING (Updated April 15, 2020)

#### **CHAPTER 10 MEANS OF EGRESS**

1008.2.2 Exit discharge. In Group I-2 occupancies where two or more exits are required, on the exterior landings required by Section 1010.6.1 1010.1.6, means of egress illumination levels for the exit discharge shall be provided such that failure of any single lighting unit shall not reduce the illumination level on that landing to less than 1 footcandle (11 lux).

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated June 23, 2015)

#### CHAPTER 10 MEANS OF EGRESS

**1006.3.2 Single exits.** A single *exit* or access to a single *exit* shall be permitted from any *story* or occupied roof where one of the following conditions exists:

- 1. The occupant load, number of dwelling units and exit access common path of egress travel distance do does not exceed the values in Table 1006.3.2(1) or 1006.3.2(2).
- 2. Rooms, areas and spaces complying with Section 1006.2.1 with *exits* that discharge directly to the exterior at the *level of exit discharge*, are permitted to have one *exit* or access to a single *exit*.
- 3. Parking garages where vehicles are mechanically parked shall be permitted to have one *exit* or access to a single *exit*.
- 4. Group R-3 and R-4 occupancies shall be permitted to have one exit or access to a single exit.
- 5. Individual single-story or multistory *dwelling units* shall be permitted to have a single exit or access to a single *exit* from the *dwelling unit* provided that both of the following criteria are met:
  - 5.1. The dwelling unit complies with Section 1006.2.1 as a space with one means of egress.
  - 5.2. Either the *exit* from the *dwelling unit* discharges directly to the exterior at the *level of exit discharge*, or the *exit access* outside the dwelling unit's entrance door provides access to not less than two approved independent *exits*.

(Portions of text and tables not shown are unaffected by the errata)

FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 10 MEANS OF EGRESS

**1006.3 Egress from stories or occupied roofs.** The means of egress system serving any story or occupied roof shall be provided with the number of exits or access to exits based on the aggregate occupant load served in accordance with this section. The path of egress travel to an *exit* shall not pass through more than one adjacent story.

Each story above the second story of a building shall have a minimum of one interior or exterior exit stairway, or interior or exterior exit ramp. Where not less than three exits or access to exits are required, not less than 50 percent of the required exits shall be interior or exterior exit stairways or ramps.

#### **Exceptions:**

- 1. Interior exit stairways and interior exit ramps are not required in open parking garages where the means of egress serves only the open parking garage.
- 2. Interior exit stairways and interior exit ramps are not required in outdoor facilities where all portions of the means of egress are essentially open to the outside.

**1006.3.1 Egress based on occupant load.** Each story and occupied roof shall have the minimum number of independent *exits*, or access to *exits*, as specified in Table 1006.3.1. A single exit or access to a single exit shall be permitted in accordance with Section 1006.3.2. The required number of exits, or *exit access stairways* or *ramps* providing access to exits, from any story or occupied roof shall be maintained until arrival at the exit discharge or a *public way*.

**1006.3.2.2 Basements.** A basement provided with one exit shall not be located more than one story below grade plane.

1010.1.4.1 Revolving doors. Revolving doors shall comply with the following:

- 1. Revolving doors shall comply with BHMA A156.27 and shall be installed in accordance with the manufacturer's instructions.
- 2. Each revolving door shall be capable of *breakout* in accordance with BHMA A156.27 and shall provide an aggregate width of not less than 36 inches (914 mm).
- 3. A revolving door shall not be located within 10 feet (3048 mm) of the foot or top of *stairways* or escalators. A dispersal area shall be provided between the *stairways* or escalators and the revolving doors.
- 4. The revolutions per minute (rpm) for a revolving door shall not exceed the maximum rpm as specified in BHMA A156.27. Manual revolving doors shall comply with Table 1010.1.4.1(1). Automatic or power-operated revolving doors shall comply with Table 1010.1.4.1(2).
- 5. An emergency stop switch shall be provided near each entry point of power or automatic operated revolving doors within 48 inches (1220 mm) of the door and between 24 inches (610 mm) and 48 inches (1220 mm) above the floor. The activation area of the emergency stop switch button shall be not less than 1 inch (25 mm) in diameter and shall be red.
- 6. Each revolving door shall have a side-hinged swinging door that complies with Section 1010.1 in the same wall and within 10 feet (3048 mm) of the revolving door.
- 7. Revolving doors shall not be part of an *accessible route* required by Section 1009 and Chapter 11.

#### TABLE 1010.1.4(2) 1010.1.4.1(2)

MAXIMUM DOOR SPEED AUTOMATIC OR POWER-OPERATED REVOLVING DOORS

(Portions of table and footnotes not shown remain unchanged)

(Portions of text and tables not shown are unaffected by the errata)

**1010.1.4.3 Special purpose horizontal sliding, accordion or folding doors.** In other than Group H occupancies, special purpose horizontal sliding, accordion or folding door assemblies permitted to be a component of a means of egress in accordance with Exception 6 to Section 1010.1.2 shall comply with all of the following criteria:

- 1. The doors shall be power operated and shall be capable of being operated manually in the event of power failure.
- 2. The doors shall be openable by a simple method from both sides without special knowledge or effort.
- 3. The force required to operate the door shall not exceed 30 pounds (133 N) to set the door in motion and 15 pounds (67 N) to close the door or open it to the minimum required width.
- 4. The door shall be openable with a force not to exceed 15 pounds (67 N) when a force of 250 pounds (1100 N) is applied perpendicular to the door adjacent to the operating device.
- 5. The door assembly shall comply with the applicable *fire protection rating* and, where rated, shall be self-closing or automatic closing by smoke detection in accordance with Section 716.5.9.3, shall be installed in accordance with NFPA 80 and shall comply with Section 716.
- 6. The door assembly shall have an integrated standby power supply.
- 7. The door assembly power supply shall be electrically supervised.
- 8. The door shall open to the minimum required width within 10 seconds after activation of the operating device.

**1011.14.1 Handrails of alternating tread devices.** Handrails shall be provided on both sides of alternating tread devices and shall comply with Section 1014.

**1015.1 General.** Guards shall comply with the provisions of Sections 1015.2 through 1015.7. Operable windows with sills located more than 72 inches (1.83 m) above finished grade or other surface below shall comply with Section 1015.8.

Occupancy	Minimum Width (inches)
Any facilities not listed below	44
Access to and utilization of mechanical,	24
plumbing or electrical systems or equipment	
With an occupant load of less than 50	36
Within a dwelling unit	36
In Group E with a corridor having an	72
occupant load of 100 or more	
In corridors and areas serving stretcher	72
traffic in occupancies where patients receive	
outpatient medical care, that causes the	
patient to be incapable of self-preservation	
Group I-2 in areas where required for bed	96
movement	

Table 1020.2
MINIMUM CORRIDOR WIDTH

**1029.9.1 Minimum aisle width.** The minimum clear width for aisles shall be as shown:

- 1. Forty-eight inches (1219 mm) for stepped aisles having seating on each side. **Exception:** Thirty-six inches (914 mm) where the stepped aisles serves less than 50 seats.
- Thirty-six inches (914 mm) for stepped aisles having seating on only one side.
- **Exception:** Twenty-three inches (584 mm) between a stepped aisle handrail and seating where an stepped aisles does not serve more than five rows on one side.

(Portions of text and tables not shown are unaffected by the errata)

- 3. Twenty-three inches (584 mm) between a stepped aisles handrail or guard and seating where the stepped aisles is subdivided by a mid-aisle handrail.
- 4. Forty-two inches (1067 mm) for level or ramped aisles having seating on both sides. **Exceptions:** 
  - 1. Thirty-six inches (914 mm) where the aisle serves less that 50 seats.
  - 2. Thirty inches (762 mm) where the aisle does not serve more than 14 seats.
- Thirty-six inches (914 mm) for level or ramped aisles having seating on only one side.
   Exception: For other than ramped aisles that serve as part of an accessible route, thirty inches (762 mm) where the ramped aisle does not serve more than 14 seats.

**1029.9.7 Stairways connecting to stepped aisles.** A stairway that connects a stepped aisle to a cross aisle or concourse shall be permitted to comply with the assembly aisle walking surface requirements of Section 1029.13. Transitions between stairways and stepped aisles shall comply with Section 1029.10.

