







INTERNATIONAL BUILDING CODE – 2021 ED.
Chapter 11 - ACCESSIBILITY
Appendix E - SUPPLEMENTARY ACCESSIBILITY REQUIREMENTS





ICC A117.1-17



INTERNATIONAL PLUMBING CODE – 2021 ED.
403.4 - Signage
403.5 - Drinking fountain location
404 - ACCESSIBLE PLUMBING FACILITIES
405.3.1 - Water closets, urinals, lavatories and bidets



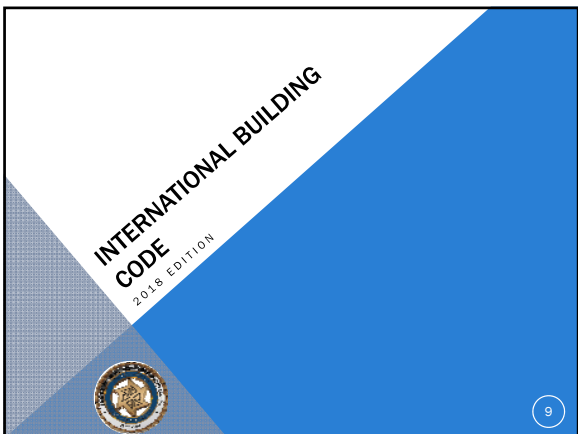

**INTERNATIONAL SWIMMING POOL & SPA CODE
- 2021 ED.
307.1.4 - Accessibility**



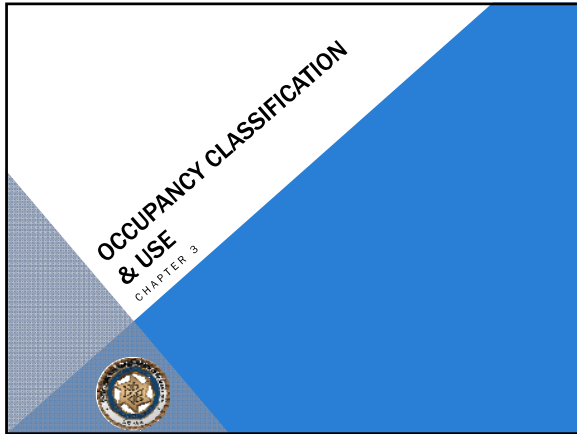
**INTERNATIONAL EXISTING BUILDING CODE -
2021 ED.
306 - ACCESSIBILITY FOR EXISTING BUILDINGS
1101.2 - Creation or extension of nonconformity.
1508 - ACCESSIBILITY
Appendix B - SUPPLEMENTARY ACCESSIBILITY
REQUIREMENTS FOR EXISTING BUILDINGS AND
FACILITIES**

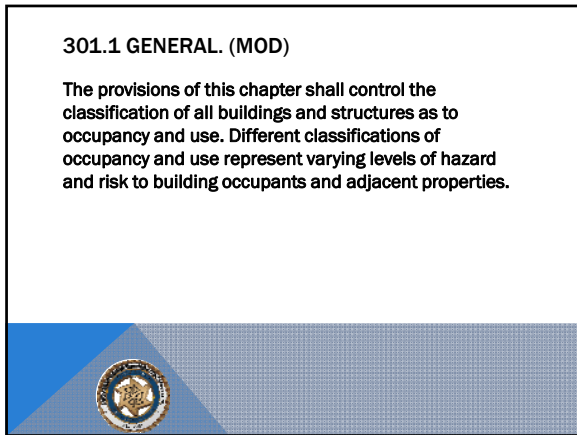


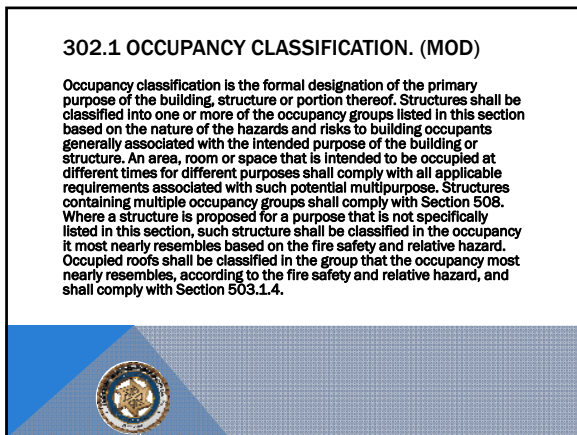
**INTERNATIONAL BUILDING
CODE
2018 EDITION**



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302.2 USE DESIGNATION. (NEW)

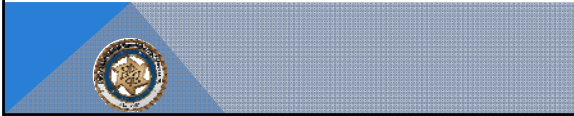
Occupancy groups contain subordinate uses having similar hazards and risks to building occupants. Uses include, but are not limited to, those functional designations listed within the occupancy group descriptions in Section 302.1. Certain uses require specific limitations and controls in accordance with the provisions of Chapter 4 and elsewhere in this code.



307.1.1 USES OTHER THAN GROUP H. (MOD)

An occupancy that stores, uses or handles hazardous materials as described in one or more of the following items shall not be classified as Group H, but shall be classified as the occupancy that it most nearly resembles.

- 15. Stationary fuel cell power systems installed in accordance with the International Fire Code.
- 16. Capacitor energy storage systems in accordance with the International Fire Code.
- 17. Group B higher education laboratory occupancies complying with Section 428 and Chapter 38 of the International Fire Code.



310.3 RESIDENTIAL GROUP R-2. (MOD)

- Apartment houses
- Congregate living facilities (nontransient) with more than 16 occupants
 - Boarding houses (nontransient)
 - Convents
 - Dormitories
 - Fraternities and sororities
 - Monasteries
- Hotels (nontransient)
- Live/work units
- Motels (nontransient)
- Vacation timeshare properties



310.4 RESIDENTIAL GROUP R-3. (MOD)

Buildings that do not contain more than two dwelling units
Care facilities that provide accommodations for five or fewer persons receiving care
Congregate living facilities (nontransient) with 16 or fewer occupants
 Boarding houses (nontransient)
 Convents
 Dormitories
 Fraternities and sororities
 Monasteries
Congregate living facilities (transient) with 10 or fewer occupants
 Boarding houses (transient)
Lodging houses (transient) with five or fewer guest rooms and 10 or fewer occupants



310.4.2 LODGING HOUSES. (MOD)

Owner-occupied lodging houses with five or fewer guest rooms and 10 or fewer total occupants shall be permitted to be constructed in accordance with the International Residential Code.



311.1.1 ACCESSORY STORAGE SPACES. (MOD)

A room or space used for storage purposes that is accessory to another occupancy shall be classified as part of that occupancy.




GREENHOUSES (MOD)

GREENHOUSE. A structure or thermally isolated area of a building that maintains a specialized sunlit environment used for and essential to the cultivation, protection or maintenance of plants.

303.4 Assembly Group A-3. - Greenhouses for the conservation and exhibition of plants that provide public access.

309.1 Mercantile Group M. - Greenhouses for display and sale of plants that provide public access.

312.1.1 Greenhouses. - Greenhouses not classified as another occupancy shall be classified as Use Group U.




**SPECIAL DETAILED
REQUIREMENTS BASED ON
OCCUPANCY & USE**
CHAPTER 4




402.8.6.1 EXIT PASSAGEWAYS. (MOD)

Where exit passageways provide a secondary means of egress from a tenant space, the exit passageways shall be constructed in accordance with Section 1024.



403.2.1.1 TYPE OF CONSTRUCTION. (MOD)


2. In other than Group F-1, H-2, H-3, H-5, M and S-1 occupancies, the fire-resistance rating of the building elements in Type IB construction shall be permitted to be reduced to the fire-resistance ratings in Type IIA.



403.4.8.3 STANDBY POWER LOADS. (MOD)

The following are classified as standby power loads:


1. Ventilation and automatic fire detection equipment for smoke-proof enclosures.
2. Elevators..
3. Where elevators are provided in a high-rise building for accessible means of egress, fire service access or occupant self-evacuation, the standby power system shall also comply with Sections 1009.4, 3007 or 3008, as applicable.



403.4.8.4 EMERGENCY POWER LOADS. (MOD)

The following are classified as emergency power loads:

1. Exit signs and means of egress illumination required by Chapter 10.
2. Elevator car lighting.
3. Emergency voice/alarm communications systems.
4. Automatic fire detection systems.
5. Fire alarm systems.
6. Electrically powered fire pumps.
7. Power and lighting for the fire command center required by Section 403.4.6.



**403.5.2 ADDITIONAL INTERIOR EXIT STAIRWAY.
(MOD)**

For buildings other than Group R-2 and their ancillary spaces that are more than 420 feet (128 m) in building height, one additional interior exit stairway meeting the requirements of Sections 1011 and 1023 shall be provided in addition to the minimum number of exits required by Section 1006.3. The total capacity of any combination of remaining interior exit stairways with one interior exit stairway removed shall be not less than the total capacity required by Section 1005.1. Scissor stairways shall not be considered the additional interior exit stairway required by this section.



**403.5.2 ADDITIONAL INTERIOR EXIT STAIRWAY.
(MOD)**

Exceptions:

1. An additional interior exit stairway shall not be required to be installed in buildings having elevators used for occupant self-evacuation in accordance with Section 3008.
2. An additional interior exit stairway shall not be required for other portions of the building where the highest occupiable floor level in those areas is less than 420 feet (128 m) in building height.



