ARTICLE II. INTERNATIONAL BUILDING CODE

Sec. 8-200. Adopted; where filed; amendments.

(a) That certain document known as the "International Building Code, 2009 Edition," which has been published as a code in book form by the International Code Council, chapters two through thirty-five and appendix chapters C, I and J inclusive, three (3) copies with amendments of which are on file in the office of the City Clerk.
(Ord. No. 2011.33, 9-22-11)

Charter reference—Adoption by reference, § 2.14.
State law reference—Adoption by reference, A.R.S. § 9-801 et seq.

Sec. 306 FACTORY GROUP F

Section 306.2 is hereby amended as follows:

Woodworking (cabinet) (establishments with more than 3 woodworking appliances.)
(Ord. No. 2011.33, 9-22-11)

Sec. 308 INSTITUTIONAL GROUP I

Section 308.2 is hereby amended as follows:

Section 308.2 Group I-1. This occupancy shall include buildings, structures or parts thereof housing more than 10 persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a residential environment that provides personal care and/or supervisory care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This group shall include, but not be limited to, the following:

Residential board and care facilities
Assisted living centers
Halfway houses
Group homes
Congregate care facilities
Social rehabilitation facilities
Alcohol and Drug abuse treatment centers
Convalescent facilities

A facility such as the above with five or fewer persons, excluding staff, shall be classified as Group R-3 and shall comply with the *International Residential Code* in accordance with Section 101.2. A facility such as the above housing at least 6 but not more than 10 persons, excluding staff, shall be classified as a Group R-4 and shall comply with the *International Residential Code* in accordance with Tempe Building Safety Administrative Code, Section 101.2 and with Section 424 of this code.

Section 308.3 is hereby amended as follows:

Section 308.3 Group I-2. This occupancy shall include buildings and structures used for medical, surgical, psychiatric, nursing, custodial, personal, or directed care on a 24-hour basis of persons who are not capable of self-preservation by responding to an emergency situation without physical assistance from staff. This group shall include, but not be limited to, the following:

Hospitals

Nursing homes (both intermediate-care facilities and skilled nursing facilities)
Mental hospitals
Detoxification facilities

(Ord. No. 2011.33, 9-22-11)

Sec. 310 RESIDENTIAL GROUP R

Section 310.1 is hereby amended as follows:

R-1 Residential occupancies where the occupants are primarily transient in nature, including:

Boarding houses
Hotels
Motels

R-2 Residential occupancies containing sleeping units or more than two dwelling units where the occupants are primarily permanent in nature, including:

Apartment houses
Convents
Dormitories
Fraternities and sororities
Live/work units
Monasteries
Vacation timeshare properties

Fraternity and sorority houses are any building used in whole or in part as a dwelling and occupied by and maintained exclusively or primarily for college, university or professional school students who are affiliated with a social, honorary or professional organization recognized currently or in the past by a college, university or professional school.

R-3 Residential occupancies where the occupants are primarily permanent in nature and not classified as R-1, R-2, R-4 or I and where:

1. Buildings do not contain more than two dwelling units as applicable in Tempe Building Safety Administrative Code, Section 101.4.2, or
2. Adult care and child care facilities that provide accommodation for five or fewer persons, excluding staff, of any age.

Adult care and child care facilities that are within a single-family home are permitted to comply with the *International Residential Code* in accordance with Tempe Building Safety Administrative Code, Section 101.4.2.

R-4 Residential occupancies shall include buildings arranged for occupancy as residential care/assisted living facilities including at least 6 but not more than 10 occupants, excluding staff.

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3 except as otherwise provided for in this code or shall comply with the *International Residential Code* in accordance with Tempe Building Safety Administrative Code, Section 101.4.2 and with Section 424 of this code.

Section 310.2 is hereby amended as follows:

Personal care service. The care of residents who do not require chronic or convalescent medical or nursing care. Personal care involves assistance with activities of daily living that can be performed by

persons without professional skills or professional training and includes the coordination or provision of intermittent nursing services, the administration of medications and treatments, and responsibility for the safety of the residents while inside the building.

Residential care/assisted living facility. A building or part thereof housing at least 6 but not more than 10 persons, excluding staff, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment which provides supervisory and/or personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff. This classification shall include, but not be limited to, the following: residential board and care facilities, assisted living homes, halfway houses, group homes, congregate care facilities, social rehabilitation facilities, alcohol and drug abuse treatment centers and convalescent facilities.

Supervisory care service. General supervision, including daily awareness of resident functioning and continuing needs.
(Ord. No. 2011.33, 9-22-11)

Sec. 406 MOTOR-VEHICLE-RELATED OCCUPANCIES

Section 406.1.6 is hereby added as follows:

Section 406.1.6 Parking lot carport canopies. A parking lot carport canopy is a non-combustible building comprised of a freestanding roof supported by columns and entirely open on all sides with no enclosures beneath the roof. Parking lot carport canopies shall be used exclusively for the solar protection of parked motor vehicles and shall not be used to shelter any other use.

Parking lot canopies which do not comply with all the provisions of this section shall be constructed in accordance with the other provisions of the code.

Section 406.1.6.1 Construction and height. Parking lot carport canopies shall be constructed entirely of non-combustible materials, except that the roof covering may have a flame-spread rating of not more than 50. Parking lot carport canopies shall be designed in accordance with the requirements of Chapter 16.

Parking lot carport canopies shall have a clear height of not less than 7 feet (2134 mm). Where van accessible shaded parking is required by this Code the clear height shall meet Tempe's accessibility requirements.

Section 406.1.6.2 Location on property. No portion of parking lot carport canopies shall be located closer than 5 feet (1524 mm) to any building or property line. A clear separation of not less than 5 feet (1524 mm) shall be maintained between canopies on the same property. Parking lot carport canopies that cannot maintain the required separation between other canopies on the same property may be considered as one canopy provided the combined canopies do not exceed the allowable length and/or width as provided in 406.1.6.3. No canopy shall cover or encroach into any required fire lane.

Parking lot carport canopies which meet all of the requirements of this section may be located in any required yard without affecting any of the general building limitations of this Code.

Section 406.1.6.3 Maximum dimensions. Parking lot carport canopies shall not exceed 150 feet in length or 40 feet in width.

Section 406.1.6.4 Automatic sprinkler systems. Parking lot carport canopies constructed with a maximum area of 5000 square feet of projected roof area, which meet all the requirements of this section, shall be permitted without automatic sprinkler system protection.
(Ord. No. 2011.33, 9-22-11)

Sec. 410 STAGES AND PLATFORMS

Section 410.3.1 is hereby amended as follows:

Section 410.3.1 Stage construction. Stages shall be constructed of materials as required for floors for the type of construction of the building in which such stages are located.

Exceptions:

1. Stages of Type IIB or IV construction with a nominal 2-inch (51 mm) wood deck, provided that the stage is separated from the other areas in accordance with Section 410.3.4.
2. In buildings of Type IIA, IIIA and VA construction, a fire-resistive-rated floor is not required, provided the space below the stage is equipped with an automatic fire-extinguishing system in accordance with Section 903 or 904.
3. In all types of construction, the finished floor shall be constructed of wood or approved noncombustible materials. Openings through the floors shall be equipped with tight-fitting, solid wood trap doors with approved safety locks.