**1029.9.8 Stairways connecting to vomitories.** A stairway that connects a vomitory to a cross aisle or concourse shall be permitted to comply with the assembly aisle walking surface requirements of Section 1029.13. Transitions between stairways and stepped aisles shall comply with Section 1029.10.

#### 1029.10.1 Transitions and stairways that maintain stepped aisle riser and tread dimensions.

Stepped aisles, transitions and stairways that maintain riser and tread dimensions shall comply with Section 1029.13 as one exit access component.

### **1029.10.2 Transitions to stairways that do not maintain stepped aisle riser and tread dimensions.** Transitions to stairways from stepped aisles with riser and tread dimensions that differ from the stairways shall comply with Sections 1029.10.2.1 through 1029.10.3.

**1029.13.1.3 Edge protection.** Ramped aisles shall have edge protection in accordance with Section 1012.10 and 1012.10.1.

**Exception:** In assembly spaces with fixed seating, edge protection is not required on the sides of ramped aisles where the ramped aisles provide access to the adjacent seating and aisle accessways.

**1029.14 Seat stability.** In a building, room or space used for assembly purposes, the seats shall be securely fastened to the floor.

#### **Exceptions:**

- 1. In a building, room or space used for assembly purposes or portions thereof without ramped or tiered floors for seating and with 200 or fewer seats, the seats shall not be required to be fastened to the floor.
- 2. In a building, room or space used for assembly purposes or portions thereof with seating at tables and without ramped or tiered floors for seating, the seats shall not be required to be fastened to the floor.
- 3. In a building, room or space used for assembly purposes or portions thereof without ramped or tiered floors for seating and with greater than 200 seats, the seats shall be fastened together in groups of not less than three or the seats shall be securely fastened to the floor.
- 4. In a building, room or space used for assembly purposes where flexibility of the seating arrangement is an integral part of the design and function of the space and seating is on tiered levels, not more than 200 seats shall not be required to be fastened to the floor. Plans showing seating, tiers and *aisles* shall be submitted for approval.
- 5. Groups of seats within a building, room or space used for assembly purposes separated from other seating by railings, *guards*, partial height walls or similar barriers with level floors and having not more than 14 seats per group shall not be required to be fastened to the floor.
- 6. Seats intended for musicians or other performers and separated by railings, *guards*, partial height walls or similar barriers shall not be required to be fastened to the floor.

# 2015 International Building Code Errata (Portions of text and tables not shown are unaffected by the errata)

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 11 ACCESSIBILITY

**1103.2.2 Employee work areas.** Spaces and elements within employee work areas shall only be required to comply with Sections 907.5.2.3.1, 1009 and 1104.3.1 and shall be designed and constructed so that individuals with disabilities can approach, enter and exit the work area. Work areas, or portions of work areas, other than raised courtroom stations in accordance with Section 1108.4.1.4, that are less than 300 square feet (30 m<sup>2</sup>) in area and located 7 inches (178 mm) or more above or below the ground or finished floor where the change in elevation is essential to the function of the space shall be exempt from all requirements.

**1107.6.4 Group R-4.** Accessible units and Type B units shall be provided in Group R-4 occupancies in accordance with Sections 1107.6.4.1 and 1107.6.4.2. Bedrooms in Group R-4 facilities shall be counted as *sleeping units* for the purpose of determining the number of units.

**1107.6.4.1 Accessible units.** In Group R-4 Condition 1, at least one of the *sleeping units* shall be an *Accessible unit*. In Group R-4 Condition 2, at least two of the *sleeping units* shall be an *Accessible unit*.

**1107.6.4.2 Type B units.** In structures with four or more *sleeping units intended to be occupied as a residence*, every *sleeping unit intended to be occupied as a residence* shall be a *Type B unit*.

Exception: The number of Type B units is permitted to be reduced in accordance with Section 1107.7.

**1109.13 Controls, operating mechanisms and hardware.** Controls, operating mechanisms and hardware intended for operation by the occupant, including switches that control lighting and ventilation and electrical convenience outlets, in accessible spaces, along accessible routes or as parts of accessible elements shall be accessible.

#### **Exceptions:**

- 1. Operable parts that are intended for use only by service or maintenance personnel shall not be required to be *accessible*.
- 2. Electrical or communication receptacles serving a dedicated use shall not be required to be accessible.
- 3. Where two or more outlets are provided in a kitchen above a length of counter top that is uninterrupted by a sink or appliance, one outlet shall not be required to be *accessible*.
- 4. Floor electrical receptacles shall not be required to be accessible.
- 5. HVAC diffusers shall not be required to be accessible.
- 6. Except for light switches, where redundant controls are provided for a single element, one control in each space shall not be required to be *accessible*.
- 7. Access doors or gates in barrier walls and fences protecting pools, spas and hot tubs shall be permitted to comply with Section 1010.1.9.2.

**1111.1 Signs.** Required accessible elements shall be identified by the International Symbol of Accessibility at the following locations.

- Accessible parking spaces required by Section 1106.1.
   Exception: Where the total number of parking spaces provided is four or less, identification of accessible parking spaces is not required.
- Accessible parking spaces required by Section 1106.2.
   Exception: In Group I-1, R-2, R-3 and R-4 facilities, where parking spaces are assigned to specific dwelling units or sleeping units, identification of accessible parking spaces is not required.
- 3. Accessible passenger loading zones.
- 4. Accessible rooms where multiple single-user toilet or bathing rooms are clustered at a single location.
- 5. Accessible entrances where not all entrances are accessible.

(Portions of text and tables not shown are unaffected by the errata)

- 6. Accessible check-out aisles where not all aisles are accessible. The sign, where provided, shall be above the check-out aisle in the same location as the checkout aisle number or type of check-out identification.
- 7. Family or assisted-use toilet and bathing rooms.
- 8. Accessible dressing, fitting and locker rooms where not all such rooms are accessible.
- 9. Accessible areas of refuge in accordance with Section 1009.9.
- 10. Exterior areas for assisted rescue in accordance with Section 1009.9.
- 11. In recreational facilities, lockers that are required to be *accessible* in accordance with Section 1109.9.

**1111.2 Directional signage.** Directional signage indicating the route to the nearest like accessible element shall be provided at the following locations. These directional signs shall include the International Symbol of Accessibility and sign characters shall meet the visual character requirements in accordance with ICC A117.1.

- 1. Inaccessible building entrances.
- 2. Inaccessible public toilets and bathing facilities.
- 3. Elevators not serving an accessible route.
- 4. At each separate-sex toilet and bathing room indicating the location of the nearest family/assisted use toilet or bathing room where provided in accordance with Section 1109.2.1.
- 5. At exits and exit stairways serving a required accessible space, but not providing an approved accessible means of egress, signage shall be provided in accordance with Section 1009.10.

Where drinking fountains for persons using wheelchairs and drinking fountains for standing persons are not located adjacent to each other, directional signage shall be provided indicating the location of the other drinking fountains.

(Portions of text and tables not shown are unaffected by the errata)

#### THIRD PRINTING (Updated April 15, 2020)

#### CHAPTER 12 INTERIOR ENVIRONMENT

**1203.1 General.** Buildings shall be provided with natural ventilation in accordance with Section <u>1203.4</u> <u>1203.5</u>, or mechanical ventilation in accordance with the *International Mechanical Code*.

Where the air infiltration rate in a *dwelling unit* is less than 5 air changes per hour where tested with a blower door at a pressure 0.2 inch w.c. (50 Pa) in accordance with Section R402.4.1.2 of the *International Energy Conservation Code— Residential Provisions*, the *dwelling unit* shall be ventilated by mechanical means in accordance with Section 403 of the *International Mechanical Code. Ambulatory care facilities* and Group I-2 occupancies shall be ventilated by mechanical means in accordance with Section 407 of the *International Mechanical Code.* 

**1203.3 Unvented attic and unvented enclosed rafter assemblies.** Unvented *attics* and unvented enclosed roof framing assemblies created by ceilings applied directly to the underside of the roof framing members/rafters and the structural roof sheathing at the top of the roof framing members shall be permitted where all the following conditions are met:

1.