404.6 ENCLOSURE OF ATRIUMS. (MOD)

Exceptions:

3. A fire barrier is not required between the atrium and the adjoining spaces of up to three floors of the atrium provided that such spaces are accounted for in the design of the smoke control system.
4. A fire barrier is not required between the atrium and the adjoining spaces where the atrium is not required to be provided with a smoke control system.



405.4.2 SMOKE BARRIER PENETRATION. (MOD)

The compartments shall be separated from each other by a smoke barrier in accordance with Section 709. Penetrations between the two compartments shall be limited to plumbing and electrical piping and conduit that are fire-stopped in accordance with Section 714. Doorways shall be protected by fire door assemblies that comply with Section 716, automatic closing by smoke detection in accordance with Section 716.2.6.6 and installed in accordance with NFPA 105 and Section 716.2.2.1. Where provided, each compartment shall have an air supply and an exhaust system independent of the other compartments.



405.4.3 ELEVATORS. (MOD)

Where elevators are provided, each compartment shall have direct access to an elevator. Where an elevator serves more than one compartment, an enclosed elevator lobby shall be provided and shall be separated from each compartment by a smoke barrier in accordance with Section 709. Doorways in the smoke barrier shall be protected by fire door assemblies that comply with Section 716, shall comply with the smoke and draft control assembly requirements of Section 716.2.2.1 with the UL 1784 test conducted without an artificial bottom seal, and shall be automatic-closing by smoke detection in accordance with Section 716.2.6.6.



405.8.1 STANDBY POWER LOADS. (MOD)

The following are classified as standby power loads:

1. Smoke control system.
2. Ventilation and automatic fire detection equipment for smoke-proof enclosures.
3. Elevators, as required in Section 3003.



405.8.2 EMERGENCY POWER LOADS. (MOD)

The following are classified as emergency power loads:

1. Emergency voice/alarm communications systems.
2. Fire alarm systems.
3. Automatic fire detection systems.
4. Elevator car lighting.
5. Means of egress and exit sign illumination as required by Chapter 10.
6. Fire pumps.



406.1 GENERAL. (MOD)

All motor-vehicle-related occupancies shall comply with Section 406.2. Private garages and carports shall also comply with Section 406.3. Open public parking garages shall also comply with Sections 406.4 and 406.5. Enclosed public parking garages shall also comply with Sections 406.4 and 406.6. Motor fuel-dispensing facilities shall also comply with Section 406.7. Repair garages shall also comply with Section 406.8.



406.2 DESIGN. (NEW)

Private garages and carports, open and enclosed public parking garages, motor fuel-dispensing facilities and repair garages shall comply with Sections 406.2.1 through 406.2.9.

406.2.1 Automatic garage door openers and vehicular gates. Automatic garage door openers shall be listed and labeled in accordance with UL 325. Where provided, automatic vehicular gates shall comply with Section 3110.



406.2.2 CLEAR HEIGHT. (NEW)

The clear height of each floor level in vehicle and pedestrian traffic areas shall be not less than 7 feet (2134 mm). Canopies under which fuels are dispensed shall have a clear height in accordance with Section 406.7.2.

Exception: A lower clear height is permitted for a parking tier in mechanical-access open parking garages where approved by the building official.



406.2.3 ACCESSIBLE PARKING SPACES. (NEW)

Where parking is provided, accessible parking spaces, access aisles and vehicular routes serving accessible parking shall be provided in accordance with Section 1106.



406.2.4 FLOOR SURFACES. (NEW)

Floor surfaces shall be of concrete or similar approved noncombustible and nonabsorbent materials. The area of floor used for the parking of automobiles or other vehicles shall be sloped to facilitate the movement of liquids to a drain or toward the main vehicle entry doorway. The surface of vehicle fueling pads in motor fuel-dispensing facilities shall be in accordance with Section 406.7.1.

Exceptions:

1. Asphalt parking surfaces shall be permitted at ground level for public parking garages and private carports.
2. Floors of Group S-2 parking garages shall not be required to have a sloped surface.
3. Slip-resistant, nonabsorbent, interior floor finishes having a critical radiant flux not more than 0.45 W/cm², as determined by ASTM E648 or NFPA 253, shall be permitted in repair garages.



406.2.5 SLEEPING ROOMS. (NEW)

Openings between a motor vehicle-related occupancy and a room used for sleeping purposes shall not be permitted.



406.2.6 FUEL DISPENSING. (NEW)

The dispensing of fuel shall only be permitted in motor fuel-dispensing facilities in accordance with Section 406.7.



406.2.7 ELECTRIC VEHICLE CHARGING STATIONS. (NEW)

Where provided, electric vehicle charging stations shall be installed in accordance with NFPA 70. Electric vehicle charging system equipment shall be listed and labeled in accordance with UL 2202. Electric vehicle supply equipment shall be listed and labeled in accordance with UL 2594. Accessibility to electric vehicle charging stations shall be provided in accordance with Chapter 11.



**406.2.8 MIXED OCCUPANCIES AND USES.
(NEW)**

Mixed uses shall be allowed in the same building as public parking garages and repair garages in accordance with Section 508.1. Mixed uses in the same building as an open parking garage are subject to Sections 402.4.2.3, 406.5.11, 508.1, 510.3, 510.4 and 510.7.



406.2.9 EQUIPMENT AND APPLIANCES. (NEW)

Equipment and appliances shall be installed in accordance with Sections 406.2.9.1 through 406.2.9.3 and the International Mechanical Code, International Fuel Gas Code and NFPA 70.



**406.2.9.1 ELEVATION OF IGNITION SOURCES.
(NEW)**

Equipment and appliances having an ignition source and located in hazardous locations and public garages, private garages, repair garages, automotive motor fuel-dispensing facilities and parking garages shall be elevated such that the source of ignition is not less than 18 inches (457 mm) above the floor surface on which the equipment or appliance rests. For the purpose of this section, rooms or spaces that are not part of the living space of a dwelling unit and that communicate directly with a private garage through openings shall be considered to be part of the private garage.

Exception: Elevation of the ignition source is not required for appliances that are listed as flammable vapor ignition resistant.



406.2.9.1.1 PARKING GARAGES. (NEW)

Connection of a parking garage with any room in which there is a fuel-fired appliance shall be by means of a vestibule providing a two-doorway separation, except that a single door is permitted where the sources of ignition in the appliance are elevated in accordance with Section 406.2.9.

Exception: This section shall not apply to appliance installations complying with Section 406.2.9.2 or 406.2.9.3.



406.2.9.2 PUBLIC GARAGES. (NEW)

Appliances located in public garages, motor fuel-dispensing facilities, repair garages or other areas frequented by motor vehicles shall be installed not less than 8 feet (2438 mm) above the floor. Where motor vehicles are capable of passing under an appliance, the appliance shall be installed at the clearances required by the appliance manufacturer and not less than 1 foot (305 mm) higher than the tallest vehicle garage door opening.

Exception: The requirements of this section shall not apply where the appliances are protected from motor vehicle impact and installed in accordance with Section 406.2.9.1 and NFPA 30A.



406.2.9.3 PRIVATE GARAGES. (NEW)

Appliances located in private garages and carports shall be installed with a minimum clearance of 6 feet (1829 mm) above the floor.

Exception: The requirements of this section shall not apply where the appliances are protected from motor vehicle impact and are installed in accordance with Section 406.2.9.1.



406.4 PUBLIC PARKING GARAGES. (MOD)

Parking garages, other than private garages, shall be classified as public parking garages and shall comply with the provisions of Sections 406.2 and 406.4 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.



407.2.6 NURSING HOME COOKING FACILITIES. (MOD)

1. The number of care recipients housed in the smoke compartment shall not be greater than 30.
2. The number of care recipients served by the cooking facility shall not be greater than 30.
3. Not more than one cooking facility area shall be permitted in a smoke compartment.
4. The types of domestic cooking appliances permitted shall be limited to ovens, cooktops, ranges, warmers and microwaves.
5. The corridor shall be a clearly identified space delineated by construction or floor pattern, material or color.
6. The space containing the domestic cooking facility shall be arranged so as not to obstruct access to the required exit.



407.2.6 NURSING HOME COOKING FACILITIES. (MOD)

7. Domestic cooking hoods installed and constructed in accordance with Section 505 of the International Mechanical Code shall be provided over cooktops and ranges.
8. Cooktops and ranges shall be protected in accordance with Section 904.13.
9. A shut-off for the fuel and electrical power supply to the cooking equipment shall be provided in a location that is accessible only to staff.
10. A timer shall be provided that automatically deactivates the cooking appliances within a period of not more than 120 minutes.



407.2.6 NURSING HOME COOKING FACILITIES. (MOD)

~~10. An interlock device shall be provided such that upon activation of the hood suppression system, the power or fuel supply to the cooktop or range will be turned off.~~

11. A portable fire extinguisher shall be provided. Installation shall be in accordance with Section 906, and the extinguisher shall be located within a 30-foot (9144 mm) distance of travel from each domestic cooking appliance.



407.3.1 CORRIDOR DOORS. (MOD)

Corridor doors, other than those in a wall required to be rated by Section 509.4 or for the enclosure of a vertical opening or an exit, shall not have a required fire protection rating and shall not be required to be equipped with self-closing or automatic-closing devices, but shall provide an effective barrier to limit the transfer of smoke and shall be equipped with positive latching. Roller latches are not permitted. Other doors shall conform to Section 716.