When the space beneath a stage is used only for electrical wiring or plumbing and it contains concealed spaces of combustible materials, the space shall be fireblocked in accordance with Section 717.2.7.

Section 410.4 is hereby amended as follows:

Section 410.4. Platform construction. Permanent platforms shall be constructed of materials as required for the type of construction of the building in which the permanent platform is located. Permanent platforms are permitted to be constructed of fire-retardant-treated wood for Type I, II and IV construction where the platforms are not more than 30 inches (762 mm) above the main floor and not more than one-third of the area of the room floor area and not more than 3000 square feet (279 m^2) in area. Where the space beneath the permanent platform is used for storage or any other purpose other than electrical wiring or plumbing, the floor construction shall be not less than 1-hour fire-resistance-rated construction. Where the space beneath the permanent platform is used only for electrical wiring or plumbing, the underside of the permanent platform need not be protected. Such platforms containing concealed combustible spaces shall be fire blocked in accordance with Section 717.2.7.

(Ord. No. 2011.33, 9-22-11)

Sec. 419 LIVE/WORK UNITS

Section 419.3.2 is hereby amended as follows:

419.3.2 Sliding doors. In the residential portion of the unit, doors in a means of egress may be of the horizontal-sliding type. The force to slide the door to its fully open position shall be in accordance with Section 1008.1.3.

Section 419.3.4 is hereby amended as follows:

419.3.4 Locks. Egress doors, in the residential portion of the unit, shall be permitted to be locked in accordance with Exception 4 of Section 1008.1.9.3.

Section 419.5 is hereby amended as follows:

419.5 Fire protection. The live/work unit shall be provided with a monitored fire alarm system where required by Section 907.2.9 and an automatic sprinkler system in accordance with Section 903.2.1.

(Ord. No. 2011.33, 9-22-11)

Sec. 424 RESIDENTIAL CARE/ASSISTED LIVING FACILITIES

Section 424 is hereby added as follows:

*Section 424.1 Applicability***.** The provisions of this section shall apply to a building or part thereof housing at least 6 but not more than 10 persons, excluding staff, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment which provides licensed care services. Except as specifically required by this division, R-4 occupancies shall meet all applicable provisions of Group R-3.

Section 424.2 General. Buildings or portions of buildings classified as R-4 occupancies shall meet all the applicable provisions of Group R-3, may be constructed of any materials allowed by this code, shall not exceed two stories in height nor be located above the second story in any building, and shall not exceed 2000 square feet above the first story except as provided in Section 506.

Section 424.3 Special provisions. R-4 occupancies having more than 2000 square feet of floor area above the first floor shall be of not less than one-hour fire-resistive construction throughout.

Section 424.3.1 Mixed Uses. R-4 occupancies shall be separated from other uses as provided in Table 508.4.

Section 424.3.2 Accessibility. R-4 occupancies shall be provided with at least one accessible route per Chapter 11 of this code. Sleeping rooms and associated toilets shall be accessible.

Exception: Existing buildings shall comply with Section 3411. Bathing and toilet facilities need not be made accessible, but shall be provided with grab bars in accordance with Chapter 11 of this code.

*Section 424.3.3 Number of exits***.** Every story, basement, or portion thereof shall have not less than two exits.

Exception: Basements and stories above the first floor containing no sleeping rooms may have one means of egress as provided in Chapter 10.

Section 424.3.4 Distance to exits. Travel distance shall comply with Chapter 10, except that the maximum travel distance from the center point of any sleeping room to an exit shall not exceed 75 feet.

Section 424.3.5 Exit Signs/Illumination. Required exit doors shall be provided with illuminated exit signs in accordance with Section 1011 of this code.

Section 424.3.6 Emergency escape and rescue. R-4 occupancies shall comply with the egress requirements of Section 1029.

Section 424.3.7 Delayed egress locks. In R-4 occupancies, delayed egress locks shall be permitted in accordance with Sections 1008.1.9.7, items 1, 2, 4, 5 and 6.

Section 424.3.8 Smoke alarms and Carbon monoxide alarms. All habitable rooms and hallways in R-4 occupancies shall be provided with smoke alarms. The smoke and carbon monoxide alarms shall be installed in accordance with Section 907.2.11 and Section 1211.

Section 424.3.9 Sprinkler systems. R-4 occupancies shall be provided with a sprinkler system installed in accordance with Section 903.3.1.2. Sprinkler systems installed under this Section shall be installed throughout, including attached garages. Such systems may not contain unsupervised valves between the domestic water riser control valve and the sprinklers.
(Ord. No. 2011.33, 9-22-11)

Sec. 501 GENERAL

Section 501.2 is hereby amended as follows:

*Section 501.2 Premises identification***.** Approved numbers or addresses shall be provided for new or existing buildings in accordance with the Tempe Building Safety Administrative Code, Section 112. (Ord. No. 2011.33, 9-22-11)

Sec. 507 UNLIMITED AREA BUILDINGS

Section 507.3 is hereby amended as follows:

Section 507.3 Sprinklered, one-story. The area of a one-story, Group B, F, M or S building or a one-story Group A-4 building, of other than Type V construction, shall not be limited when 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:

1. Buildings and structures of Type I and 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 and 903.3.1.1 and Chapter 23 of the International Fire Code.
2. 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:

2.1 Exits doors directly to the outside are provided for occupants of the participant sports areas; and

2.2 The building is equipped with a fire alarm system with manual fire alarm boxes installed in accordance with Section 907.

Section 507.3.1 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, provided:

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; and

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

Such buildings may contain other occupancies provided that such occupancies do not occupy more than 10 percent of the area of any floor of a building, nor more than the tabular values permitted in the occupancy by Table 503 for such occupancy. Such buildings having Group F and S occupancies may also

have Group H-2, H-3 and H-4 fire areas within the building as provided by the limitations in Section 507.8.

Section 507.4 is hereby amended as follows:

Section 507.4 Two-story. The area of a two-story, Group B, F, M or S building shall not be limited when the building is provided with an automatic sprinkler system in accordance with Section 903.3.1.1 throughout, and is surrounded and adjoined by public ways or yards not less than 60 feet (18 288 mm) in width.