The unvented attic space is completely within the building thermal

- envelope.
- No interior Class I vapor retarders are installed on the ceiling side (*attic* floor) of the unvented *attic* assembly or on the ceiling side of the unvented enclosed roof framing assembly.
- 3. Where wood shingles or shakes are used, a minimum 1/4-inch (6.4 mm) vented airspace separates the shingles or shakes and the roofing underlayment above the structural sheathing.
- 4. In Climate Zones 5, 6, 7 and 8, any air-impermeable insulation shall be a Class II vapor retarder or shall have a Class II vapor retarder coating or covering in direct contact with the underside of the insulation.
- 5. Insulation shall be located in accordance with the following:
  - 5.1. Item 5.1.1, 5.1.2, 5.1.3 or 5.1.4 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing.
    - 5.1.1. Where only air-impermeable insulation is provided, it shall be applied in direct contact with the underside of the structural roof sheathing.
    - 5.1.2. Where air-permeable insulation is provided inside the building thermal envelope, it shall be installed in accordance with Item 5.1 5.1.1. In addition to the air-permeable insulation installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing in accordance with the R values in Table 1203.3 for condensation control.
    - 5.1.3. Where both air-impermeable and air-permeable insulation are provided, the *air-impermeable insulation* shall be applied in direct contact with the underside of the structural roof sheathing in accordance with Item 5.1.1 and shall be in accordance with the R values in Table 1203.3 for condensation control. The *air-permeable insulation* shall be installed directly under the *air impermeable insulation*.
    - 5.1.4. Alternatively, sufficient rigid board or sheet insulation shall be installed directly above the structural roof sheathing to maintain the monthly average temperature of the underside of the structural roof sheathing above 45°F (7°C). For calculation purposes, an interior air temperature of 68°F (20°C) is assumed and the exterior air temperature is assumed to be the monthly average outside air temperature of the three coldest months.
  - 5.2. Where preformed insulation board is used as the *air-impermeable insulation* layer, it shall be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.

#### **Exceptions:**

- 1. Section 1203.3 does not apply to special use structures or enclosures such as swimming pool enclosures, data processing centers, hospitals or art galleries.
- 2. Section 1203.3 does not apply to enclosures in Climate Zones 5 through 8 that are humidified beyond 35 percent during the three coldest months.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated November 16, 2015)

#### CHAPTER 12 INTERIOR ENVIRONMENT

#### 1203.3 Unvented attic and unvented enclosed rafter assemblies....

(Note: No change to main text, items not shown and exceptions)

1.

In Climate Zones 5, 6, 7 and 8, any air-impermeable

insulation shall be a Class II vapor retarder or shall have a Class III II vapor retarder coating or covering in direct contact with the underside of the insulation.

5.2. Where preformed insulation board is used as the <u>air-permeable</u> <u>air-impermeable</u> insulation layer, it shall be sealed at the perimeter of each individual sheet i+nterior surface to form a continuous layer.

(Portions of text and tables not shown are unaffected by the errata)

#### CHAPTER 12 INTERIOR ENVIRONMENT

**1203.3 Unvented attic and unvented enclosed rafter assemblies.** Unvented *attics* and unvented enclosed roof framing assemblies created by ceilings applied directly to the underside of the roof framing members/rafters and the structural roof sheathing at the top of the roof framing members shall be permitted where all the following conditions are met:

- 1. The unvented attic space is completely within the building thermal envelope.
- 2. No interior Class I vapor retarders are installed on the ceiling side (*attic* floor) of the unvented *attic* assembly or on the ceiling side of the unvented enclosed roof framing assembly.
- 3. Where wood shingles or shakes are used, a minimum ¼-inch (6.4 mm) vented airspace separates the shingles or shakes and the roofing underlayment above the structural sheathing.
- 4. In Climate Zones 5, 6, 7 and 8, any air-impermeable insulation shall be a Class II vapor retarder or shall have a Class II vapor retarder coating or covering in direct contact with the underside of the insulation.
- 5. Insulation shall be located in accordance with the following:
  - 5.1. Item 5.1.1, 5.1.2, 5.1.3 or 5.1.4 shall be met, depending on the air permeability of the insulation directly under the structural roof sheathing.
    - 5.1.1. Where only air-impermeable insulation is provided, it shall be applied in direct contact with the underside of the structural roof sheathing.
    - 5.1.2. Where air-permeable insulation is provided inside the building thermal envelope, it shall be installed in accordance with Item 5.1. In addition to the air-permeable insulation installed directly below the structural sheathing, rigid board or sheet insulation shall be installed directly above the structural roof sheathing in accordance with the R values in Table 1203.3 for condensation control.
    - 5.1.3. Where both air-impermeable and air-permeable insulation are provided, the *air-impermeable insulation* shall be applied in direct contact with the underside of the structural roof sheathing in accordance with Item 5.1.1 and shall be in accordance with the R values in Table 1203.3 for condensation control. The *air-permeable insulation* shall be installed directly under the *airimpermeable insulation*.
    - 5.1.4. Alternatively, sufficient rigid board or sheet insulation shall be installed directly above the structural roof sheathing to maintain the monthly average temperature of the underside of the structural roof sheathing above 45°F (7°C). For calculation purposes, an interior air temperature of 68°F (20°C) is assumed and the exterior air temperature is assumed to be the monthly average outside air temperature of the three coldest months.
  - 5.2. Where preformed insulation board is used as the *air-permeable insulation* layer, it shall be sealed at the perimeter of each individual sheet interior surface to form a continuous layer.

#### Exceptions:

- 1. Section 1203.3 does not apply to special use structures or enclosures such as swimming pool enclosures, data processing centers, hospitals or art galleries.
- 2. Section 1203.3 does not apply to enclosures in Climate Zones 5 through 8 that are humidified beyond 35 percent during the three coldest months.

**1205.5 Emergency egress lighting.** The *means of egress* shall be illuminated in accordance with Section 1008.1.

(Portions of text and tables not shown are unaffected by the errata)

#### THIRD PRINTING (Updated April 15, 2020)

#### CHAPTER 14 EXTERIOR WALLS

**[BS] 1405.17 Fastening.** Weather boarding and wall coverings shall be securely fastened with aluminum, copper, zinc, zinc-coated or other *approved* corrosion-resistant fasteners in accordance with the nailing schedule in Table 2304.10.1 or the *approved* manufacturer's instructions. Shingles and other weather coverings shall be attached with appropriate standard-shingle nails to furring strips securely nailed to studs, or with *approved* mechanically bonding nails, except where sheathing is of wood not less than 1-inch (25 mm) nominal thickness or of wood structural panels as specified in Table 2308.9.3(3) 2308.6.3(3).

#### FIRST PRINTING (Updated August 28, 2014)

#### CHAPTER 14 **EXTERIOR WALLS**

#### TABLE 1405.2 MINIMUM THICKNESS OF WEATHER COVERINGS

COVERING TYPE	MINIMUM THICKNESS (inches)
Adhered masonry veneer	0.25
Aluminum siding	0.019
Anchored masonry veneer	2.625
Asbestos-cement boards	0.125
Asbestos shingles	0.156
Cold-rolled copper <sup>d</sup>	0.0216 nominal
Copper shingles <sup>d</sup>	0.0162 nominal
Exterior plywood (with sheathing)	0.313
Exterior plywood (without sheathing)	See Section 2304.6
Fiber cement lap siding	0.25°
Fiber cement panel siding	0.25°
Fiberboard siding	0.5
Glass-fiber reinforced concrete panels	0.375
Hardboard siding <sup>c</sup>	0.25
High-yield copper <sup>d</sup>	0.0162 nominal
Lead-coated copper <sup>d</sup>	0.0216 nominal
Lead-coated high-yield copper	0.0162 nominal
Marble slabs	1
Particleboard (with sheathing)	See Section 2304.6
Particleboard (without sheathing)	See Section 2304.6
Porcelain tile	0.25
Steel (approved corrosion resistant)	0.0149
Stone (cast artificial, anchored)	1.5
Stone (natural)	2
Structural glass	0.344
Stucco or exterior cement plaster	
Three-coat work over:	
Metal plaster base	0.875 <sup>b</sup>
Unit masonry	0.625 <sup>b</sup>
Cast-in-place or precast concrete	0.625 <sup>b</sup>

(Portions of text and tables not shown are unaffected by the errata)

Two-coat work over:	
Unit masonry	0.5 <sup>b</sup>
Cast-in-place or precast concrete	0.375 <sup>b</sup>
Terra cotta (anchored)	1
Terra cotta (adhered)	0.25
Vinyl siding	0.035
Wood shingles	0.375
Wood siding (without sheathing) <sup>a</sup>	0.5

For SI:1 inch = 25.4 mm, 1 ounce = 28.35 g, 1 square foot = 0.093 m<sup>2</sup>.

a. Wood siding of thicknesses less than 0.5 inch shall be placed over sheathing that conforms to Section 2304.6.

b. Exclusive of texture.

c. As measured at the bottom of decorative grooves.

d. 16 ounces per square foot for cold-rolled copper and lead-coated copper, 12 ounces per square foot for copper shingles, high-yield copper and lead-coated high-yield copper.