407.5 SMOKE BARRIERS. (MOD)

Smoke barriers shall be provided to subdivide every story used by persons receiving care, treatment or sleeping into not fewer than two smoke compartments. Smoke barriers shall be provided to subdivide other stories with an occupant load of 50 or more persons, into not fewer than two smoke compartments. The smoke barrier shall be in accordance with Section 709.



407.5.1 SMOKE COMPARTMENT SIZE. (NEW)

Stories shall be divided into smoke compartments with an area of not more than 22,500 square feet (2092 m²) in Group I-2 occupancies.

Exceptions:

1. A smoke compartment in Group I-2, Condition 2 is permitted to have an area of not more than 40,000 square feet (3716 m²) provided that all patient sleeping rooms within that smoke compartment are configured for single patient occupancy and any suite within the smoke compartment complies with Section 407.4.4.
2. A smoke compartment in Group I-2, Condition 2 without patient sleeping rooms is permitted to have an area of not more than 40,000 square feet (3716 m²).



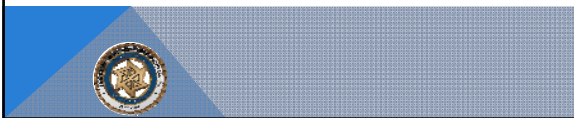
407.5.2 EXIT ACCESS TRAVEL DISTANCE. (NEW)

The distance of travel from any point in a smoke compartment to a smoke barrier door shall be not greater than 200 feet (60 960 mm).



407.5.4 INDEPENDENT EGRESS. (MOD)

A means of egress shall be provided from each smoke compartment created by smoke barriers without having to return through the smoke compartment from which means of egress originated. Smoke compartments that do not contain an exit shall be provided with direct access to not less than two adjacent smoke compartments.



407.6 AUTOMATIC-CLOSING DOORS. (NEW)

Automatic-closing doors with hold-open devices shall comply with Sections 709.5 and 716.2.



420.2 SEPARATION WALLS. (MOD)

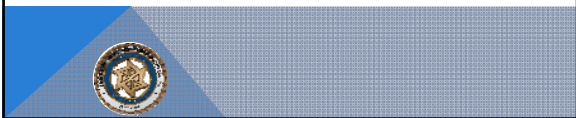
Exceptions:

1. Where sleeping units include private bathrooms, walls between bedrooms and the associated private bathrooms are not required to be constructed as fire partitions.
2. Where sleeping units are constructed as suites, walls between bedrooms within the sleeping unit and the walls between the bedrooms and associated living spaces are not required to be constructed as fire partitions.
3. In Group R-3 and R-4 facilities, walls within the dwelling units or sleeping units are not required to be constructed as fire partitions.



420.3 HORIZONTAL SEPARATION. (MOD)

Exception: In Group R-3 and R-4 facilities, floor assemblies within the dwelling units or sleeping units are not required to be constructed as horizontal assemblies.



420.7 GROUP I-1 ASSISTED LIVING HOUSING UNITS. (NEW)

In Group I-1 occupancies, where a fire-resistance corridor is provided in areas where assisted living residents are housed, shared living spaces, group meeting or multipurpose therapeutic spaces open to the corridor shall be in accordance with all of the following criteria:

1. The walls and ceilings of the space are constructed as required for corridors.
2. The spaces are not occupied as resident sleeping rooms, treatment rooms, incidental uses in accordance with Section 509, or hazardous uses.
3. The open space is protected by an automatic fire detection system installed in accordance with Section 907.



420.7 GROUP I-1 ASSISTED LIVING HOUSING UNITS. (NEW)

4. In Group I-1, Condition 1, the corridors onto which the spaces open are protected by an automatic fire detection system installed in accordance with Section 907, or the spaces are equipped throughout with quick-response sprinklers in accordance with Section 903.3.2.
5. In Group I-1, Condition 2, the corridors onto which the spaces open, in the same smoke compartment, are protected by an automatic fire detection system installed in accordance with Section 907, or the smoke compartment in which the spaces are located is equipped throughout with quick-response sprinklers in accordance with Section 903.3.2.
6. The space is arranged so as not to obstruct access to the required exits.



420.8 GROUP I-1 COOKING FACILITIES. (NEW)

In Group I-1 occupancies, rooms or spaces that contain cooking facilities with domestic cooking appliances shall be in accordance with all of the following criteria:

1. In Group I-1, Condition 1 occupancies, the number of care recipients served by one cooking facility shall not be greater than 30.
2. In Group I-1, Condition 2 occupancies, the number of care recipients served by one cooking facility and within the same smoke compartment shall not be greater than 30.
3. The types of domestic cooking appliances permitted shall be limited to ovens, cooktops, ranges, warmers and microwaves.
4. The space containing the domestic cooking facilities shall be arranged so as not to obstruct access to the required exit.



420.8 GROUP I-1 COOKING FACILITIES. (NEW)

- 5. Domestic cooking hoods installed and constructed in accordance with Section 505 of the International Mechanical Code shall be provided over cooktops or ranges.
- 6. Cooktops and ranges shall be protected in accordance with Section 904.13.
- 7. A shutoff for the fuel and electrical supply to the cooking equipment shall be provided in a location that is accessible only to staff.
- 8. A timer shall be provided that automatically deactivates the cooking appliances within a period of not more than 120 minutes.
- 9. A portable fire extinguisher shall be provided. Installation shall be in accordance with Section 906 and the extinguisher shall be located within a 30-foot (9144 mm) distance of travel from each domestic cooking appliance.



420.8.1 COOKING FACILITIES OPEN TO THE CORRIDOR. (NEW)

Cooking facilities located in a room or space open to a corridor, aisle or common space shall comply with Section 420.8.



420.9 GROUP R COOKING FACILITIES. (NEW)

In Group R occupancies, cooking appliances used for domestic cooking operations shall be in accordance with Section 917.2 of the International Mechanical Code.



420.10 GROUP R-2 DORMITORY COOKING FACILITIES. (NEW)

Domestic cooking appliances for use by residents of Group R-2 college dormitories shall be in accordance with Sections 420.10.1 and 420.10.2.



420.10.1 COOKING APPLIANCES. (NEW)

Where located in Group R-2 college dormitories, domestic cooking appliances for use by residents shall be in compliance with all of the following:

1. The types of domestic cooking appliances shall be limited to ovens, cooktops, ranges, warmers, coffee makers and microwaves.
2. Domestic cooking appliances shall be limited to approved locations.
3. Cooktops and ranges shall be protected in accordance with Section 904.13.
4. Cooktops and ranges shall be provided with a domestic cooking hood installed and constructed in accordance with Section 505 of the International Mechanical Code.





420.10.2 COOKING APPLIANCES IN SLEEPING ROOMS. (NEW)



Cooktops, ranges and ovens shall not be installed or used in sleeping rooms.



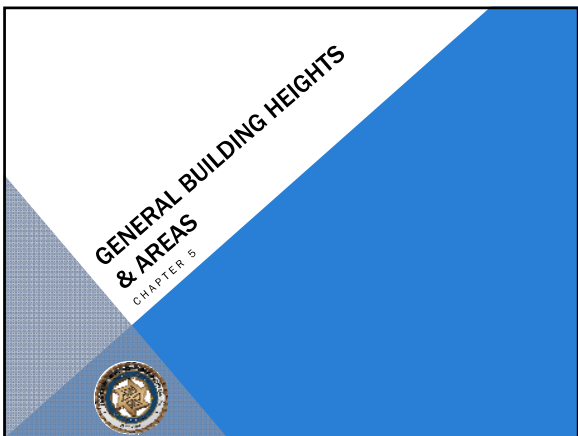

SECTION 427 MEDICAL GAS SYSTEMS (NEW)
This is a new section in 2018



SECTION 428 HIGHER EDUCATION LABORATORIES (NEW)
This is a new section in 2018



GENERAL BUILDING HEIGHTS & AREAS
CHAPTER 5




503.1.4 OCCUPIED ROOFS. (NEW)

A roof level or portion thereof shall be permitted to be used as an occupied roof provided the occupancy of the roof is an occupancy that is permitted by Table 504.4 for the story immediately below the roof. The area of the occupied roofs shall not be included in the building area as regulated by Section 506.

Exceptions:

1. The occupancy located on an occupied roof shall not be limited to the occupancies allowed on the story immediately below the roof where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 and occupant notification in accordance with Section 907.5 is provided in the area of the occupied roof.
2. Assembly occupancies shall be permitted on roofs of open parking spaces of Type I or Type II construction, in accordance with the exception to Section 903.2.1.6.



503.1.4.1 ENCLOSURES OVER OCCUPIED ROOF AREAS. (NEW)

Elements or structures enclosing the occupied roof areas shall not extend more than 48 inches (1220 mm) above the surface of the occupied roof.

Exception: Penthouses constructed in accordance with Section 1510.2 and towers, domes, spires and cupolas constructed in accordance with Section 1510.5.