Such buildings may contain other occupancies provided that such occupancies do not occupy more than 10 percent of the area of any floor of a building, nor more than the tabular values permitted in the occupancy by Table 503 for such occupancy. Such buildings having Group F and S occupancies may also have Group H-2, H-3 and H-4 fire areas within the building as provided by the limitations in Section 507.8.
(Ord. No. 2011.33, 9-22-11)

Sec. 603 COMBUSTIBLE MATERIAL IN TYPE I AND II CONSTRUCTION

Section 603.1.3 is hereby amended as follows:

Section 603.1.3 Electrical. The use of electrical wiring methods with combustible insulation, tubing, raceways and related components shall be permitted when installed in accordance with the limitations of the Tempe Electrical Code.
(Ord. No. 2011.33, 9-22-11)

Sec. 702 DEFINITIONS

Section 702 is hereby amended as follows:

Environmental opening. An open space beneath and extending to grade plane under a floor/ceiling assembly or roof/ceiling assembly with structural supports other than exterior walls and not already defined or regulated elsewhere in this code. The space shall be open on at least three sides. Each side shall be not less than eighty-five (85%) percent open starting a maximum of twelve inches (304.8 mm) below the floor/ceiling assembly or roof/ceiling assembly and extending down to the grade plane. The space below the assembly shall have no use or occupancy except as a vehicular or pedestrian passageway.
(Ord. No. 2011.33, 9-22-11)

Sec. 703 FIRE-RESISTANCE RATINGS AND FIRE TESTS

Section 703.6 is hereby amended as follows:

Section 703.6 Marking and identification. Fire walls , fire barriers , fire partitions , smoke barriers and smoke partitions or any other wall required to have protected openings or penetrations shall be effectively and permanently identified with signs or stenciling. Such identification shall:

1. Be located on the wall surface in accessible concealed floor, floor-ceiling or attic spaces;

2. Be within 10 feet (3048 mm) of each side of an intersecting wall and repeated at intervals not exceeding 30 feet (9144 mm) measured horizontally along the wall or partition; and
3. Include lettering not less than 0.25 inch (6.35 mm) in width and 2 inches (50.8 mm) in height, with the wording: "FIRE AND/OR SMOKE ASSEMBLY RATED XX HOUR-PROTECT ALL OPENINGS TO XX HOUR."

Exception: Walls in Group R-2 occupancies that do not have a removable decorative ceiling allowing access to the concealed space.

(Ord. No. 2011.33, 9-22-11)

Sec. 705 EXTERIOR WALLS

Section 705.8.7 is hereby amended as follows:

705.8.7 Environmental openings. Where an environmental opening occurs, the floor/ceiling assembly or roof/ceiling assembly and supporting construction of columns, beams, girders, joists, trusses or other load bearing members forming the opening shall have fire-resistance rated construction as required by Table 601 for the type of construction and Table 602 based on fire separation distance.

Where fire-resistance rated construction is only required by Table 602, the fire-resistance rated construction shall continue until reaching the distance where fire-resistance rated construction is no longer required.

Exception: Beams, girders, joists, trusses or other load bearing members which are perpendicular to the line used to determine the fire-separation distance shall be protected for their entire length including supporting construction at each end.

(Ord. No. 2011.33, 9-22-11)

Sec. 706 FIRE WALLS

Table 706.4 is hereby amended as follows:

TABLE 706.4
FIRE WALL FIRE-RESISTANCE RATINGS[c]

GROUP	FIRE-RESISTANCE RATING (hours)
A, B, E, H-4, I, R-1, R-2, U	**3[a]**
F-1, H-3[b], H-5, M, S-1	**3**
H-1, H-2	**4[b]**
F-2, S-2, R-3, R-4	**2**

a. Walls shall be not less than 2-hour fire-resistance rated where separating buildings of Type II or V construction.
b. For Group H-1, H-2 or H-3 buildings also see Sections 415.4 and 415.5.
c. For the purpose of this provision, occupancy changes between B, F-1, M or S-1 will not require a change to an existing fire (area separation) wall.

(Ord. No. 2011.33, 9-22-11)

Sec. 715 OPENING PROTECTIVES

Section 715.5.2 is hereby amended as follows:

Section 715.5.2 Nonsymmetrical glazing systems. Nonsymmetrical fire-protection-rated glazing systems in fire partitions, fire barriers, or in exterior walls with a fire separation distance of less than or equal to 10 feet (3048 mm) pursuant to Section 705 shall be tested with both faces exposed to the furnace, and the assigned fire protection rating shall be the shortest duration obtained from the two tests conducted in compliance with NFPA 257 or UL 9.
(Ord. No. 2011.33, 9-22-11)

Sec. 721 CALCULATED FIRE RESISTANCE

Section 721.2.1.4.3 is hereby amended as follows:

Section Section 721.2.1.4.3 Nonsymmetrical assemblies. For a wall having no finish on one side or different types or thicknesses of finish on each side, the calculation procedures of Sections 721.2.1.4.1 and 721.2.1.4.2 shall be performed twice, assuming either side of the wall to be the fire-exposed side. The fire-resistance rating of the wall shall not exceed the lower of the two values.

> **Exception:** For an exterior wall with a fire separation distance greater than 10 feet (3048 mm) the fire shall be assumed to occur on the interior side only.

Section 721.3.2.3 is hereby amended as follows:

Section 721.3.2.3 Nonsymmetrical assemblies. For a wall having no finish on one side or having different types or thicknesses of finish on each side, the calculation procedures of this section shall be performed twice, assuming either side of the wall to be the fire-exposed side. The fire-resistance rating of the wall shall not exceed the lower of the two values calculated.

> **Exception:** For exterior walls with a fire separation distance greater than 10 feet (3048 mm) the fire shall be assumed to occur on the interior side only.

Section 721.4.1.4 is hereby amended as follows:

Section 721.4.1.4 Nonsymmetrical assemblies. For a wall having no finish on one side or having different types or thicknesses of finish on each side, the calculation procedures of this section shall be performed twice, assuming either side to be the fire-exposed side of the wall. The fire resistance of the wall shall not exceed the lower of the two values determined.

> **Exception:** For exterior walls with a fire separation distance greater than 10 feet (3048 mm) the fire shall be assumed to occur on the interior side only.

Section 721.6.2.3 is hereby amended as follows:

Section 721.6.2.3 Exterior walls. For an exterior wall with a fire separation distance greater than 10 feet (3048 mm), the wall is assigned a rating dependent on the interior membrane and the framing as described in Tables 721.6.2(1) and 721.6.2(2). The membrane on the outside of the nonfire-exposed side of exterior walls with a fire separation distance greater than 10 feet (3048 mm) may consist of sheathing, sheathing paper and siding as described in Table 721.6.2(3).
(Ord. No. 2011.33, 9-22-11)

Sec. 903 AUTOMATIC SPRINKLER SYSTEMS

Section 903 is hereby amended as follows:

Section 903.2 Where required. Approved automatic sprinkler systems shall be provided in the locations described in this section.

Section 903.2.1 New buildings or structures. All areas of new buildings or structures, and other locations required by this Chapter, shall be provided with an automatic fire sprinkler system complying with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3 as applicable.

Exceptions: Unless the use of the facility otherwise requires automatic fire sprinkler protection, fire sprinkler systems shall not be required for the following:

1. R-3 occupancies of 5,000 square feet or less and other buildings or structures accessory to R-3 occupancies.
2. Detached non-combustible carports of 5,000 square feet or less in roof area.
3. In other than H occupancies, detached non-residential buildings of 1,000 square feet or less in floor area.
4. Detached non-combustible canopies less than 5,000 square feet in roof area used exclusively for vehicle fuel dispensing stations provided the fire separation distance required by Table 602 is maintained from property lines or other buildings.
5. Shade canopies less than 5,000 square feet; not closer than 5 feet to any building, property line or other shade canopy; and shading one of the following: vehicles for sale at a dealership, vehicle-washing or drying facilities, playground equipment, or outdoor eating areas without cooking.
6. Shipping containers used for non- hazardous storage purposes and not closer than 5 feet to any building, property line or other container.
7. Exterior roofs, overhangs or awnings of Type I, II or III construction with no combustible storage beneath.
8. Exterior covered/enclosed walkways of Type I, II or III construction with enclosing walls that are at least 50 percent open.