**1405.3 Vapor retarders.** Vapor retarders as described in Section 1405.3.3 shall be provided in accordance with Sections 1405.3.1 and 1405.3.2, or an approved design using accepted engineering practice for hygrothermal analysis.

**[BS] 1405.6 Anchored masonry veneer.** Anchored masonry veneer shall comply with the provisions of Sections 1405.6, 1405.7, 1405.8 and 1405.9 and Sections 12.1 and 12.2 of TMS 402/ACI 530/ASCE 5.

**[BS] 1405.6.2 Seismic requirements.** Anchored masonry veneer located in Seismic Design Category C, D, E or F shall conform to the requirements of Section 12.2.2.10 of TMS 402/ACI 530/ASCE 5.

**[BS] 1405.10 Adhered masonry veneer.** Adhered masonry veneer shall comply with the applicable requirements in this section and Sections 12.1 and 12.3 of TMS 402/ACI 530/ASCE 5.

#### THIRD PRINTING (Updated April 15, 2020)

#### **CHAPTER 15 ROOF ASSEMBLIES AND ROOFTOP STRUCTURES**

[BF] 1509.2 Fire testing. Radiant barriers shall be permitted for use above decks where the radiant barrier is covered with an approved roof covering and the system consisting of the radiant barrier and the roof covering complies with the requirements of either FM 4550 4450 or UL 1256.

(Portions of text and tables not shown are unaffected by the errata)

#### SECOND PRINTING (Updated October 22, 2015)

#### CHAPTER 15 ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

#### TABLE 1504.1.1 CLASSIFICATION OF ASPHALT SHINGLES

MAXIMUM BASIC WIND SPEED, V <sub>ult</sub> , FROM FIGURE <del>1609A,</del> <del>B, C</del> 1609.3(1),	MAXIMUM BASIC WIND SPEED, Vasd, FROM TABLE	ASTM D 7158a CLASSIFICATION	ASTM D 3161 CLASSIFICATION
<u>1609.3(2), 1609.3(3)</u> OR ASCE 7	1609.3.1		

(Portions of table not shower remain unchanged)

**1504.5 Edge securement for low-slope roofs.** Low-slope built-up, modified bitumen and single-ply roof system metal edge securement, except gutters, shall be designed and installed for wind loads in accordance with Chapter 16 and tested for resistance in accordance with Test Methods RE-1, RE-2 and RE-3 of ANSI/SPRI ES-1, except *Vult* wind speed shall be determined from Figure 1609A, 1609B, or 1609C 1609.3(1), 1609.3(2) or 1609.3(3) as applicable.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 15 ROOF ASSEMBLIES AND ROOFTOP STRUCTURES

**[BG] 1510.5.1 Noncombustible construction required.** Towers, spires, domes and cupolas greater than 60 feet (18 288 mm) in height above the highest point at which such structure contacts the roof as measured to the highest point on such structure, or that exceeds 200 square feet (18.6 m2) in area at any horizontal section, or which is intended to be used for any purpose other than a belfry or architectural embellishment, or is located on the top of a building greater than 50 feet (1524 mm) in building height shall be constructed of and supported by noncombustible materials and shall be separated from the building below by construction having a fire-resistance rating of not less than 1.5 hours with openings protected in accordance with Section 711. Such structures located on the top of a building greater than 50 feet (15 240 mm) in building height shall be supported by noncombustible construction.

**[BG] 1510.6.3 Type V construction.** The height of mechanical equipment screens located on the roof decks of buildings of Type V construction, as measured from grade plane to the highest point on the mechanical equipment screen, shall be permitted to exceed the maximum building height allowed for the building by other provisions of this code where complying with any one of the following limitations, provided the fire separation distance is greater than 5 feet (1524 mm):

- 1. Where the fire separation distance is not less than 20 feet (6096 mm), the height above grade plane of the mechanical equipment screen shall not exceed 4 feet (1219 mm) more than the maximum building height allowed;
- 2. The mechanical equipment screen shall be constructed of noncombustible materials;
- 3. The *mechanical equipment screen* shall be constructed of fire-retardant-treated wood complying with Section 2303.2 for exterior installation; or
- 4. Where the fire separation distance is not less than 20 feet (6096 mm), the *mechanical equipment screen* shall be constructed of materials having a flame spread index of 25 or less when tested in the minimum and maximum thicknesses intended for use with each face tested independently in accordance with ASTM E 84 or UL 723.

**[BG] 1510.7 Photovoltaic panels and modules.** Rooftop-mounted *photovoltaic panels* and *modules* shall be designed in accordance with this section.

**[BG] 1510.7.1 Wind resistance.** Rooftop-mounted *photovoltaic panels* and *modules* shall be designed for component and cladding wind loads in accordance with Chapter 16 using an effective wind area based on the dimensions of a single unit frame.

**[BG] 1510.7.2 Fire classification.** Rooftop-mounted *photovoltaic panels* and *modules* shall have the fire classification in accordance with Section 1505.9.

**[BG] 1510.7.3 Installation.** Rooftop-mounted *photovoltaic panels* and *modules* shall be installed in accordance with the manufacturer's instructions.

**[BG] 1510.7.4 Photovoltaic panels and modules.** Rooftop-mounted *photovoltaic panels* and *modules* shall be *listed* and labeled in accordance with UL 1703 and shall be installed in accordance with the manufacturer's instructions.

**[BG] 1510.8 Other rooftop structures.** Rooftop structures not regulated by Sections 1510.2 through 1510.7 shall comply with Sections 1510.8.1 through 1510.8.5, as applicable.

[BG] 1510.8.1 Aerial supports. Aerial supports shall be constructed of noncombustible materials.

(Portions of text and tables not shown are unaffected by the errata)

**Exception:** Aerial supports not greater than 12 feet (3658 mm) in height as measured from the roof deck to the highest point on the aerial supports shall be permitted to be constructed of combustible materials.

**[BG] 1510.8.2 Bulkheads.** Bulkheads used for the shelter of mechanical or electrical equipment or vertical shaft openings in the roof assembly shall comply with Section 1510.2 as penthouses. Bulkheads used for any other purpose shall be considered as an additional story of the building.

**[BG] 1510.8.3 Dormers.** Dormers shall be of the same type of construction as required for the roof in which such dormers are located or the exterior walls of the building.

**[BG] 1510.8.4 Fences.** Fences and similar structures shall comply with Section 1510.6 as *mechanical equipment screens*.

**[BG] 1510.8.5 Flagpoles.** Flagpoles and similar structures shall not be required to be constructed of noncombustible materials and shall not be limited in height or number.

**[BG] 1510.9 Structural fire resistance.** The structural frame and roof construction supporting imposed loads upon the roof by any rooftop structure shall comply with the requirements of Table 601. The fire-resistance reduction permitted by Table 601, Note a, shall not apply to roofs containing rooftop structures.