TABLE 504.3A ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE (MOD)

R	NS ¹	UL	160	65	55	65	55	65	50	40
	S1SR		60	60	60	60	60	60	60	60
	S	UL	100	85	75	85	75	85	70	60

R ²	NS ²	UL	160	65	55	65	55	65	50	40
	S1SD		60	60	60	60	60	60	50	40
	S1SR		60	60	60	60	60	60	60	60
	S	UL	100	85	75	85	75	85	70	60



505.2.1 AREA LIMITATION. (MOD)


Exceptions:

3. The aggregate area of a mezzanine within a dwelling unit that is located in a building equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 shall not be greater than one-half of the floor area of the room, provided that:

3.1. Except for enclosed closets and bathrooms, the mezzanine shall be open to the room in which such mezzanine is located;


3.2. The opening to the room shall be unobstructed except for walls not more than 42 inches (1067 mm) in height, columns and posts; and

3.3. Exceptions to Section 505.2.3 shall not be permitted.



505.2.1.1 AGGREGATE AREA OF MEZZANINES AND EQUIPMENT PLATFORMS. (NEW)

Where a room contains both a mezzanine and an equipment platform, the aggregate area of the two raised floor levels shall be not greater than two thirds of the floor area of that room or space in which they are located. The area of the mezzanine shall not exceed the area determined in accordance with Section 505.2.1.



505.2.3 OPENNESS. (MOD)

Exceptions:

5. In occupancies other than Groups H and I, which are no more than two stories above grade plane and equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, a mezzanine having two or more exits or access to exits shall not be required to be open to the room in which the mezzanine is located.



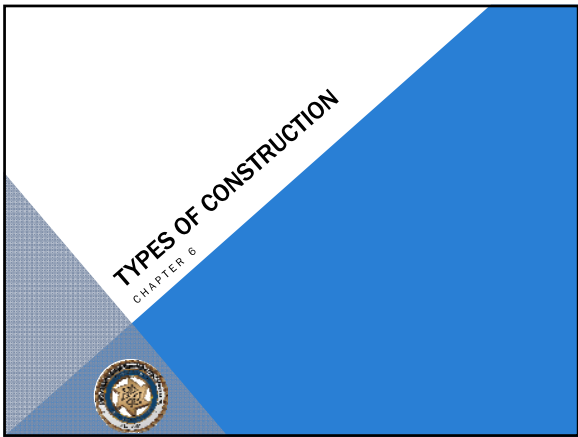


TABLE 509 INCIDENTAL USES (MOD)

Stationary storage battery systems having an energy capacity greater than the threshold quantity specified in Table 1206.2 of the <i>International Fire Code</i>	1 hour in Group B, F, M, S and U occupancies; 2 hours in Group A, E, I and R occupancies.
Electrical installations and transformers	See Sections 110.26 through 110.34 and Sections 450.3 through 450.48 of NFPA 70 for protection and separation requirements.




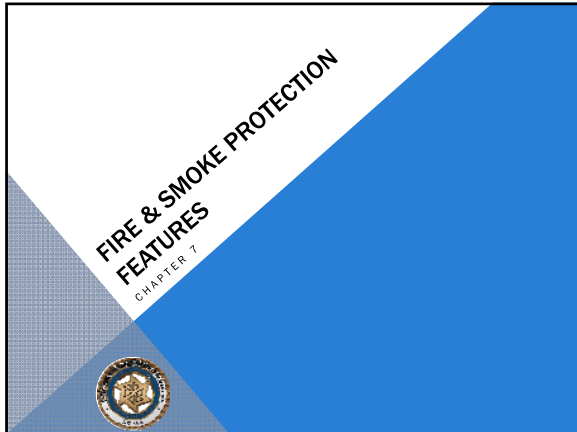


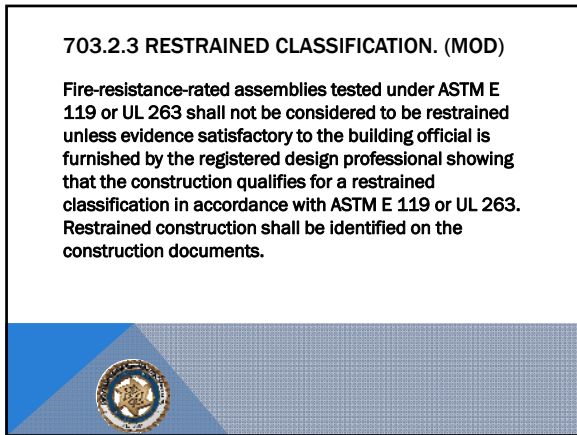
603.1 ALLOWABLE MATERIALS. (MOD)

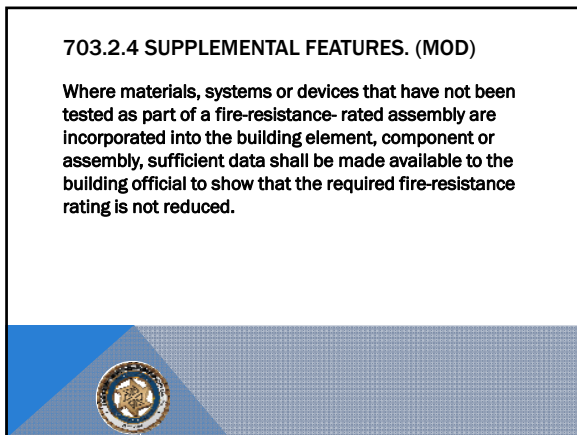
Combustible materials shall be permitted in buildings of Type I or II construction in the following applications and in accordance with Sections 603.1.1 through 603.1.3:

26. Wall construction of freezers and coolers of less than 1,000 square feet (92.9 m²), in size, lined on both sides with noncombustible materials and the building is protected throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.










703.3 METHODS FOR DETERMINING FIRE RESISTANCE. (MOD)

The application of any of the methods listed in this section shall be based on the fire exposure and acceptance criteria specified in ASTM E 119 or UL 263. The required fire resistance of a building element, component or assembly shall be permitted to be established by any of the following methods or procedures:


1. Fire-resistance designs documented in approved sources.
6. Fire-resistance designs certified by an approved agency.



703.7 MARKING AND IDENTIFICATION (MOD)


Where there is an accessible concealed floor, floor-ceiling or attic space, 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 in the concealed space. Such identification shall:

1. Be located within .15 feet (4572 mm) of the end of each wall and at intervals not exceeding 30 feet (9144 mm) measured horizontally along the wall or partition.
2. Include lettering not less than 3 inches (76 mm) in height with a minimum 3/8-inch (9.5 mm) stroke in a contrasting color incorporating the suggested wording, "FIRE AND/OR SMOKE BARRIER—PROTECT ALL OPENINGS," or other wording, SECTION 704



704.2 COLUMN PROTECTION (PA MOD 2015)

704.2 Column protection. Where columns are required to have protection to achieve a fire-resistance rating, the entire column shall be provided individual encasement protection by protecting it on all sides for the full column height, including connections to other structural members, with materials having the required fire-resistance rating. Where the column extends through a ceiling, the encasement protection shall be continuous from the top of the foundation or floor/ceiling assembly below through the ceiling space to the top of the column.



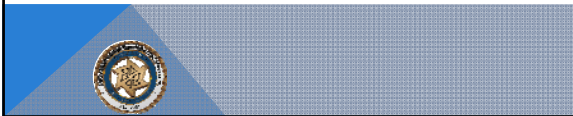
704.4 PROTECTION OF SECONDARY MEMBERS. (MOD)

Secondary members that are required to have protection to achieve a fire-resistance rating shall be protected by individual encasement protection.



704.4.1 LIGHT-FRAME CONSTRUCTION (PA MOD 2015)

704.4.1 Light-frame construction. Studs and boundary elements that are integral elements in load-bearing walls of light-frame construction shall be permitted to have required fire-resistance ratings provided by the membrane protection provided for the load-bearing wall.



704.4.2 HORIZONTAL ASSEMBLIES. (MOD)

Horizontal assemblies are permitted to be protected with a membrane or ceiling where the membrane or ceiling provides the required fire-resistance rating and is installed in accordance with Section 711.



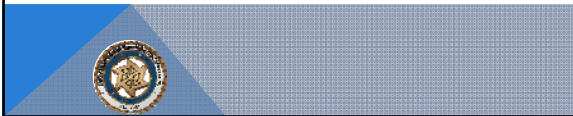
TABLE 705.2 MINIMUM DISTANCE OF PROJECTION (MOD)

FIRE SEPARATION DISTANCE (FSD)	MINIMUM DISTANCE FROM LINE USED TO DETERMINE FSD
0 feet to 2 feet	Projections not permitted
Greater than 2 feet to 3 feet	24 inches
Greater than 3 feet to less than 30 feet	24 inches plus 8 inches for every foot of FSD beyond 3 feet or fraction thereof
30 feet or greater	20 feet



705.2 PROJECTIONS. CORNICES (MOD)

Exception: Buildings on the same lot and considered as portions of one building in accordance with Section 705.3 are not required to comply with this section for projections between the buildings.



705.2.3 COMBUSTIBLE PROJECTIONS. (MOD)

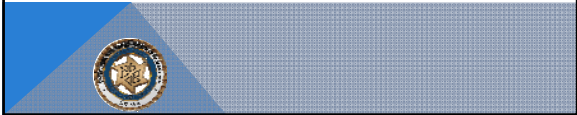
Combustible projections extending to within 5 feet (1524 mm) of the line used to determine the fire separation distance shall be of not less than 1-hour fire-resistance-rated construction, Type IV construction, fire-retardant-treated wood or as required by Section 1406.3.



705.3 BUILDINGS ON THE SAME LOT. (MOD)

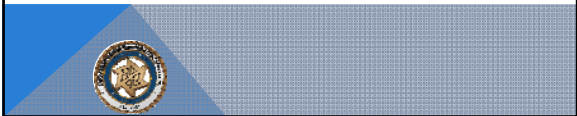
Exceptions:

2. Where an S-2 parking garage of Construction Type I or IIA is erected on the same lot as a Group R-2 building, and there is no fire separation distance between these buildings, then the adjoining exterior walls between the buildings are permitted to have occupant use openings in accordance with Section 706.8. However, opening protectives in such openings shall only be required in the exterior wall of the S-2 parking garage, not in the exterior wall openings in the R-2 building, and these opening protectives in the exterior wall of the S-2 parking garage shall be not less than 1 1/2-hour fire protection rating.