This section is not intended to indicate all instances or circumstances where fire sprinkler systems are required; refer to this Chapter and the Tempe Fire Code for other requirements.

Section 903.2.2 Group H-5 occupancies. An automatic sprinkler system shall be installed throughout buildings containing Group H-5 occupancies. The design of the sprinkler system shall not be less than that required by this code for the occupancy hazard classifications in accordance with Table 903.2.2. Where the design area of the sprinkler system consists of a corridor protected by one row of sprinklers, the maximum number of sprinklers required to be calculated is 13.

TABLE 903.2.2 GROUP H-5 SPRINKLER DESIGN CRITERIA

Location	Occupancy Hazard Classification
Fabrication areas	Ordinary Hazard Group 2
Service corridors	Ordinary Hazard Group 2
Storage rooms without dispensing	Ordinary Hazard Group 2
Storage rooms with dispensing	Extra Hazard Group 2
Corridors	Ordinary Hazard Group 2

Section 903.2.3 Change of occupancy. An automatic sprinkler system complying with Section 903.3 shall be provided for an existing building or portion thereof undergoing a change of occupancy as follows, based upon the relative hazard levels indicated in Table 903.2.3:

1. When a change of occupancy is made to a higher level as shown in Table 903.2.3, the area or building shall be provided with an automatic fire sprinkler system.
2. When a change of occupancy is made within hazard level 1 as shown in Table 903.2.3, the area or building shall be provided with an automatic fire sprinkler system.
3. Any change of occupancy of a building or area of more than 5000 square feet shall be retrofit with a fire sprinkler system.

TABLE 903.2.3 EXISTING BUILDING HAZARD LEVELS

Hazard Level	Building Occupancy Type
1 (highest)	H, I, R-1, R-2, R-4
2	A-2, A-5
3	A-1, A-3, A-4 , E
4	B, F-1, M, S-1
5 (lowest)	F-2, S-2, U, R-3

Notes: Occupancies are as defined in this Code.

When a change of occupancy of 5000 square feet or less is made to a lower hazard level or within a hazard level (except hazard level 1), as shown in Table 903.2.3, the building is not required to be provided with an automatic fire sprinkler system.

This section is not intended to indicate all instances or circumstances where fire sprinkler systems are required; refer to this Chapter and the Tempe Fire Code for other requirements.

Section 903.2.4 Additions. All additions to existing buildings or structures and all buildings or structures that are expanded by an addition(s) shall be provided with an automatic fire protection system complying with Section 903.3 as applicable.

Exception: An existing non-sprinklered building or structure and additions to such existing building, provided the occupancy of the existing building is not changed, the addition is the same occupancy, and the total area of all such additions to the building do not exceed 1000 square feet.

The above exception does not supersede other requirements of this Chapter or the Tempe Fire Code.

Section 903.2.5 Rubbish and linen chutes. An automatic sprinkler system shall be installed at the top of rubbish and linen chutes and in their terminal rooms. Chutes extending through three or more floors shall have additional sprinkler heads installed within such chutes at alternate floors. Chute sprinklers shall be accessible for servicing.

Section 903.2.6 During construction. Automatic sprinkler systems required during construction, alteration and demolition operations shall be provided in accordance with the Tempe Fire Code.

Section 903.2.7 Ducts conveying hazardous exhausts. Where required by the Tempe Mechanical Code, automatic sprinklers shall be provided in ducts conveying hazardous exhaust, or flammable or combustible materials.

Exception: Ducts in which the largest cross-sectional diameter of the duct is less than 10 inches (254 mm).

*Section 903.2.8 Commercial cooking operations***.** An automatic sprinkler system shall be installed in commercial kitchen exhaust hood and duct system where an automatic sprinkler system is used to comply with Section 904.

*Section 903.2.9 Other required suppression systems***.** In addition to the requirements of Section 903.2, the provisions indicated in Table 903.2.11.6 also require the installation of a suppression system for certain buildings and areas

Section 903.3.1.2 NFPA 13R sprinkler systems. Where allowed in multi-family buildings, and Group R Division 4 occupancies, automatic sprinkler systems shall be installed throughout in accordance with NFPA 13R, provided there are no deletions of sprinklers in attics, bathrooms, closets (including those containing mechanical or electrical equipment), foyers, garages, carports, accessible areas under interior stairs and landings used for storage or living purposes.

Section 903.3.1.3 NFPA 13D sprinkler systems. Where allowed, automatic sprinkler systems in one- and two- family dwellings shall be installed throughout in accordance with NFPA 13D, provided there are no deletions of sprinklers in attics, bathrooms, closets (including those containing mechanical or electrical equipment), foyers, garages, carports, accessible areas under interior stairs and landings used for storage or living purposes.

Section 903.3.6. Hose threads. Fire hose threads used in connection with automatic sprinkler systems shall be approved and compatible with the Tempe Fire Department hose threads.

Section 903.3.7. Fire department connections. The location of fire department connections shall be approved by the Tempe Fire Marshal's authorized representative.
(Ord. No. 2011.33, 9-22-11)

Sec. 907 FIRE ALARM AND DETECTION SYSTEMS

Section 907.2.11.3 is hereby amended as follows:

Section *907.2.11.3 Interconnection*. Where more than one smoke alarm is required to be installed within an individual dwelling unit or sleeping unit in Group R-1, R-2, R-3 or R-4, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed. In Group R-3, the interconnection of alarms may be accomplished with listed wireless smoke alarms.

Section 907.2.11.4 is hereby amended as follows:

Section *907.2.11.4 Power source*. In new construction, required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.

Exceptions:

1. Smoke alarms are not required to be equipped with battery backup where they are connected to an emergency electrical system.
2. Smoke alarms shall be permitted to be battery operated when installed in buildings without commercial power or where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure.
3. Where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, hard-wiring of smoke alarms in existing areas shall not be required unless there is an attic, crawl space or basement available which could provide access for hard wiring without the removal of interior finishes.

Section 907.2.11.5 is hereby amended as follows:

Section 907.2.11.5 Alterations, repairs and additions. When alterations, repairs or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be equipped with smoke alarms located as required for new dwellings.

Exceptions:

1. Work involving the exterior surfaces of dwellings, such as the replacement of roofing or siding, or the addition or replacement of windows or doors, or the addition of a porch or deck, are exempt from the requirements of this section.
2. Installation, alteration or repairs of plumbing or mechanical systems are exempt from the requirements of this section.

(Ord. No. 2011.33, 9-22-11)

Sec. 915 EMERGENCY RESPONDER RADIO COVERAGE

Section 915.1 is hereby amended as follows:

Section 915.1 General. Emergency responder radio coverage shall be provided in all new buildings in accordance with Tempe City Code Chapter 9, Article II Section 9-21.
(Ord. No. 2011.33, 9-22-11)

Sec. 1008 DOORS, GATES AND TURNSTILES.

Section 1008.1.2 is hereby amended as follows:

*Section 1008.1.2 Door swing***.** Egress doors shall be of the pivoted or side-hinged swinging type.