(Portions of text and tables not shown are unaffected by the errata)

#### SECOND PRINTING (Updated October 22, 2015)

#### CHAPTER 16 STRUCTURAL DESIGN

**1612.5 Flood hazard documentation.** The following documentation shall be prepared and sealed by a *registered design professional* and submitted to the *building official*:

- 1. For construction in flood hazard areas other than coastal high hazard areas or coastal A zones:
  - 1.1. The elevation of the lowest floor, including the basement, as required by the lowest floor elevation inspection in Section 110.3.3 and for the final inspection in Section 110.3.10.1.
  - 1.2. For fully enclosed areas below the design flood elevation where provisions to allow for the automatic entry and exit of floodwaters do not meet the minimum requirements in Section 2.6.2.1 <u>2.7.2.1</u> of ASCE 24, *construction documents* shall include a statement that the design will provide for equalization of hydrostatic flood forces in accordance with Section 2.6.2.2 <u>2.7.2.2</u> of ASCE 24.
  - 1.3. For dry flood proofed nonresidential buildings, *construction documents* shall include a statement that the dry flood proofing is designed in accordance with ASCE 24.
- 2. For construction in coastal high hazard areas and coastal A zones:
  - 2.1. The elevation of the bottom of the lowest horizontal structural member as required by the lowest floor elevation inspection in Section 110.3.3 and for the final inspection in Section 110.3.10.1.
  - 2.2. Construction documents shall include a statement that the building is designed in accordance with ASCE 24, including that the pile or column foundation and building or structure to be attached thereto is designed to be anchored to resist flotation, collapse and lateral movement due to the effects of wind and flood loads acting simultaneously on all building components, and other load requirements of Chapter 16.
  - 2.3. For breakaway walls designed to have a resistance of more than 20 psf (0.96 kN/m2) determined using allowable stress design, *construction documents* shall include a statement that the breakaway wall is designed in accordance with ASCE 24.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated June 23, 2015)

#### CHAPTER 16 STRUCTURAL DESIGN

**1604.6 In-situ load tests.** The *building official* is authorized to require an engineering analysis or a load test, or both, of any construction whenever there is reason to question the safety of the construction for the intended occupancy. Engineering analysis and load tests shall be conducted in accordance with Section <u>1709</u> <u>1708</u>.

**1604.7 Preconstruction load tests.** Materials and methods of construction that are not capable of being designed by *approved* engineering analysis or that do not comply with the applicable referenced standards, or alternative test procedures in accordance with Section 1707, shall be load tested in accordance with Section 1709.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated October 13, 2014)

#### CHAPTER 16 STRUCTURAL DESIGN

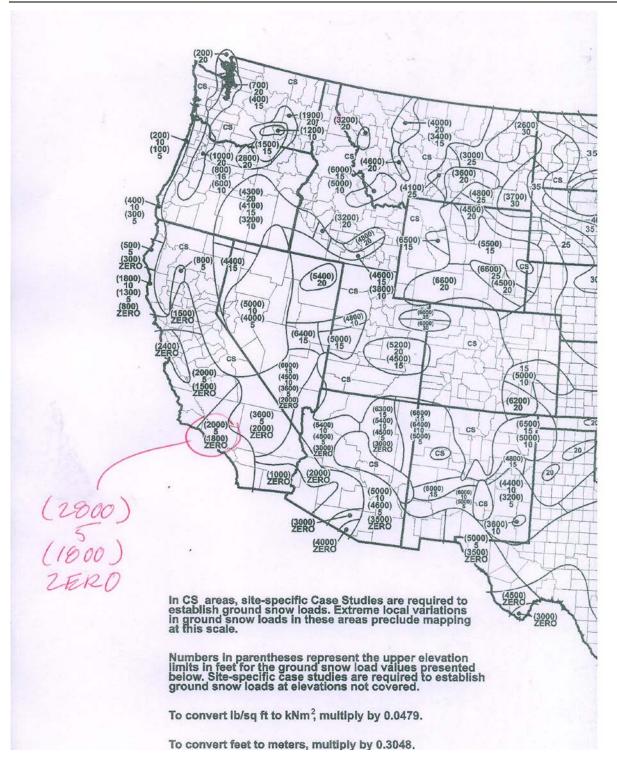
TABLE 1604.3DEFLECTION LIMITS

Note a should read "... exceed <mark>I/60</mark>." "... exceed <mark>I/150</mark>." And "... exceed <mark>I/90</mark>." Note h should read "... exceed I/60." "... exceed I/175 for each glass lite or I/60 for ..." And "... exceed I/120." Note I should read "... members, I shall be ..."

In all cases, that's a lowercase "L" replacing the number 1.

Figure 1608.2 GROUND SNOW LOADS, pg, FOR THE UNITED STATES (psf) (Revise southern California values as indicated in the figure)

(Portions of text and tables not shown are unaffected by the errata)



**1609.1.2.1 Louvers.** Louvers protecting intake and exhaust ventilation ducts not assumed to be open that are located within 30 feet (9144 mm) of grade shall meet the requirements of AMCA 540.

1612.2 Definitions. The following terms are defined in Chapter 2: BASE FLOOD. BASE FLOOD ELEVATION. BASEMENT. COASTAL A ZONE. COASTAL HIGH HAZARD AREA. DESIGN FLOOD.

**DESIGN FLOOD ELEVATION.** DRY FLOODPROOFING. **EXISTING CONSTRUCTION. EXISTING STRUCTURE.** FLOOD or FLOODING. FLOOD DAMAGE-RESISTANT MATERIALS. FLOOD HAZARD AREA. FLOOD INSURANCE RATE MAP (FIRM). FLOOD INSURANCE STUDY. FLOODWAY. LOWEST FLOOR. SPECIAL FLOOD HAZARD AREA. START OF CONSTRUCTION. SUBSTANTIAL DAMAGE. SUBSTANTIAL IMPROVEMENT.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 18 STRUCTURAL DESIGN

**1809.12 Timber footings.** Timber footings shall be permitted for buildings of Type V construction and as otherwise *approved* by the *building official*. Such footings shall be treated in accordance with AWPA U1 (Commodity Specification A, Use Category 4B). Treated timbers are not required where placed entirely below permanent water level, or where used as capping for wood piles that project above the water level over submerged or marsh lands. The compressive stresses perpendicular to grain in untreated timber footings supported upon treated piles shall not exceed 70 percent of the allowable stresses for the species and grade of timber as specified in the ANSI/AWC NDS.

**1810.3.2.4 Timber.** Timber deep foundation elements shall be designed as piles or poles in accordance with ANSI/AWC NDS. Round timber elements shall conform to ASTM D 25. Sawn timber elements shall conform to DOC PS-20.

**1810.3.11.2 Seismic Design Categories D through F.** For structures assigned to *Seismic Design Category* D, E or F, deep foundation element resistance to uplift forces or rotational restraint shall be provided by anchorage into the pile cap, designed considering the combined effect of axial forces due to uplift and bending moments due to fixity to the pile cap. Anchorage shall develop a minimum of 25 percent of the strength of the element in tension. Anchorage into the pile cap shall comply with the following:

- 1. In the case of uplift, the anchorage shall be capable of developing the least of the following:
  - 1.1. The nominal tensile strength of the longitudinal reinforcement in a concrete element.
  - 1.2. The nominal tensile strength of a steel element.
  - 1.3. The frictional force developed between the element and the soil multiplied by 1.3. Exception: The anchorage is permitted to be designed to resist the axial tension force resulting from the seismic load effects including overstrength factor in accordance with Section 12.4.3 or 12.14.3.2 of ASCE 7.
- 2. In the case of rotational restraint, the anchorage shall be designed to resist the axial and shear forces, and moments resulting from the seismic load effects including overstrength factor in accordance with Section 12.4.3 or 12.14.3.2 of ASCE 7 or the anchorage shall be capable of developing the full axial, bending and shear nominal strength of the element.

Where the vertical lateral-force-resisting elements are columns, the pile cap flexural strengths shall exceed the column flexural strength. The connection between batter piles and pile caps shall be designed to resist the nominal strength of the pile acting as a short column. Batter piles and their connection shall be designed to resist forces and moments that result from the application of seismic load effects including over strength factor in accordance with Section 12.4.3 or 12.14.3.2 of ASCE 7.