705.6 STRUCTURAL STABILITY. (MOD)

Exterior walls shall extend to the height required by Section 705.11. Interior structural elements that brace the exterior wall but that are not located within the plane of the exterior wall shall have the minimum fire-resistance rating required in Table 601 for that structural element. Structural elements that brace the exterior wall but are located outside of the exterior wall or within the plane of the exterior wall shall have the minimum fire-resistance rating required in Tables 601 and 602 for the exterior wall.



706.1.1 PARTY WALLS. (MOD)


Any wall located on a lot line between adjacent buildings, which is used or adapted for joint service between the two buildings, shall be constructed as a fire wall in accordance with Section 706. Party walls shall be constructed without openings and shall create separate buildings.



706.1.1 PARTY WALLS. (MOD)


Exceptions:

2. Fire walls are not required on lot lines dividing a building for ownership purposes where the aggregate height and area of the portions of the building located on both sides of the lot line do not exceed the maximum height and area requirements of this code. For the code official's review and approval, he or she shall be provided with copies of dedicated access easements and contractual agreements that permit the owners of portions of the building located on either side of the lot line access to the other side for purposes of maintaining fire and life safety systems necessary for the operation of the building.



706.2 STRUCTURAL STABILITY. (MOD)

Exception: In Seismic Design Categories D through F, where double fire walls are used in accordance with NFPA 221, floor and roof sheathing not exceeding 3/4 inch (19.05 mm) thickness shall be permitted to be continuous through the wall assemblies of light frame construction.




708.4 CONTINUITY. (NEW)

Fire partitions shall extend from the top of the foundation or floor/ceiling assembly below and be securely attached to one of the following:

1. The underside of the floor or roof sheathing, deck or slab above.
2. The underside of a floor/ceiling or roof/ceiling assembly having a fire-resistance rating that is not less than the fire-resistance rating of the fire partition.

Exceptions:

1. Fire partitions shall not be required to extend into a crawl space below where the floor above the crawl space has a minimum 1-hour fire-resistance rating.




708.4 CONTINUITY. (NEW)

2. Fire partitions serving as a corridor wall shall not be required to extend above the lower membrane of a corridor ceiling provided that the corridor ceiling membrane is equivalent to corridor wall membrane, and either of the following conditions is met:


- 2.1. The room-side membrane of the corridor wall extends to the underside of the floor or roof sheathing, deck or slab of a fire-resistance-rated floor or roof above.
- 2.2. The building is equipped with an automatic sprinkler system installed throughout in accordance with Section 903.3.1.1 or 903.3.1.2, including automatic sprinklers installed in the space between the top of the fire partition and underside of the floor or roof sheathing, deck or slab above.

3. Fire partitions serving as a corridor wall shall be permitted to terminate at the upper membrane of the corridor ceiling assembly where the corridor ceiling is constructed as required for the corridor wall.



708.4 CONTINUITY. (NEW)


4. Fire partitions separating tenant spaces in a covered or open mall building complying with Section 402.4.2.1 shall not be required to extend above the underside of a ceiling. Such ceiling shall not be required to be part of a fire-resistance-rated assembly, and the attic or space above the ceiling at tenant separation walls shall not be required to be subdivided by fire partitions.



708.4.1 SUPPORTING CONSTRUCTION. (NEW)

The supporting construction for a fire partition shall have a fire-resistance rating that is equal to or greater than the required fire-resistance rating of the supported fire partition.


Exception: In buildings of Types IIB, IIIB and VB construction, the supporting construction requirement shall not apply to fire partitions separating tenant spaces in covered and open mall buildings, fire partitions separating dwelling units, fire partitions separating sleeping units and fire partitions serving as corridor walls.



708.4.2 FIREBLOCKS AND DRAFTSTOPS IN COMBUSTIBLE CONSTRUCTION. (NEW)

In combustible construction where fire partitions do not extend to the underside of the floor or roof sheathing, deck or slab above, the space above and along the line of the fire partition shall be provided with one of the following:


1. Fireblocking up to the underside of the floor or roof sheathing, deck or slab above using materials complying with Section 718.2.1.
2. Draftstopping up to the underside of the floor or roof sheathing, deck or slab above using materials complying with Section 718.3.1 for floors or Section 718.4.1 for attics.



708.4.2 FIREBLOCKS AND DRAFTSTOPS IN COMBUSTIBLE CONSTRUCTION. (NEW)


Exceptions:

1. Buildings equipped with an automatic sprinkler system installed throughout in accordance with Section 903.3.1.1, or in accordance with Section 903.3.1.2 provided that protection is provided in the space between the top of the fire partition and underside of the floor or roof sheathing, deck or slab above as required for systems complying with Section 903.3.1.1.
2. Where corridor walls provide a sleeping unit or dwelling unit separation, draftstopping shall only be required above one of the corridor walls.
3. In Group R-2 occupancies with fewer than four dwelling units, fireblocking and draftstopping shall not be required.




708.4.2 FIREBLOCKS AND DRAFTSTOPS IN COMBUSTIBLE CONSTRUCTION. (NEW)

4. In Group R-2 occupancies up to and including four stories in height in buildings not exceeding 60 feet (18 288 mm) in height above grade plane, the attic space shall be subdivided by draftstops into areas not exceeding 3,000 square feet (279 m²) or above every two dwelling units, whichever is smaller.
5. In Group R-3 occupancies with fewer than three dwelling units, fire-blocking and draftstopping shall not be required in floor assemblies.



709.5.1 GROUP I-2 AND AMBULATORY CARE FACILITIES. (MOD)


In Group I-2 and ambulatory care facilities, where doors protecting openings in smoke barriers are installed across a corridor and have hold-open devices, the doors shall be automatic-closing in accordance with Section 716.2.6.6. Such doors shall have a vision panel with fire-protection rated glazing materials in fire-protection-rated frames, the area of which shall not exceed that tested.



714.5.2 MEMBRANE PENETRATIONS (MOD)

Exceptions:

8. Ceiling membrane penetrations by listed luminaires (light fixtures) or by luminaires protected with listed materials, which have been tested for use in fire-resistance-rated assemblies and are installed in accordance with the instructions included in the listing.




SECTION 715 FIRE-RESISTANT JOINT SYSTEMS (MOD)

715.1 General.

Exception: Fire-resistant joint systems shall not be Required for joints in all of the following locations:

5. Floors and ramps within parking garages or structures constructed in accordance with Sections 406.5 and 406.6.

10. The intersection of exterior curtain wall assemblies and the roof slab or roof deck.



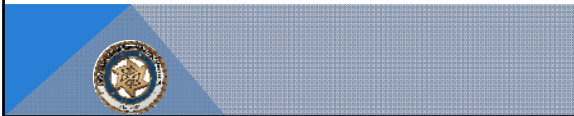
715.2 INSTALLATION. (MOD)

A fire-resistant joint system shall be securely installed in accordance with the manufacturer's installation instructions and the listing criteria in or on the joint for its entire length so as not to impair its ability to accommodate expected building movements and to resist the passage of fire and hot gases.



716.2.6.5 DELAYED-ACTION CLOSERS. (NEW)

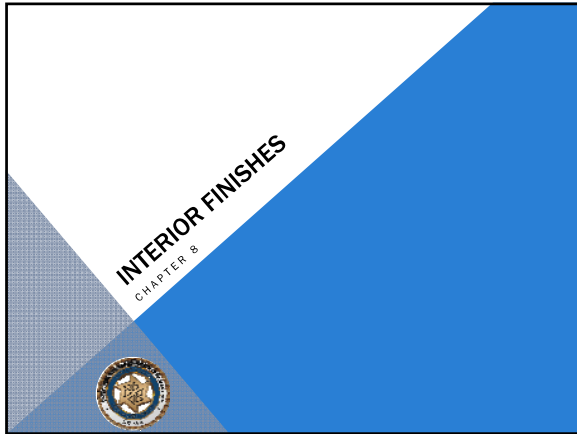
Doors required to be self-closing and not required to be automatic closing shall be permitted to be equipped with delayed-action closers.

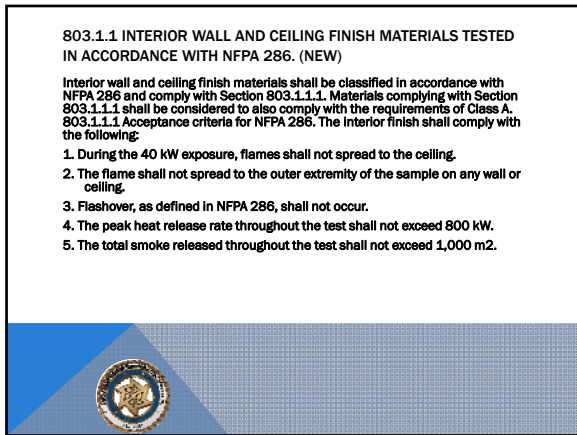


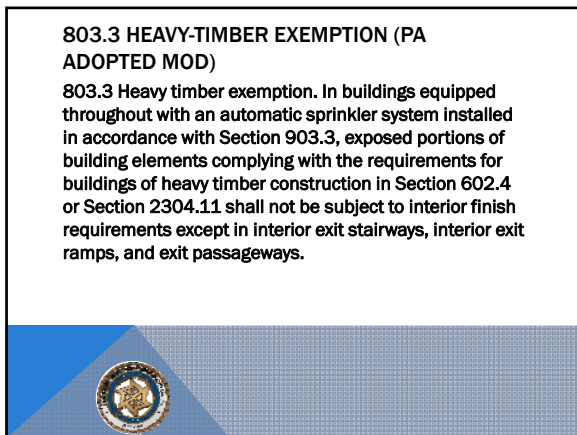
720.1 GENERAL. (MOD)

Insulating materials shall comply with the requirements of this section. Where a flame spread index or a smoke-developed index is specified in this section, such index shall be determined in accordance with ASTM E84 or UL 723. Any material that is subject to an increase in flame spread index or smoke-developed index beyond the limits herein established through the effects of age, moisture or other atmospheric conditions shall not be permitted. Insulating materials, when tested in accordance with the requirements of this section, shall include facings, when used, such as vapor retarders, vapor permeable membranes and similar coverings, and all layers of single and multilayer reflective foil insulation and similar materials.