Exceptions:

1. Private garages, office areas, factory and storage areas with an occupant load of 10 or less.
2. Group I-3 occupancies used as a place of detention.
3. Critical or intensive care patient rooms within suites of health care facilities.
4. Doors within or serving a single dwelling unit in Groups R-2 and R-3.
5. In other than Group H occupancies, revolving doors complying with Section 1008.1.4.1.
6. In other than Group H occupancies, horizontal sliding doors complying with Section 1008.1.4.3 are permitted in a means of egress.
7. Power-operated doors in accordance with Section 1008.1.4.2.
8. Doors serving a bathroom within an individual sleeping unit in Group R-1.
9. DELETED

Doors shall swing in the direction of egress travel where serving an occupant load of 50 or more persons or a Group H occupancy.

Section 1008.1.4.4 is hereby amended as follows:

Section 1008.1.4.4 Access-controlled (Controlled egress) egress doors. The entrance doors in a means of egress in buildings with an occupancy in Group A, B, E, I-2, M, R-1 or R-2 and entrance doors to tenant spaces in occupancies in Groups A, B, E, I-2, M, R-1 and R-2 are permitted to be equipped with

an approved entrance and egress access control system which shall be installed in accordance with all of the following criteria:

1. A sensor shall be provided on the egress side arranged to detect an occupant approaching the doors. The doors shall be arranged to unlock by a signal from or loss of power to the sensor.
2. Loss of power to that part of the access control system which locks the doors shall automatically unlock the doors.
3. The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016 mm to 1219 mm) vertically above the floor and within 5 feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the lock-independent of the access control system electronics-and the doors shall remain unlocked for a minimum of 30 seconds.
4. Activation of the building fire alarm system, if provided, shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.
5. Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically unlock the doors. The doors shall remain unlocked until the fire alarm system has been reset.
6. Entrance doors in buildings with an occupancy in Group A, B, E or M shall not be secured from the egress side during periods that the building is open to the general public.
7. A key (knox) box in accordance with the provisions of the Tempe Fire Code shall be provided for fire department access with a master key/access card in a location acceptable to the fire code official.
8. Entrance doors which are secured and restrict fire fighter access shall have a permanent symbol affixed to the exterior of the door or other location acceptable to the fire code official. The design and size of the symbol shall be acceptable to the fire code official and in accordance with the Tempe Fire Code Section 504.

Section 1008.1.4.4.1 is hereby amended as follows:

Section 1008.1.4.4.1 Access-controlled (Free egress) egress doors. The doors in a means of egress in buildings with an occupancy in Group A, B, E, F, I-1, I-2, I-4, M, R, S or U and doors to tenant spaces in occupancies in Groups A, B, E, F, I-1, I-2, I-4, M, R, S or U are permitted to be equipped with an approved access control system that allows free egress when installed in accordance with all of the following criteria:

1. Egress shall be accomplished with a handle, lever, panic or fire exit hardware that provides unobstructed egress without special knowledge, effort, key, tool or relies on any electronic method of operation.
2. Activation of the building fire alarm system, if provided, shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.
3. Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically unlock the doors. The doors shall remain unlocked until the fire alarm system has been reset.
4. A key (knox) box in accordance with the provisions of the Tempe Fire Code shall be provided for fire department access with a master key/access card in a location acceptable to the fire code official.

5. Access controlled doors which are secured and restrict fire fighter access shall have a permanent symbol affixed to the exterior of the door or other location acceptable to the fire code official. The design and size of the symbol shall be acceptable to the fire code official and in accordance with the Tempe Fire Code Section 504.

Section 1008.1.5 is hereby amended as follows:

Section 1008.1.5 Floor elevation. There shall be a floor or landing on each side of a door. Such floor or landing shall be at the same elevation on each side of the door. Landings shall be level except for exterior landings, which are permitted to have a slope not to exceed 0.25 units vertical in 12 units horizontal (2-percent slope).

Exceptions:

1. Doors serving individual dwelling units in Groups R-2 and R-3 where the following apply:
   1.1. A door is permitted to open at the top step of an interior flight of stairs, provided the door does not swing over the top step.
   1.2. Screen doors and storm doors are permitted to swing over stairs or landings.
2. Exterior doors as provided for in Section 1003.5, Exception 1, and Section 1020.2, which are not on an accessible route.
3. In Group R-3 occupancies not required to be Accessible units, Type A units or Type B units, the landing at an exterior doorway shall not be more than 7.75 inches (197 mm) below the top of the threshold, provided the door, other than an exterior storm or screen door, does not swing over the landing.
4. Variations in elevation due to differences in finish materials, but not more than 0.5 inch (12.7 mm).
5. Exterior decks, patios or balconies that are part of Type B dwelling units, have impervious surfaces and that are not more than 4 inches (102 mm) below the finished floor level of the adjacent interior space of the dwelling unit, provided the door, other than an exterior storm or screen door, does not swing over the landing.

Section 1008.1.9.3 is hereby amended as follows:

Section 1008.1.9.3 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

1. Places of detention or restraint.
2. In buildings in occupancy Group A having an occupant load of three hundred (300) or less, Groups B, F, M and S, and in places of religious worship, the main exterior door or doors are permitted to be equipped with key-operated locking devices from the egress side provided:
   2.1. The locking device is readily distinguishable as locked.
   2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED. The sign shall be in letters one inch (25 mm) high on a contrasting background.
   2.3. The use of the key-operated locking device is revokable by the fire code official for due cause.

3. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware.
4. Group R, Division 3 Occupancies and individual dwelling units within Group R, Division 2 Occupancies. Such occupancies may be provided with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.
5. Fire doors after the minimum elevated temperature has disabled the unlatching mechanism in accordance with listed fire door test procedures.

Section 1008.1.9.4 is hereby amended as follows:

Section 1008.1.9.4 Bolt locks. Manually operated flush bolts or surface bolts are not permitted.

Exceptions:

1. On doors not required for egress in individual dwelling units or sleeping units.
2. Where a pair of doors serves a storage or equipment room, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf.
3. Where a pair of doors serves an occupant load of less than 50 persons in Group B, F or S occupancy, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf. The inactive leaf shall contain no handles, bars, doorknobs, panic bars or similar operating hardware which provides the appearance that the inactive leaf may be used as part of the means of egress.
4. Where a pair of doors serves a Group B, F or S occupancy, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf provided such inactive leaf is not needed to meet egress width requirements and the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1. The inactive leaf shall contain no handles, bars, doorknobs, panic bars or similar operating hardware which provides the appearance that the inactive leaf may be used as part of the means of egress.
5. Where a pair of doors serves patient care rooms in Group I-2 occupancies, self-latching edge- or surface-mounted bolts are permitted on the inactive leaf provided that the inactive leaf is not needed to meet egress width requirements and the inactive leaf shall contain no handles, bars, doorknobs, panic bars or similar operating hardware which provides the appearance that the inactive leaf may be used as part of the means of egress.

Section 1008.1.9.7 is hereby amended as follows:

Section 1008.1.9.7 Delayed egress locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E and H occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.
2. The doors unlock upon loss of power controlling the lock or lock mechanism.
3. The door locks shall have the capability of being unlocked by a signal from the fire command center.

4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for 1 second to the release device. Initiation of the irreversible process shall activate an audible signal in the

   vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.