(Portions of text and tables not shown are unaffected by the errata)

#### THIRD PRINTING (Updated April 15, 2020)

#### CHAPTER 19 CONCRETE

1905.1.8 ACI 318, Section 17.2.3. Modify ACI 318 Sections 17.2.3.4.2, 17.2.3.4.3(d) and 17.2.3.5.2 to read as follows:

17.2.3.4.2 – (no change)

17.2.3.4.3(D)- (no change)

Exceptions:

1. (no change)

1.1. The allowable in-plane shear strength of the anchor is determined in accordance with ANSI/AWC NDS Table <u>11E</u> 12E for lateral design values parallel to grain.

1.2 through 3 – (no change)

#### THIRD PRINTING (Updated April 15, 2020)

#### **CHAPTER 21** MASONRY

2104.1.1 Support on wood. Masonry shall not be supported on wood girders or other forms of wood construction except as permitted in Section 2304.12 2304.13.

(Portions of text and tables not shown are unaffected by the errata)

#### THIRD PRINTING (Updated April 15, 2020)

#### CHAPTER 23 WOOD

**2304.12.4 Termite protection.** In geographical areas where hazard of termite damage is known to be very heavy, wood floor framing in the locations specified in Section 2304.12.2.1 2304.12.1.1 and exposed framing of exterior decks or balconies shall be of naturally durable species (termite resistant) or preservative treated in accordance with AWPA U1 for the species, product preservative and end use or provided with *approved* methods of termite protection.

(Portions of text and tables not shown are unaffected by the errata)

#### SECOND PRINTING (Updated October 22, 2015)

#### CHAPTER 23 STRUCTURAL DESIGN

# TABLE 2304.8(1)ALLOWABLE SPANS FOR LUMBER FLOOR AND ROOF SHEATHING a,b(No change to table)

For SI: 1 inch = 25.4 mm.

- a. Installation details shall conform to Sections 2304.8.1 and 2304.8.2 for floor and roof sheathing, respectively.
- Floor or roof sheathing complying with this table shall be deemed to meet the design criteria of Section <u>2304.7</u> <u>2304.8</u>.
- c. Maximum 19-percent moisture content.

#### FIRST PRINTING (Updated October 30, 2014)

2308.2.6 Risk Category limitation. The use of the provisions for conventional light-frame construction in this section shall not be permitted for Risk Category IV buildings, as determined by Section 1604.5, assigned to Seismic Design Category B, C, D or  $\blacksquare \underline{F}$ .

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 23 STRUCTURAL DESIGN

#### TABLE 2306.2(1)

#### ALLOWABLE SHEAR VALUES (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL DIAPHRAGMS UTILIZING STAPLES WITH FRAMING OF DOUGLAS FIR-LARCH, OR SOUTHERN PINE<sup>a</sup> FOR WIND OR SEISMIC LOADING<sup>f</sup>

Portions of table or footnotes not shown remain unchanged.

- a. For framing of other species: (1) Find specific gravity for species of lumber in ANSI/AWC NDS. (2) For staples find shear value from table above for Structural I panels (regardless of actual grade) and multiply value by 0.82 for species with specific gravity of 0.42 or greater, or 0.65 for all other species.
- f. For shear loads of normal or permanent load duration as defined by the ANSI/AWC NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.

#### TABLE 2306.2(2)

ALLOWABLE SHEAR VALUES (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL BLOCKED DIAPHRAGMS UTILIZING MULTIPLE ROWS OF STAPLES (HIGH-LOAD DIAPHRAGMS) WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE<sup>a</sup> FOR WIND OR SEISMIC LOADING <sup>b, g, h</sup> Portions of table or footnotes not shown remain unchanged.

a. For framing of other species: (1) Find specific gravity for species of framing lumber in ANSI/AWC NDS. (2) For staples, find shear value from table above for Structural I panels (regardless of actual grade) and

multiply value by 0.82 for species with specific gravity of 0.42 or greater, or 0.65 for all other species.
h. For shear loads of normal or permanent load duration as defined by the ANSI/AWC NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.

#### TABLE 2306.3(1)

# ALLOWABLE SHEAR VALUES (POUNDS PER FOOT) FOR WOOD STRUCTURAL PANEL SHEAR WALLS UTILIZING STAPLES WITH FRAMING OF DOUGLAS FIR-LARCH OR SOUTHERN PINE<sup>a</sup> FOR WIND OR SEISMIC LOADING <sup>b, f, g, i</sup>

Portions of table or footnotes not shown remain unchanged.

- a. For framing of other species: (1) Find specific gravity for species of lumber in ANSI/AWC NDS. (2) For staples find shear value from table above for Structural I panels (regardless of actual grade) and multiply value by 0.82 for species with specific gravity of 0.42 or greater, or 0.65 for all other species.
- g. In Seismic Design Category D, E or F, where shear design values exceed 350 pounds per linear foot, all framing members receiving edge fastening from abutting panels shall be not less than a single 3-inch nominal member, or two 2-inch nominal members fastened together in accordance with Section 2306.1 to transfer the design shear value between framing members. Wood structural panel joint and sill plate nailing shall be staggered at all panel edges. See AWC SDPWS for sill plate size and anchorage requirements.
- i. For shear loads of normal or permanent load duration as defined by the ANSI/AWC NDS, the values in the table above shall be multiplied by 0.63 or 0.56, respectively.

#### TABLE 2306.3(2)

# ALLOWABLE SHEAR VALUES (plf) FOR WIND OR SEISMIC LOADING ON SHEAR WALLS OF FIBERBOARD SHEATHING BOARD CONSTRUCTION UTILIZING STAPLES FOR TYPE V CONSTRUCTION ONLY <sup>a, b, c, d, e</sup>

Portions of table or footnotes not shown remain unchanged.

b. Panel edges shall be backed with 2-inch or wider framing of Douglas Fir-larch or Southern Pine. For framing of other species: (1) Find specific gravity for species of framing lumber in ANSI/AWC NDS. (2) For staples, multiply the shear value from the table above by 0.82 for species with specific gravity of 0.42 or greater, or 0.65 for all other species.

(Portions of text and tables not shown are unaffected by the errata)

#### TABLE 2306.3(3)

ALLOWABLE SHEAR VALUES FOR WIND OR SEISMIC FORCES FOR SHEAR WALLS OF LATH AND PLASTER OR GYPSUM BOARD WOOD FRAMED WALL ASSEMBLIES UTILIZING STAPLES

Portions of table or footnotes not shown remain unchanged.

a. These shear walls shall not be used to resist loads imposed by masonry or concrete walls (see AWC SDPWS). Values shown are for short-term loading due to wind or seismic loading. Walls resisting seismic loads shall be subject to the limitations in Section 12.2.1 of ASCE 7. Values shown shall be reduced 25 percent for normal loading.

#### THIRD PRINTING (Updated April 15, 2020)

#### CHAPTER 24 GLASS AND GLAZING

2406.1.3 Glass block. Glass-block walls shall comply with Section 2101.2.5 2110.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated October 13, 2014)

#### CHAPTER 25 GYPSUM BOARD, GYPSUM PANEL PRODUCTS AND PLASTER

#### **TABLE 2506.2** GYPSUM BOARD AND GYPSUM PANEL PRODUCTS MATERIALS AND ACCESSORIES MATERIAL STANDARD Accessories for gypsum board ASTM C1047 **ASTM C557** Adhesives for fastening gypsum board Cold-formed steel studs and track, structural AISI S200 and ASTM C 955, Section 8 AISI S220 and ASTM C 645, Section 10 Cold-formed steel studs and track, nonstructural ASTM C 920 Elastomeric joint sealants Fiber-reinforced gypsum panels ASTM C 1278 Glass mat gypsum backing panel ASTM C 1178 Glass mat gypsum panel 5 ASTM C 1658 Glass mat gypsum substrate ASTM C 1177 Joint reinforcing tape and compound ASTM C 474; C 475 Nails for gypsum boards ASTM C 514, F 547, F 1667 Steel screws ASTM C 954; C 1002 Standard specification for gypsum board ASTM C 1396 Testing gypsum and gypsum products ASTM C 22; C 472; C 473

#### TABLE 2507.2 LATH, PLASTERING MATERIALS AND ACCESSORIES

MATERIAL	STANDARD			
Accessories for gypsum veneer base	ASTM C1047			
Blended cement	ASTM C595			
Exterior plaster bonding compounds	ASTM C932			
Cold-formed steel studs and track, structural	AISI S200 and ASTM C 955, Section 8			
Cold-formed steel studs and track, nonstructural	AISI S220 and ASTM C 645, Section 10			
Elastomeric joint sealants	ASTM C 920			
Fiber-reinforced gypsum panels	ASTM C 1278			
Glass mat gypsum backing panel	ASTM C 1178			
Glass mat gypsum panel 5	ASTM C 1658			
Glass mat gypsum substrate	ASTM C 1177			
Joint reinforcing tape and compound	ASTM C 474; C 475			
Nails for gypsum boards	ASTM C 514, F 547, F 1667			
Steel screws	ASTM C 954; C 1002			
Standard specification for gypsum board	ASTM C 1396			
Testing gypsum and gypsum products	ASTM C 22; C 472; C 473			

2508.3.1 Floating angles. Fasteners at the top and bottom plates of vertical assemblies, or the edges and ends of horizontal assemblies perpendicular to supports, and at the wall line are permitted to be omitted except on shear resisting elements or fire-resistance-rated assemblies. Fasteners shall be applied in such a manner as not to fracture the face paper with the fastener head.