803.11 LAMINATED PRODUCTS FACTORY PRODUCED WITH A WOOD SUBSTRATE. (NEW)

Laminated products factory produced with a wood substrate shall comply with one of the following:

1. The laminated product shall meet the criteria of Section 803.1.1.1 when tested in accordance with NFPA 286 using the product-mounting system, including adhesive, as described in Section 5.8 of NFPA 286.
2. The laminated product shall have a Class A, B, or C flame spread index and smoke-developed index, based on the requirements of Table 803.13, in accordance with ASTM E84 or UL 723. Test specimen preparation and mounting shall be in accordance with ASTM E2579.



803.12 FACINGS OR WOOD VENEERS INTENDED TO BE APPLIED ON SITE OVER A WOOD SUBSTRATE. (NEW)

Facings or veneers intended to be applied on site over a wood substrate shall comply with one of the following:

1. The facing or veneer shall meet the criteria of Section 803.1.1.1 when tested in accordance with NFPA 286 using the product mounting system, including adhesive, as described in Section 5.9 of NFPA 286.
2. The facing or veneer shall have a Class A, B or C flame spread index and smoke-developed index, based on the requirements of Table 803.13, in accordance with ASTM E84 or UL 723. Test specimen preparation and mounting shall be in accordance with ASTM E2404.



803.15.2 SET-OUT CONSTRUCTION. (MOD)

Where walls and ceilings are required to be of fire-resistance-rated or noncombustible construction and walls are set out or ceilings are dropped distances greater than specified in Section 803.15.1, Class A finish materials, in accordance with Section 803.1.1 or 803.1.2, shall be used.


Exceptions:

3. Where the combustible void is filled with a noncombustible material.




806.2 COMBUSTIBLE DECORATIVE MATERIALS. (MOD)
Exceptions:

4. The 10-percent limit shall not apply to curtains, draperies, fabric hangings and similar combustible decorative materials used as window coverings.




FIRE PROTECTION & LIFE SAFETY SYSTEMS
CHAPTER 9



901.6.2 INTEGRATED TESTING. (NEW)

Where two or more fire protection or life safety systems are interconnected, the intended response of subordinate fire protection and life safety systems shall be verified when required testing of the initiating system is conducted. In addition, integrated testing shall be performed in accordance with Sections 901.6.2.1 and 901.6.2.2.



901.6.2.1 HIGH-RISE BUILDINGS. (NEW)

For high-rise buildings, integrated testing shall comply with NFPA 4, with an integrated test performed prior to issuance of the certificate of occupancy and at intervals not exceeding 10 years, unless otherwise specified by an integrated system test plan prepared in accordance with NFPA 4. If an equipment failure is detected during integrated testing, a repeat of the integrated test shall not be required, except as necessary to verify operation of fire protection or life safety functions that are initiated by equipment that was repaired or replaced.



901.6.2.2 SMOKE CONTROL SYSTEMS. (NEW)

Where a fire alarm system is integrated with a smoke control system as outlined in Section 909, integrated testing shall comply with NFPA 4, with an integrated test performed prior to issuance of the certificate of occupancy and at intervals not exceeding 10 years, unless otherwise specified by an integrated system test plan prepared in accordance with NFPA 4. If an equipment failure is detected during integrated testing, a repeat of the integrated test shall not be required, except as necessary to verify operation of fire protection or life safety functions that are initiated by equipment that was repaired or replaced.



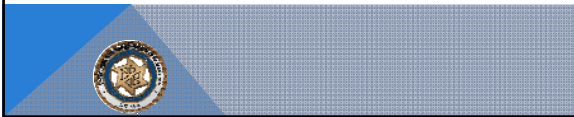
902.1.1 ACCESS. (NEW)

Automatic sprinkler system risers, fire pumps and controllers shall be provided with ready access. Where located in a fire pump room or automatic sprinkler system riser room, the door shall be permitted to be locked provided that the key is available at all times.



902.1.2 MARKING ON ACCESS DOORS. (NEW)

Access doors for automatic sprinkler system riser rooms and fire pump rooms shall be labeled with an approved sign. The lettering shall be in contrasting color to the background. Letters shall have a minimum height of 2 inches (51 mm) with a minimum stroke of 3/8 inch (10 mm).



902.1.3 ENVIRONMENT. (NEW)

Automatic sprinkler system riser rooms and fire pump rooms shall be maintained at a temperature of not less than 40°F (4°C). Heating units shall be permanently installed.



902.1.4 LIGHTING. (NEW)

Permanently installed artificial illumination shall be provided in the automatic sprinkler system riser rooms and fire pump rooms.



903.2.1.1 GROUP A-1. (MOD)

An automatic sprinkler system shall be provided throughout stories containing Group A-1 occupancies and throughout all stories from the Group A-1 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:



903.2.1.2 GROUP A-2. (MOD)

An automatic sprinkler system shall be provided throughout stories containing Group A-2 occupancies and throughout all stories from the Group A-2 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:



903.2.1.3 GROUP A-3. (MOD)

An automatic sprinkler system shall be provided throughout stories containing Group A-3 occupancies and throughout all stories from the Group A-3 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:



903.2.1.4 GROUP A-4. (MOD)

An automatic sprinkler system shall be provided throughout stories containing Group A-4 occupancies and throughout all stories from the Group A-4 occupancy to and including the levels of exit discharge serving that occupancy where one of the following conditions exists:



903.2.1.5.1 (NEW)

Spaces under grandstands or bleachers. Enclosed spaces under grandstands or bleachers shall be equipped with an automatic sprinkler system in accordance with Section 903.3.1.1 where either of the following exist:

1. The enclosed area is 1,000 square feet (93 m²) or less and is not constructed in accordance with Section 1029.1.1.1.
2. The enclosed area exceeds 1,000 square feet (93 m²).



903.2.3 GROUP E. (MOD)

An automatic sprinkler system shall be provided for Group E occupancies as follows:

2. The Group E fire area is located on a floor other than a level of exit discharge serving such occupancies.

Exception: In buildings where every classroom has not fewer than one exterior exit door at ground level, an automatic sprinkler system is not required in any area below the lowest level of exit discharge serving that area.

3. The Group E fire area has an occupant load of 300 or more.



903.3.1.2.1 BALCONIES AND DECKS. (MOD)

Sprinkler protection shall be provided for exterior balconies, decks and ground floor patios of dwelling units and sleeping units where either of the following conditions exists:

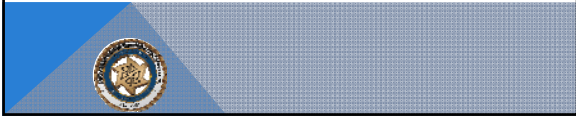
2. Exterior balconies, decks and ground floor patios of dwelling units and sleeping units are constructed in accordance with Section 705.2.3.1, Exception 3.



903.3.1.2.3 ATTICS. (NEW)

Attic protection shall be provided as follows:

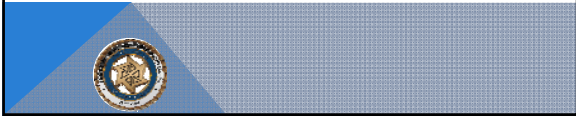
1. Attics that are used or intended for living purposes or storage shall be protected by an automatic sprinkler system.
2. Where fuel-fired equipment is installed in an unsprinklered attic, not fewer than one quickresponse intermediate temperature sprinkler shall be installed above the equipment.



903.3.1.2.3 ATTICS. (NEW)

3. Where located in a building of Type III, Type IV or Type V construction designed in accordance with Section 510.2 or 510.4, attics not required by Item 1 to have sprinklers shall comply with one of the following if the roof assembly is located more than 55 feet (16 764mm) above the lowest level of required fire department vehicle access:

- 3.1. Provide automatic sprinkler system protection.
- 3.2. Construct the attic using noncombustible materials.
- 3.3. Construct the attic using fire-retardant-treated wood complying with Section 2303.2.
- 3.4. Fill the attic with noncombustible insulation. The height of the roof assembly shall be determined by measuring the distance from the lowest required fire vehicle access road surface adjacent to the building to the eave of the highest pitched roof, the intersection of the highest roof to the exterior wall, or the top of the highest parapet, whichever yields the greatest distance. For the purpose of this measurement, required fire vehicle access roads shall include only those roads that are necessary for compliance with Section 503 of the International Fire Code.