   Exception: Where approved, a delay of not more than 30 seconds is permitted.
5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.
6. Emergency lighting shall be provided at the door.
7. Delayed egress controlled doors which are secured and restrict fire fighter access shall have a permanent symbol affixed to the exterior of the door or other location acceptable to the
   fire code official. The design and size of the symbol shall be acceptable to the fire code official and in accordance with the Tempe Fire Code Section 504.

Section 1008.1.9.8 is hereby amended as follows:

Section 1008.1.9.8 Electromagnetically locked egress doors. Doors in the means of egress that are not otherwise required to have panic hardware in buildings with an occupancy in Group A, B, E, M, R-1 or R-2 and doors to tenant spaces in Group A, B, E, M, R-1 or R-2 shall be permitted to be electromagnetically locked if equipped with listed hardware that incorporates a built-in switch and meet the requirements below:

1. The listed hardware that is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions.
2. The listed hardware is capable of being operated with one hand.
3. Operation of the listed hardware releases to the electromagnetic lock and unlocks the door immediately.
4. Loss of power to the listed hardware automatically unlocks the door.
5. Electromagnetically locked egress doors which are secured and restrict fire fighter access shall have a permanent symbol affixed to the exterior of the door or other location acceptable to the fire code official. The design and size of the symbol shall be acceptable to the fire code official and in accordance with the Tempe Fire Code Section 504.

(Ord. No. 2011.33, 9-22-11)

Sec. 1015 EXIT AND EXIT ACCESS DOORWAYS

Section 1015.2.2 is hereby amended as follows:

Section 1015.2.2 Three or more exits or exit access doorways. Where access to three or more exits is required, at least two exit doors or exit access doorways shall be arranged in accordance with the provisions
of Section 1015.2.1. Additional required exit doors or exit access doorways shall be spaced so a minimum distance of one-forth of the length of the maximum overall diagonal dimension of the area served is maintained between any other required exit door or exit access doorway.
(Ord. No. 2011.33, 9-22-11)

Sec. 1021 NUMBER OF EXITS AND CONTINUITY

Section 1021.2 is hereby amended as follows:

Section 1021.2 Buildings with one exit. Only one exit shall be required from Group R-3 occupancy buildings except those licensed as an assisted living facility or from stories of other buildings as indicated in Table 1021.2.

Occupancies shall be permitted to have a single exit in buildings otherwise required to have more than one exit if the areas served by the single exit do not exceed the limitations of Table 1021.2.

Mixed occupancies shall be permitted to be served by single exits provided each individual occupancy complies with the applicable requirements of Table 1021.2 for that occupancy.

Where applicable, cumulative occupant loads from adjacent occupancies shall be considered in accordance with the provisions of Section 1004.1.

Basements with a single exit shall not be located more than one story below grade plane.

Table 1021.2 is hereby amended as follows:

TABLE 1021.2
STORIES WITH ONE EXIT

STORY	OCCUPANCY	MAXIMUM OCCUPANTS (OR DWELLING UNITS) PER FLOOR AND TRAVEL DISTANCE
First story or basement	A, B[d], E[e], F[d], M, U, S[d]	49 occupants and 75 feet travel distance
	H-2, H-3	3 occupants and 25 feet travel distance
	H-4, H-5, I[f], R[f]	10 occupants and 75 feet travel distance
	S[a]	29 occupants and 100 feet travel distance
Second story	B[b], F, M, S[a]	29 occupants and 75 feet travel distance
	R-2	4 dwelling units and 50 feet travel distance
Third story	R-2[c]	4 dwelling units and 50 feet travel distance

For SI: 1 foot = 304.8 mm.

a. For the required number of exits for parking structures, see Section 1021.1.2.

b. For the required number of exits for air traffic control towers, see Section 412.3.

c. Buildings classified as Group R-2 equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with emergency escape and rescue openings in accordance with Section 1029.

d. Group B, F and S occupancies in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 shall have a maximum travel distance of 100 feet.

e. Day care occupancies shall have a maximum occupant load of 10.

f. R-4 and I-1 occupancies for Adult or Child Care facilities are not permitted to have only one exit.

(Ord. No. 2011.33, 9-22-11)

Sec. 1024 LUMINOUS EGRESS PATH MARKINGS

Section 1024.1 is hereby amended as follows:

Section 1024.1 General. Approved luminous egress path markings delineating the exit path shall be provided in building having occupied floors located more than 75 feet (22 860 mm) above the lowest level of fire department vehicle access in accordance with Sections 1024.1 through 1024.5.

Exceptions:

1. Luminous egress path markings shall not be required on the level of exit discharge in lobbies that serve as part of the exit path in accordance with Section 1027.1, Exception 1.

2. Luminous egress path markings shall not be required in areas of open parking garages that serve as part of the exit path in accordance with Section 1027.1, Exception 3.

(Ord. No. 2011.33, 9-22-11)

Sec. 1101 GENERAL.

Section 1101.2 is hereby amended as follows:

Section 1101.2. Design. Buildings and facilities shall be designed and constructed to be accessible in accordance with the this code, ICC A117.1, and Arizona Revised Statutes, Title 41, Chapter 9, Article 8, Public Accommodation and Services, The Arizonans with Disabilities Act, R 10-3-401 through R 10-3-404, which includes 28 CFR Part 35 and 28 CFR 36 and Americans with Disabilities Act Accessibility Guidelines for Buildings and Facilities (ADAAG). Where provisions may conflict between the different codes, the provision that provides the greatest degree of accessibility shall be used for any given building element.

(Ord. No. 2011.33, 9-22-11)

Sec. 1102 DEFINITIONS.

Section 1102.1 is hereby amended as follows:

Section 1102.1 Dressing room. A room in which changing clothes or dressing is an intended use, including but not limited to fitting rooms, locker rooms, and shower or bathing rooms where a separate room is not provided for dressing.

(Ord. No. 2011.33, 9-22-11)

Sec. 1211 CARBON MONOXIDE ALARMS

Section 1211 is hereby added as follows:

Section 1211.1 Carbon monoxide detection and notification. Carbon monoxide alarms shall be listed as complying with UL 2034 and shall be installed in accordance with this code and the manufacturer's installation instructions.

Section 1211.2 Carbon monoxide alarms. In new construction of R-2, R-3 and R-4 occupancies, an approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages.

Section 1211.3 Where required in existing dwellings. Where work requiring a permit occurs in existing dwellings that have attached garages or in existing dwellings units within which fuel-fired appliances exist, carbon monoxide alarms shall be provided in accordance with Section 1211.2.

Section 1211.4 Power source. Carbon monoxide alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting

switch other than those required for overcurrent protection. Carbon monoxide alarms shall be interconnected either by hard-wiring or with listed wireless alarms.

Exceptions:

1. Carbon monoxide alarms shall be permitted to be battery operated when installed in buildings without commercial power or where the alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure.
2. Hard-wiring of carbon monoxide alarms in existing areas shall not be required where the alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for hard wiring without the removal of interior finishes.