(Portions of text and tables not shown are unaffected by the errata)

#### THIRD PRINTING (Updated April 15, 2020)

#### CHAPTER 26 PLASTIC

**2603.7 Foam plastic insulation used as interior finish or interior trim in plenums.** Foam plastic insulation used as interior wall or ceiling finish or as interior trim in plenums shall exhibit a flame spread index of 75 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E 84 or UL 723 and shall comply with one or more of Sections 2603.7.1, 2603.7.2 and <u>2603.7.3</u>-2607.3.

#### TABLE 2603.12.2 FURRING MINIMUM FASTENING REQUIREMENTS FOR ABBLICATION OVER FOAM BLASTIC SHEATHING TO SUBBORT OLADDING WEIGHT

FURRING	FRAMING	FASTENER	MINIMUM	FASTENER	MAXIMUM THICKNESS OF FOAM SHEATHING <sup>4</sup>					
MATERIAL	MEMBER	TYPE AND	PENETRATION	SPACING IN	<sup>d</sup> (inches)			-		
		MINIMUM	INTO WALL	FURRING	(	,				
		SIZEb	FRAMING	(inches)						
			(inches)	(						
					16"o.c.	furring <sup>e</sup>		24"o.c.	furring <sup>e</sup>	
					Cladding weight Cladding weight		ng weigł	nt		
					3 psf	11	25 psf	3 psf	11	25
					-	psf		-	psf	psf

(No change to table -replace footnote 4 with d in top row last column)

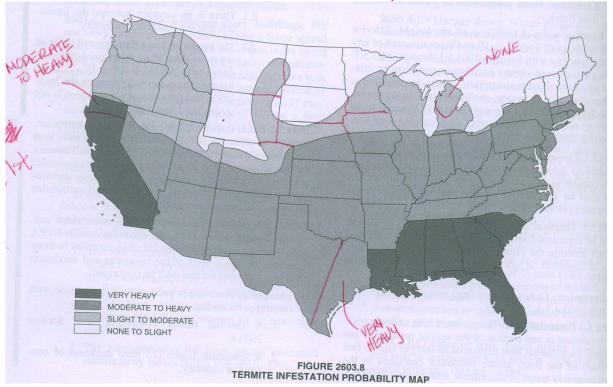
(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated October 27, 2014)

#### CHAPTER 26 PLASTIC

#### Figure 2603.8 TERMITE INFESTATION PROBABILITY MAP

Add state lines in the middle of the map Change the color indications in California, Michigan and Texas as indicated (same as 2015 IRC Figure R3012.6)



**2603.9 Special approval.** Foam plastic shall not be required to comply with the requirements of Section 2603.4 or those of Section 2603.6 where specifically approved based on large scale tests such as, but not limited to, NFPA 286 (with the acceptance criteria of Section 803.1.2.1), FM 4880, UL 1040 or UL 1715. Such testing shall be related to the actual end-use configuration and be performed on the finished manufactured foam plastic assembly in the maximum thickness intended for use. Foam plastics that are used as interior finish on the basis of special tests shall also conform to the flame spread and smoke-developed requirements of Chapter 8. Assemblies tested shall include seams, joints and other typical details used in the installation of the assembly and shall be tested in the manner intended for use.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated September 11, 2014)

#### CHAPTER 27 ELECTRIC

**[F] 2702.2.3 Emergency responder radio coverage systems.** Standby power shall be provided for emergency responder radio coverage systems required in Section 916 and the *International Fire Code*. The standby power supply shall be capable of operating the emergency responder radio coverage system for a duration of not less than 24 hours.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 30 ELEVATORS AND CONVEYING SYSTEMS

**3008.8.1 Protection of wiring or cables.** Wires or cables that are located outside of the elevator hoistway, machine room, control room and control space and that provide normal or standby power, control signals, communication with the car, lighting, heating, air conditioning, *ventilation* and fire-detecting systems to occupant evacuation elevators shall be protected by construction having a *fire-resistance rating* of not less than 2 hours, shall be circuit integrity cable having a fire-resistance rating of not less than 2 hours or shall be protected by a listed electrical circuit protective system having a *fire-resistance rating* of not less than 2 hours.

**Exception:** Wiring and cables to control signals are not required to be protected provided that wiring and cables do not serve Phase II emergency in-car operation.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 31 SPECIAL CONSTRUCTION

#### SECTION 3109 SWIMMING POOLS, SPAS AND HOT TUBS

**3109.1 General.** The design and construction of swimming pools, spas and hot tubs shall comply with the *International Swimming Pool and Spa Code.* 

**3109.1 General.** Swimming pools shall comply with the requirements of Sections 3109.2 through 3109.5 and other applicable sections of this code.

**3109.2 Definition.** The following term is defined in Chapter 2: **SWIMMING POOLS.** 

**3109.3 Public swimming pools.** Public swimming pools shall be completely enclosed by a fence not less than 4 feet (1290 mm) in height or a screen enclosure. Openings in the fence shall not *permit* the passage of a 4-inch-diameter (102 mm) sphere. The fence or screen enclosure shall be equipped with self-closing and self-latching gates.

**3109.4 Residential swimming pools.** Residential swimming pools shall be completely enclosed by a barrier complying with Sections 3109.4.1 through 3109.4.3.

**Exception:** A swimming pool with a power safety cover or a spa with a safety cover complying with ASTM F 1346 need not comply with this section.

**3109.4.1 Barrier height and clearances.** The top of the barrier shall be not less than 48 inches (1219 mm) above grade measured on the side of the barrier that faces away

from the swimming pool. The vertical clearance between grade and the bottom of the barrier shall be not greater than 2 inches (51 mm) measured on the side of the barrier

that faces away from the swimming pool. Where the top of the pool structure is above grade, the barrier is authorized to be at ground level or mounted on top of the pool structure,

and the vertical clearance between the top of the pool structure and the bottom of the barrier shall be not greater than 4 inches (102 mm).

3109.4.1.1 Openings. Openings in the barrier shall not allow passage of a 4-inch-diameter (102 mm) sphere.

**3109.4.1.2 Solid barrier surfaces.** Solid barriers which do not have openings shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

#### 3109.4.1.3 Closely spaced horizontal members.

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall be not greater than 13/4 inches (44 mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall be not greater than 13/4 inches (44 mm) in width.

#### 3109.4.1.4 Widely spaced horizontal members.

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches (1143 mm) or more, spacing between vertical members shall be not greater

(Portions of text and tables not shown are unaffected by the errata)

than 4 inches (102 mm). Where there are decorative cutouts within vertical members, spacing within the cutouts shall be not greater than 13/4 inches (44 mm) in width.

**3109.4.1.5 Chain link dimensions.** Mesh size for chain link fences shall be not greater than a 21/4-inch square (57 mm square) unless the fence is provided with slats fastened at the top or the bottom that reduce the openings to not more than 13/4 inches (44 mm).

**3109.4.1.6 Diagonal members.** Where the barrier is composed of diagonal members, the opening formed by the diagonal members shall be not greater than 13/4 inches (44 mm).