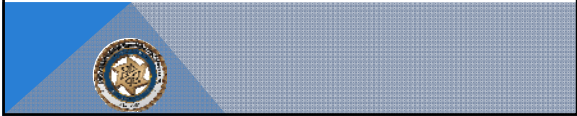
903.3.1.2.3 ATTICS. (NEW)

4. Group R-4, Condition 2 occupancy attics not required by Item 1 to have sprinklers shall comply with one of the following:
- 4.1. Provide automatic sprinkler system protection.
 - 4.2. Provide a heat detection system throughout the attic that is arranged to activate the building fire alarm system.
 - 4.3. Construct the attic using noncombustible materials.
 - 4.4. Construct the attic using fire-retardant treated wood complying with Section 2303.2.
 - 4.5. Fill the attic with noncombustible insulation.



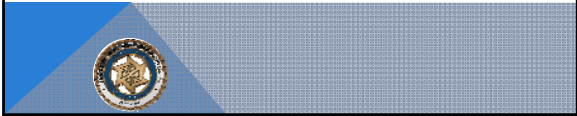
904.13 DOMESTIC COOKING SYSTEMS. (MOD)

- Cooktops and ranges installed in the following occupancies shall be protected in accordance with Section 904.13.1:
- 1. In Group I-1 occupancies where domestic cooking facilities are installed in accordance with Section 420.8.
 - 2. In Group I-2, Condition 1 occupancies where domestic cooking facilities are installed in accordance with Section 407.2.6.
 - 3. In Group R-2 college dormitories where domestic cooking facilities are installed in accordance with Section 420.10.



[F] 904.13.1 PROTECTION FROM FIRE. (MOD)

Cooktops and ranges shall be protected in accordance with Section 904.13.1.1 or 904.13.1.2.



904.13.1.1 AUTOMATIC FIRE-EXTINGUISHING SYSTEM. (NEW)

The domestic recirculating or exterior vented cooking hood provided over the cooktop or range shall be equipped with an approved automatic fire-extinguishing system complying with the following:

1. The automatic fire-extinguishing system shall be of a type recognized for protection of domestic cooking equipment. Pre-engineered automatic fire-extinguishing systems shall be listed and labeled in accordance with UL 300A and installed in accordance with the manufacturer's instructions.
2. Manual actuation of the fire-extinguishing system shall be provided in accordance with Section 904.12.1.
3. Interconnection of the fuel and electric power supply shall be in accordance with Section 904.12.2.



904.13.1.2 IGNITION PREVENTION. (NEW)

Cooktops and ranges shall include burners that have been tested and listed to prevent ignition of cooking oil with burners turned on to their maximum heat settings and allowed to operate for 30 minutes.



904.14 AEROSOL FIRE-EXTINGUISHING SYSTEMS. (NEW)

Aerosol fire-extinguishing systems shall be installed, periodically inspected, tested and maintained in accordance with Sections 901 and 904.4, NFPA 2010, and in accordance with their listing. Such devices and appurtenances shall be listed and installed in compliance with manufacturer's instructions.



905.4 LOCATION OF CLASS I STANDPIPE HOSE CONNECTIONS. (MOD)

Class I standpipe hose connections shall be provided in all of the following locations:

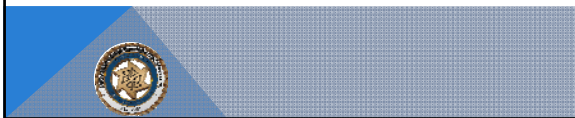
1. In every required interior exit stairway, a hose connection shall be provided for each story above and below grade plane. Hose connections shall be located at the main floor landing unless otherwise approved by the fire code official.

Exception: A single hose connection shall be permitted to be installed in the open corridor or open breezeway between open stairs that are not greater than 75 feet (22 860 mm) apart.



905.5 LOCATION OF CLASS II STANDPIPE HOSE CONNECTIONS. (MOD)

Class II standpipe hose connections located so that all portions of the building are within 30 feet (9144 mm) of a nozzle attached to 100 feet (30 480 mm) of hose. Class II standpipe hose connections shall be located where they will have ready access.



905.11 LOCKING STANDPIPE OUTLET CAPS. (NEW)

The fire code official is authorized to require locking caps on the outlets on dry standpipes where the responding fire department carries key wrenches for the removal that are compatible with locking FDC connection caps.



906.1 WHERE REQUIRED. (MOD)

Portable fire extinguishers shall be installed in all of the following locations:
1. In Group A, B, E, F, H, I, M, R-1, R-2, R-4 and S occupancies.

Exceptions:

1. In Group R-2 occupancies, portable fire extinguishers shall be required only in locations specified in Items 2 through 6 where each dwelling unit is provided with a portable fire extinguisher having a minimum rating of 1- A:10-B:C.
2. In Group E occupancies, portable fire extinguishers shall be required only in locations specified in Items 2 through 6 where each classroom is provided with a portable fire extinguisher having a minimum rating of 2- A:20-B:C.
2. Within 30 feet (9144 mm) distance of travel from commercial cooking equipment and from domestic cooking equipment in Group I-1; I-2, Condition 1; and R-2 college dormitory occupancies.
3. In areas where flammable or combustible liquids are stored, used or dispensed.



907.2.1 GROUP A. (MOD)

A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group A occupancies where the occupant load due to the assembly occupancy is 300 or more, or where the Group A occupant load is more than 100 persons above or below the lowest level of exit discharge. Group A occupancies not separated from one another in accordance with Section 707.3.10 shall be considered as a single occupancy for the purposes of applying this section. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy.



907.2.6 GROUP I. (MOD)


Exceptions:

1. Manual fire alarm boxes in sleeping units of Group I-1 and I-2 occupancies shall not be required at exits if located at all care providers' control stations or other constantly attended staff locations, provided that such manual fire alarm boxes are visible and provided with ready access, and the distances of travel required in Section 907.4.2.1 are not exceeded.




907.2.12 HIGH-RISE BUILDINGS. (NEW)

907.2.12.3 Multiple-channel voice evacuation. In buildings with an occupied floor more than 120 feet (36 576 mm) above the lowest level of fire department vehicle access, voice evacuation systems for high-rise buildings shall be multiple-channel systems.




[F] 907.2.22 BATTERY ROOMS. (MOD)

An automatic smoke detection system shall be installed in areas containing stationary storage battery systems as required in Section 1206.2 of the International Fire Code.



907.2.23 CAPACITOR ENERGY STORAGE SYSTEMS. (NEW)

An automatic smoke detection system shall be installed in areas containing capacitor energy storage systems as required by Section 1206.3.



907.3.2 SPECIAL LOCKING SYSTEMS. (MOD)

Where special locking systems are installed on means of egress doors in accordance with Sections 1010.1.9.6 or 1010.1.9.7, an automatic detection system shall be installed as required by that section.



907.5.2.2.4 EMERGENCY VOICE/ALARM COMMUNICATION CAPTIONS. (MOD)

Where stadiums, arenas and grandstands have 15,000 fixed seats or more and provide audible public announcements, the emergency/voice alarm communication system shall provide prerecorded or real-time captions. Prerecorded or live emergency captions shall be from an approved location constantly attended by personnel trained to respond to an emergency.



907.5.2.3.2 GROUPS I-1 AND R-1. (MOD)

Habitable spaces in dwelling units and sleeping units in Group I-1 and R-1 occupancies in accordance with Table 907.5.2.3.2 shall be provided with visible alarm notification. Visible alarms shall be activated by the in-room smoke alarm and the building fire alarm system



907.5.2.3.3 GROUP R-2. (MOD)

In Group R-2 occupancies required by Section 907 to have a fire alarm system, each story that contains dwelling units and sleeping units shall be provided with the capability to support visible alarm notification appliances in accordance with Chapter 11 of ICC A117.1. Such capability shall accommodate wired or wireless equipment. The future capability shall include one of the following:

1. The interconnection of the building fire alarm system with the unit smoke alarms.
2. The replacement of audible appliances with combination audible/visible appliances.
3. The future extension of the existing wiring from the unit smoke alarm locations to required locations for visible appliances.



910.4 MECHANICAL SMOKE REMOVAL SYSTEMS. (MOD)

910.4.5 Manual control location. Manual controls shall be located where they are able to be accessed by the fire service from an exterior door of the building and separated from the remainder of the building by not less than 1-hour fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both.



912.2 LOCATION. (MOD)

With respect to hydrants, driveways, buildings and landscaping, fire department connections shall be so located that fire apparatus and hose connected to supply the system will not obstruct access to the buildings for other fire apparatus. The location of fire department connections shall be approved by the fire code official.



912.2.1 VISIBLE LOCATION. (MOD)

Fire department connections shall be located on the street side of buildings or facing approved fire apparatus access roads, fully visible and recognizable from the street, fire apparatus access road or nearest point of fire department vehicle access or as otherwise approved by the fire code official.



913.2.2 CIRCUITS SUPPLYING FIRE PUMPS. (MOD)

Cables used for survivability of circuits supplying fire pumps shall be protected using one of the following methods:

1. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a fire-resistance rating of not less than 1 hour.
2. Electrical circuit protective systems shall have a fire-resistance rating of not less than 1 hour. Electrical circuit protective systems shall be installed in accordance with their listing requirements.
3. Construction having a fire-resistance rating of not less than 1 hour.



915.4.3 LOCATIONS. (NEW)

Carbon monoxide alarms shall only be installed in dwelling units and in sleeping units. They shall not be installed in locations where the code requires carbon monoxide detectors to be used.