(Ord. No. 2011.33, 9-22-11)

Sec. 1503 WEATHER PROTECTION

Section 1503.4.2 is hereby amended as follows:

1503.4.2 Scuppers. When scuppers are used for secondary (emergency overflow) roof drainage, the quantity, size, location and inlet elevation of the scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1503.4.1. Scuppers shall be sized in accordance with the Tempe Plumbing Code, Section 1106 and 1107. The flow through the primary system shall not be considered when locating and sizing scuppers.
(Ord. No. 2011.33, 9-22-11)

Sec. 1603 CONSTRUCTION DOCUMENTS

Section 1603.1.10 is hereby added as follows:

Section 1603.1.10 Floor and roof design live loads posted. Where the live loads for which each floor or portion thereof of a commercial or industrial building is or has been designed to exceed 50 psf (2.40 kN/m2), such design live loads shall be conspicuously posted by the owner in that part of each story in which they apply, using durable signs. It shall be unlawful to remove or deface such notices.

Section 1603.1.11 is hereby added as follows:

Section 1603.1.11 Issuance of certificate of occupancy. A certificate of occupancy required by Section 107 shall not be issued until the floor load signs, required by Section 1603.1.10, have been installed.

Section 1603.1.12 is hereby added as follows:

Section 1603.1.12 Restrictions on loading. It shall be unlawful to place, or cause or permit to be placed, on any floor or roof of a building, structure or portion thereof, a load greater than is permitted by this code.
(Ord. No. 2011.33, 9-22-11)

Sec. 1607 LIVE LOADS.

Table 1607 is hereby amended as follows:

Table 1607.1
MINIMUM UNIFORMLY DISTRIBUTED LOADS AND MINIMUM CONCENTRATED LIVE LOADS.

OCCUPANCY OR USE	UNIFORM (psf)	CONCENTRATED (lbs.)
27. Residential One- and two-family dwellings		-
Uninhabitable attics with limited storage[i], [j], [k]	40	
Habitable attics and sleeping areas	40	

Remainder of table is unchanged

Section 1607.7.1.2 is hereby amended as follows:

Section 1607.7.1.2 Components. Intermediate rails (all those except the handrail), balusters and panel fillers shall be designed to withstand a horizontally applied normal load of 50 pounds (0.22 kN) on an area equal to one square foot (0.093m^2), including openings and space between rails. Reactions due to this loading are not required to be superimposed with those of Section 1607.7.1 or 1607.7.1.1.

Open guards shall be configured so that the balusters, panel fillers or ornamental patterns will not allow the passage of a sphere sized in accordance with Section 1013.3, through any opening when subjected to a horizontally applied normal load of 25 pounds (0.11 kN). Guards shall be maintained in conformance with this code.
(Ord. No. 2011.33, 9-22-11)

Sec. 1609 WIND LOADS.

Section 1609.1.1 is hereby amended as follows:

Section 1609.1.1 Determination of wind loads. Wind loads on every building or structure shall be determined in accordance with Chapter 6 of ASCE 7. The type of opening protection required, the basic wind speed and the exposure category for a site is permitted to be determined in accordance with Section 1609 or ASCE 7**,** but not less than 90 mph 3-second gust, Exposure C. Wind shall be assumed to come from any horizontal direction and wind pressures shall be assumed to act normal to the surface considered.

Exceptions:

1. Subject to the limitations of Section 1609.1.1.1, the provisions of ICC-600 shall be permitted for applicable Group R-2 and R-3 buildings.
2. Subject to the limitations of Section 1609.1.1.1, residential structures using the provisions of the AF&PA WFCM.
3. Subject to the limitations of Section 1609.1.1.1, residential structures using the provisions of AISI S230.
4. Designs using NAAMM FP 1001.

5. Designs using TIA-222 for antenna-supporting structures and antennas.
6. Wind tunnel tests in accordance with Section 6.6 of ASCE 7, subject to the limitations in Section 1609.1.1.2.
7. Wind loads on solid freestanding walls may be calculated using the provisions of ASCE 7-02 or
   ASCE 7-05.

Section 1609.4.3 is hereby amended as follows:

Section 1609.4.3 Exposure C: Exposure C shall apply for all cases where Exposure B or D does not apply. To use Exposure B, the registered design professional shall provide evidence within the design calculations that Exposure B would apply to the project site.
(Ord. No. 2011.33, 9-22-11)

Sec. 2406 SAFETY GLAZING

Section 2406.4 is hereby amended as follows:

Section 2406.4 Hazardous locations. The following shall be considered specific hazardous locations requiring safety glazing materials:

1. N/C
2. N/C
3. N/C
4. N/C
5. Glazing in doors and enclosures for or walls facing hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) measured vertically above any standing or walking surface. All other interior or exterior glazing in bathrooms, shower rooms or other similar areas, where the bottom edge of which is less than 60 inches (1524 mm) above the standing or walking surface.

N/C for the remainder of this section
(Ord. No. 2011.33, 9-22-11)

Sec. 2902 MINIMUM PLUMBING FACILITIES

Section 2902.1 is hereby amended as follows:

Section 2902.1 Minimum number of fixtures. Plumbing fixtures shall be provided for the type of occupancy and in the minimum number shown in Table 2902.1. Types of occupancies not shown in Table 2902.1 shall be considered individually by the building official. The number of occupants shall be determined by this code. Occupancy classification shall be determined in accordance with Chapter 3.

Exception: Where approved by the building official or designee because of the use or character of the building or space or through statistical data, the occupant load used to determine the minimum number of fixtures may be less than that as calculated by Table 1004.1.1

Table 2902.1 is hereby amended as follows:

TABLE 2902.1
MINIMUM NUMBER OF REQUIRED PLUMBING FACILITIES [a]
(See Sections 2902.2 and 2902.3)

No.	CLASSIFICATION	USE GROUP	DESCRIPTION	WATER CLOSETS (SEE SECTION 419.2 OF THE INTERNATIONAL PLUMBING CODEFOR URINALS)		LAVATORIES		BATHTUBS OR SHOWERS	DRINKING FOUNTAINS [e, f, g, h] *(SEE SECTION 410.1 OF THE INTERNATIONAL PLUMBING CODE)*	OTHER
				MALE	FEMALE	MALE	FEMALE			
1	Assembly	A-2[d]	Nightclubs, bars, taverns, dance halls and buildings for similar purposes	1 per 40	1 per 40	1 per 75		—	1 per 500	—
			Restaurants, banquet halls and food courts	1 per 75	1 per 75	1 per 200		—	1 per 500	—
2	Business (see Sections 2902.2, 2902.4, 2902.4.1 and 2902.6)	B	Buildings for the transaction of business, professional services, other services involving merchandise, office buildings, banks, light industrial and similar uses	1 per 25 for the first 50 and 1 per 50 for the remainder exceeding 50		1 per 40 for the first 80 and 1 per 80 for the remainder exceeding 80		—	Where Separate Facilities are required by Section 2902.2 1 per 100	—
6	Mercantile (see Section 2902.2, 2902.5 and 2902.6)	M	Retail stores, service stations, shops, salesrooms, markets and shopping centers	1 per 500		1 per 750		—	Where Separate Facilities are required by Section 2902.2 1 per 1,000	—

Remainder of table is unchanged

a. N/C

b. N/C

c. N/C

d. N/C

e. N/C

f. In other than I-1 Residential care, I-3 Reformatories, detention centers and correctional centers, I-4 Adult day care and child care, R-2 Dormitories, fraternities, sororities and boarding houses, R-3 Congregate living facilities with 16 or fewer persons, and R-4 Residential care/assisted living facilities, drinking fountains are not required for an occupant load of 25 or fewer.

g. In individual tenant spaces provided with a break room sink(s) or water dispenser(s) of B, F-1, F-2, S-1 or S-2 occupancies, each break room sink or water dispenser may be used as a substitute for each required non-accessible drinking fountain.

h. Occupancies that provide food and/or beverage service to patrons do not need to provide drinking fountains.