**3109.4.1.7 Gates.** Access doors or gates shall comply with the requirements of Sections 3109.4.1.1 through 3109.4.1.6 and shall be equipped to accommodate a locking device. Pedestrian access doors or gates shall open outward away from the pool and shall be selfclosing and have a self-latching device. Doors or gates other than pedestrian access doors or gates shall have a self-latching device. Release mechanisms shall be in accordance with Sections 1010.1.9 and 1109.13. Where the release mechanism of the self-latching device is located less than 54 inches (1372 mm) from the bottom of the door or gate, the release mechanism shall be located on the pool side of the door or gate 3 inches (76 mm) or more, below the top of the door or gate, and the door or gate and barrier shall be without openings greater than 1/2 inch (12.7 mm) within 18 inches (457 mm) of the release mechanism.

**3109.4.1.8 Dwelling wall as a barrier.** Where a wall of a *dwelling* serves as part of the barrier, one of the following shall apply:

- 1. Doors with direct access to the pool through that wall shall be equipped with an alarm that produces an audible warning when the door or its screen, if present, are opened. The alarm shall be *listed* and labeled in accordance with UL 2017. In dwellings not required to be Accessible units, Type A units or Type B units, the deactivation switch shall be located 54 inches (1372 mm) or more above the threshold of the door. In dwellings required to be Accessible units, Type B units, the deactivation switch shall be located 54 inches (1372 mm) or more above the threshold of the door. In dwellings required to be Accessible units, Type A units, the deactivation switch shall be located for the units, Type A units or Type B units, the deactivation switch shall be located for the units, Type A units or Type B units, the deactivation switch shall be located for the units, Type A units or Type B units, the deactivation switch shall be located for the units, Type A units or Type B units, the deactivation switch shall be located for the units, Type A units or Type B units, the deactivation switch shall be located for the units, Type A units or Type B units, the deactivation switch shall be located not higher than 54 inches (1372 mm) and not less than 48 inches (1219 mm) above the threshold of the door.
- 2. The pool shall be equipped with a power safety cover that complies with ASTM F 1346.
- 3. Other means of protection, such as self-closing doors with self-latching devices, which are approved, shall be accepted so long as the degree of protection afforded is not less than the protection afforded by Item 1 or 2 above.

**3109.4.1.9 Pool structure as barrier.** Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then the ladder or steps either shall be capable of being secured, locked or removed to prevent access, or the ladder or steps shall be surrounded by a barrier that meets the requirements of Sections 3109.4.1.1 through 3109.4.1.8. Where the ladder or steps are secured, locked or removed, any opening created shall not allow the passage of a 4-inch-diameter (102 mm) sphere.

**3109.4.2 Indoor swimming pools.** Walls surrounding indoor swimming pools shall not be required to comply with Section 3109.4.1.8.

**3109.4.3 Prohibited locations.** Barriers shall be located so as to prohibit permanent structures, equipment or similar objects from being used to climb the barriers.

**3109.5 Entrapment avoidance.** Suction outlets shall be designed and installed in accordance with ANSI/APSP-7.

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated August 11, 2014)

#### CHAPTER 33 SAFEGUARDS DURING CONSTRUCTION

**3303.7 Fire safety during demolition.** Fire safety during demolition shall comply with the applicable requirements of this code and the applicable provisions of Chapter **33** of the *International Fire Code*.

**[F] 3310.2 Maintenance of means of egress.** Required *means of egress* shall be maintained at all times during construction, demolition, remodeling or *alterations* and *additions* to any building.

**Exception:** Existing means of egress need not be maintained where approved temporary means of egress systems and facilities are provided.

#### THIRD PRINTING (Updated April 15, 2020)

#### **CHAPTER 35 REFERENCE STANDARDS**

ICC		
Standard Reference		
Number	Title	Code Section
ISPSC-15	International Swimming Pool and Spa Code	3109.1
ASCE		
	dard Specification for the Design of Cold-formed Stainles	ss Steel Structural Members 1604.3.3,
2210.1, 2210.2 29- <mark>14</mark> 05	Standard Calculation Methods for Structural Fire Prote	ection 722.1
	nd Tunnel Testing for Buildings and Other Structure	s
1609.1.1		

FΜ

4450 (1989) Approval Standard for Class 1 Insulated Steel Deck Roofs—with Supplements through July 1992 .... 1509.2

FIRST PRINTING (Updated December 6, 2016)

#### **CHAPTER 35 REFERENCE STANDARDS**

(Portions of text and tables not shown are unaffected by the errata)

#### FIRST PRINTING (Updated June 23, 2015)

#### CHAPTER 35 REFERENCE STANDARDS

#### APSP

The Association of Pool & Spa Professionals 2111 Eisenhower Avenue Alexandria, VA 22314

#### ASCE

24—13 14 Flood Resistant Design and Construction ...1203.4.2, 1612.4, 1612.5, 2702.1.7, 3001.2

#### ASTM

#### AWC

ANSI/AWC NDS—2015 National Design Specification (NDS) for Wood Construction with <u>2012 2015 NDS</u> Supplement .....202, 722.1, <u>722.6.3.2</u>, Table 1604.3, <u>1711.1.1</u>, <u>1711.1.2.1</u>, 1809.12, 1810.3.2.4, Table 1810.3.2.6, 1905.1.8, <u>2302.1</u>, 2304.13, 2306.1, <u>2306.2</u>, Table 2306.2(1), Table 2306.2(2), Table 2306.3(1), Table 2306.3(2), 2307.1

#### GA

GA 600—09 12 Fire-Resistance Design Manual, 20th Edition ... Table 721.1(1), Table 721.1(2), Table 721.1(3)

#### NFPA

85—11 15 Boiler and Combustion System Hazards Code.....415.8.1

#### TMS

403-2013 Direct Design Handbook for Masonry Structures....2101.2

#### THIRD PRINTING (Updated April 15, 2020)

#### APPENDIX D FIRE DISTRICTS

D105.1 General. The preceding provisions of this appendix shall not apply in the following instances:

Items 1 through 4 are unchanged.

5. Water tanks and cooling towers conforming to Sections 1509.3 and 1509.4 1510.3 and 1510.4.

Items 6 through 12 are unchanged

#### FIRST PRINTING (Updated June 23, 2015)

#### **APPENDIX G FLOOD-RESISTANT CONSTRUCTION**

G801.4 Retaining walls, sidewalks and driveways. Retaining walls, sidewalks and driveways shall meet the requirements of Section 1804.4 1804.5.

(Portions of text and tables not shown are unaffected by the errata)

#### THIRD PRINTING (Updated April 15, 2020)

#### APPENDIX H SIGNS

**H106.1.1 Internally illuminated signs.** Except as provided for in Sections 402.16 402.6.4 and 2611, where internally illuminated signs have facings of wood or approved plastic, the area of such facing section shall be not more than 120 square feet (11.16 m2) and the wiring for electric lighting shall be entirely enclosed in the sign cabinet with a clearance of not less than 2 inches (51 mm) from the facing material. The dimensional limitation of 120 square feet (11.16 m2) shall not apply to sign facing sections made from flame-resistant-coated fabric (ordinarily known as "flexible sign face plastic") that weighs less than 20 ounces per square yard (678 g/m2) and that, when tested in accordance with NFPA 701, meets the fire propagation performance requirements of both Test 1 and Test 2 or that, when tested in accordance with an approved test method, exhibits an average burn time of 2 seconds or less and a burning extent of 5.9 inches (150 mm) or less for 10 specimens.

#### FIRST PRINTING (Updated August 11, 2014)

#### **APPENDIX H** SIGNS

User note: Code change proposals to this appendix will be considered by the IBC – Structural Code Development Committee during the 2016 (Group B) Code Development Cycle. See explanation on page iv.

#### FIRST PRINTING (Updated August 11, 2014)

#### **APPENDIX I PATIO COVERS**

User note: Code change proposals to this appendix will be considered by the IBC - Structural Code Development Committee during the 2016 (Group B) Code Development Cycle. See explanation on page iv.

#### FIRST PRINTING (Updated October 13, 2014)

#### **APPENDIX J** GRADING

#### Figure J108.1 **DRAINAGE DIMENSIONS** (Revise figure as indicated below)