Section 2902.1.1 is hereby amended as follows:

Section 2902.1.1 Fixture calculations. To determine the occupant load of each sex, the total occupant load shall be divided in half. To determine the required number of fixtures, the fixture ratio or ratios for each fixture type shall be applied to the occupant load of each sex in accordance with Table 2902.1. Fractional numbers resulting from applying the fixture ratios of Table 2902.1 shall be rounded up

to the next whole number. For calculations involving multiple occupancies, such fractional numbers for each occupancy shall first be summed and then rounded up to the next whole number.

Exception:

1. Fractional numbers of .5 or less resulting from applying the fixture ratios of Table 2902.1 may be rounded down to the next whole number.

2. The total occupant load shall not be required to be divided in half where approved statistical data indicate a distribution of the sexes of other than 50 percent of each sex.

Section 2902.1.2 is hereby amended as follows:

Section 2902.1.2 Family or assisted use toilet and bath fixtures. Fixtures located within family or assisted use toilet and bathing rooms required by Section 1109.2.1 are permitted to be included in the number of required fixtures for either the male or female occupants in assembly and mercantile occupancies provided the required quantity of fixtures per sex is not reduced.
(Ord. No. 2011.33, 9-22-11)

Sec. 3102 MEMBRANE STRUCTURES

Section 3102.2 is hereby amended as follows:

Section 3102.2 Definitions. The following words and terms shall, for the purposes of this section and as used elsewhere in this code, have the meanings shown herein.

MEMBRANE-COVERED FRAME STRUCTURE. A nonpressurized building wherein the structure is composed of a rigid framework which uses a single membrane material such as fabric, plastic or metal as the roof covering to provide shade or weather protection.

COMBUSTIBLE MEMBRANE STRUCTURE. A membrane structure in which the membrane is flame-resistant and may be of combustible or noncombustible material and all component parts of the structure are combustible.

Section 3102.3 is hereby amended as follows:

Section 3102.3 Type of construction. Noncombustible membrane structures shall be classified as Type IIB construction. Noncombustible frame or cable-supported structures covered by an approved membrane in accordance with Section 3102.3.1 shall be classified as Type IIB construction. Heavy timber frame-supported structures covered by an approved membrane in accordance with Section 3102.3.1 shall be classified as Type IV construction. Other membrane structures shall be classified as Type V construction. Membrane structures shall be provided with an automatic sprinkler system in accordance with Section 903.2.1 of this code.

Exception: Plastic less than 30 feet (9144 mm) above any floor used in greenhouses, where occupancy by the general public is not authorized, and for aquaculture pond covers is not required to meet the fire propagation performance criteria of NFPA 701.

Section 3102.6 is hereby amended as follows:

Section 3102.6 Mixed construction. Membrane structures shall be permitted to be utilized as specified in this section as a portion of buildings of other types of construction. Height and area limits shall be as specified for the type of construction and occupancy of the building.

Exception: A membrane structure attached or detached at the exterior of a building may be considered as a portion of buildings of other types of construction provided the construction type as classified in Section 3102.3 is equal to or greater than the type of construction of the building and the height and area limits shall be as specified for the type of construction and occupancy of the building.

(Ord. No. 2011.33, 9-22-11)

Sec. 3107 SIGNS.

Section 3107.1 is hereby amended as follows:

Section 3107.1 General. Signs shall be designed, constructed and maintained in accordance with the City of Tempe Zoning and Development Code.

(Ord. No. 2011.33, 9-22-11)

Sec. 3109 SWIMMING POOL ENCLOSURE AND SAFETY DEVICES.

Section 3109.2 is hereby amended as follows:

Section 3109.2. Definition. The following word and term shall, for the purpose of this section and as used elsewhere in this code, have the meaning shown herein.

SWIMMING POOL. Any structure intended for swimming or recreational bathing that contains water over 18 inches (430 mm) deep. This includes in-ground, aboveground, and on-ground swimming pools, hot tubs, and spas.

Section 3109.4.1 is hereby amended as follows:

Section 3109.4.1. Barrier height and clearances. The top of the barrier shall be at least 5 feet (1525 mm) above grade measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 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, such as an aboveground pool, the barrier may be at ground level, such as the pool structure, or mounted on the top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (102 mm).

Section 3109.4.4 is hereby added as follows:

Section 3109.4.4 Barrier exceptions.

1. Spas or hot tubs with a safety cover which complies with ASTM F 1346 shall be exempt from the barrier provisions of Section 3109.
2. Where the premises upon which a swimming pool, spa, or hot tub is located adjoins that body of water recorded as Tract S of The Lakes, an enclosure parallel to the bank is not required; provided, that an abutting enclosure, conforming to AG105, extends horizontally to the lakeside edge of the lake bank or beyond. For purposes of this exception, the word abutting shall mean terminating at the point of contact with the lakeside edge of the bank.

Section 3109.4.5 is hereby added as follows:

Section 3109.4.5. Unenclosed pools. It is hereby declared to be a public nuisance and dangerous to the public health, safety and welfare to maintain an outdoor swimming pool, spa or hot tub in the city unless enclosed in accordance with Section 3109, It shall be the responsibility of both the property owner and the occupant of the premises to install and maintain the fences, locks, latches, alarms, and gates in good condition and proper working order when water is in the pool, and either or both may be deemed in violation of this chapter for failure to do so.

Section 3109.4.6 is hereby added as follows:

Section 3109.4.6 Prerequisites to issuance of building permit. A building permit shall not be issued for any swimming pool, spa or hot tub unless the plans for such pool provide for an enclosure as required by this article.

Section 3109.4.7 is hereby added as follows:

Section 3109.4.7 Final inspection and approval. No swimming pool, spa or hot tub shall be filled in whole or in part with water unless the pool enclosure has been installed in accordance with this article and approved by the deputy community development director/building safety or authorized representative.
(Ord. No. 2011.33, 9-22-11)

Sec. 3401 GENERAL.

Section 3401.3 is hereby amended as follows:

Section 3401.3 Compliance with other codes. Alterations, repairs, additions and changes of occupancy to existing structures shall comply with the provisions for alterations, repairs, additions and changes of occupancy in the Tempe building codes.
(Ord. No. 2011.33, 9-22-11)

Sec. 3412 COMPLIANCE ALTERNATIVES.

Section 3412.2 is hereby amended as follows:

Section 3412.2 Applicability. Buildings for which a certificate of occupancy has been issued and existing structures which have received a final inspection approval, in which there is work involving additions, alterations or changes of occupancy shall be made to conform to the requirements of this section or the provisions of Sections 3403 through 3409. The provisions in Sections 3412.2.1 through 3412.2.5 shall apply to existing occupancies that will continue to be, or are proposed to be, in Groups A, B, E, F, M, R, S and U. These provisions shall not apply to buildings with occupancies in Group H or I.
(Ord. No. 2011.33, 9-22-11)