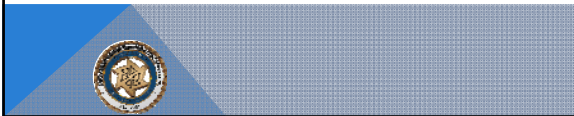
915.6 MAINTENANCE. (MOD)

Carbon monoxide alarms and carbon monoxide detection systems shall be maintained in accordance with the International Fire Code.



916.1 GAS DETECTION SYSTEMS. (NEW)

Gas detection systems required by this code shall comply with Sections 916.2 through 916.11.



916.2 PERMITS. (NEW)

Permits shall be required as set forth in Section 105.7.11 of the International Fire Code.



916.2.1 CONSTRUCTION DOCUMENTS. (NEW)

Documentation of the gas detection system design and equipment to be used that demonstrates compliance with the requirements of this code shall be provided with the application for permit.



916.3 EQUIPMENT. (NEW)

Gas detection system equipment shall be designed for use with the gases being detected and shall be installed in accordance with manufacturer's instructions.




916.4 POWER CONNECTIONS. (NEW)

Gas detection systems shall be permanently connected to the building electrical power supply or shall be permitted to be cord connected to an un-switched receptacle using an approved restraining means that secures the plug to the receptacle.




916.5 EMERGENCY AND STANDBY POWER. (NEW)

Standby or emergency power shall be provided or the gas detection system shall initiate a trouble signal at an approved location if the power supply is interrupted.



916.6 SENSOR LOCATIONS. (NEW)


Sensors shall be installed in approved locations where leaking gases are expected to accumulate.



916.7 GAS SAMPLING. (NEW)

Gas sampling shall be performed continuously. Sample analysis shall be processed immediately after sampling, except as follows:

1. For HPM gases, sample analysis shall be performed at intervals not exceeding 30 minutes.
2. For toxic gases, sample analysis shall be performed at intervals not exceeding 5 minutes in accordance with Section 6004.2.2.7 of the International Fire Code.
3. Where a less frequent or delayed sampling interval is approved.



916.8 SYSTEM ACTIVATION. (NEW)

A gas detection alarm shall be initiated where any sensor detects a concentration of gas exceeding the following thresholds:

1. For flammable gases, a gas concentration exceeding 25 percent of the lower flammability limit (LFL).
2. For nonflammable gases, a gas concentration exceeding one-half of the IDLH, unless a different threshold is specified by the section of this code requiring a gas detection system. Upon activation of a gas detection alarm, alarm signals or other required responses shall be as specified by the section of this code requiring a gas detection system. Audible and visible alarm signals associated with a gas detection alarm shall be distinct from fire alarm and carbon monoxide alarm signals.



916.9 SIGNAGE. (NEW)

Signs shall be provided adjacent to gas detection system alarm signaling devices that advise occupants of the nature of the signals and actions to take in response to the signal.




916.10 FIRE ALARM SYSTEM CONNECTIONS. (NEW)


Gas sensors and gas detection systems shall not be connected to fire alarm systems unless approved and connected in accordance with the fire alarm equipment manufacturer's instructions.




916.11 INSPECTION, TESTING AND SENSOR CALIBRATION. (NEW)
Gas detection systems and sensors shall be inspected, tested and calibrated in accordance with the International Fire Code.



917.1 COLLEGE AND UNIVERSITY CAMPUSES. (NEW)
Prior to construction of a new building requiring a fire alarm system on a multiple-building college or university campus having a cumulative building occupant load of 1,000 or more, a mass notification risk analysis shall be conducted in accordance with NFPA 72. Where the risk analysis determines a need for mass notification, an approved mass notification system shall be provided in accordance with the findings of the risk analysis.

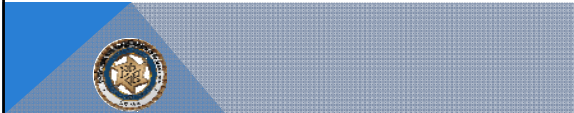


MEANS OF EGRESS
CHAPTER 10



1003.2 CEILING HEIGHT. (MOD)

The means of egress shall have a ceiling height of not less than 7 feet 6 inches (2286 mm) above the finished floor.



1004.3 MULTIPLE FUNCTION OCCUPANT LOAD. (NEW)

Where an area under consideration contains multiple functions having different occupant load factors, the design occupant load for such area shall be based on the floor area of each function calculated independently.



TABLE 1004.5 MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT (MOD)

Business areas	150 gross
Concentrated business use areas	See Section 1004.8



**1004.8 CONCENTRATED BUSINESS USE AREAS.
(NEW)**

The occupant load factor for concentrated business use shall be applied to telephone call centers, trading floors, electronic data processing centers and similar business use areas with a higher density of occupants than would normally be expected in a typical business occupancy environment. Where approved by the building official, the occupant load for concentrated business use areas shall be the actual occupant load, but not less than one occupant per 50 square feet (4.65 m²) of gross occupiable floor space.



**1006.2.1 EGRESS BASED ON OCCUPANT LOAD AND
COMMON PATH OF EGRESS TRAVEL DISTANCE. (MOD)**

Two exits or exit access doorways from any space shall be provided where the design occupant load or the common path of egress travel distance exceeds the values listed in Table 1006.2.1. The cumulative occupant load from adjacent rooms, areas or spaces shall be determined in accordance with Section 1004.2.



**1006.2.1 EGRESS BASED ON OCCUPANT LOAD AND
COMMON PATH OF EGRESS TRAVEL DISTANCE. (MOD)**

1. The number of exits from foyers, lobbies, vestibules or similar spaces need not be based on cumulative occupant loads for areas discharging through such spaces, but the capacity of the exits from such spaces shall be based on applicable cumulative occupant loads.



1006.2.2.6 GROUPS R-3 AND R-4. (NEW)

Where Group R-3 occupancies are permitted by Section 903.2.8 to be protected by an automatic sprinkler system installed in accordance with Section 903.3.1.3, the exit access travel distance for Group R-3 shall be not more than 125 feet (38 100 mm). Where Group R-4 occupancies are permitted by Section 903.2.8 to be protected by an automatic sprinkler system installed in accordance with Section 903.3.1.3, the exit access travel distance for Group R-4 shall be not more than 75 feet (22 860 mm).



1006.3 EGRESS FROM STORIES OR OCCUPIED ROOFS. (MOD)

The means of egress system serving any story or occupied roof shall be provided with the number of separate and distinct exits or access to exits based on the aggregate occupant load served in accordance with this section. Where stairways serve more than one story, only the occupant load of each story considered individually shall be used in calculating the required number of exits or access to exits serving that story.



1006.3.1 ADJACENT STORY. (NEW)

The path of egress travel to an exit shall not pass through more than one adjacent story.

Exception: The path of egress travel to an exit shall be permitted to pass through more than one adjacent story in any of the following:

1. In Group R-1, R-2 or R-3 occupancies, exit access stairways and ramps connecting four stories or less serving and contained within an individual dwelling unit, sleeping unit or live/work unit.
2. Exit access stairways serving and contained within a Group R-3 congregate residence or a Group R-4 facility.



1006.3.1 ADJACENT STORY. (NEW)

3. Exit access stairways and ramps in open parking garages that serve only the parking garage.
4. Exit access stairways and ramps serving open-air assembly seating complying with the exit access travel distance requirements of Section 1029.7.
5. Exit access stairways and ramps between the balcony, gallery or press box and the main assembly floor in occupancies such as theaters, places of religious worship, auditoriums and sports facilities.






TABLE 1006.2.1 SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY (MOD)

Occupancy Group	Exit Access Doorway	Exit	Exit Access	Exit Access Distance
R-1	20	NP	NP	125'
R-2	20	NP	NP	125'
R-3	20	NP	NP	125'
R-4	20	NP	NP	125'



1006.3.2 EGRESS BASED ON OCCUPANT LOAD. (MOD)

Each story and occupied roof shall have the minimum number of separate and distinct exits, or access to exits, as specified in Table 1006.3.2. A single exit or access to a single exit shall be permitted in accordance with Section 1006.3.3. 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.



1008.2.3 EXIT DISCHARGE. (NEW)

Illumination shall be provided along the path of travel for the exit discharge from each exit to the public way.

Exception: Illumination shall not be required where the path of the exit discharge meets both of the following requirements:

1. The path of exit discharge is illuminated from the exit to a safe dispersal area complying with Section 1028.5.
2. A dispersal area shall be illuminated to a level not less than 1 footcandle (1.1 lux) at the walking surface



1009.1 ACCESSIBLE MEANS OF EGRESS REQUIRED. (MOD)

Accessible means of egress shall comply with this section. Accessible spaces shall be provided with not less than one accessible means of egress. Where more than one means of egress is required by Section 1006.2 or 1006.3 from any accessible space, each accessible portion of the space shall be served by not less than two accessible means of egress.

Exceptions:

1. Accessible means of egress are not required to be provided in existing buildings.
1. One accessible means of egress is required from an accessible mezzanine level in accordance with Section 1009.3, 1009.4 or 1009.5.
2. In assembly areas with ramped aisles or stepped aisles, one accessible means of egress is permitted where the common path of egress travel is accessible and meets the requirements in Section 1029.8.



1009.7.2 SEPARATION. (MOD)


Exception: The fire-resistance rating and opening protectives are not required in the exterior wall where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2.



1009.8 TWO-WAY COMMUNICATION. (MOD)


Exceptions:

6. Two-way communication systems are not required in Group I-2 or I-3 facilities.



1010.1.1 SIZE OF DOORS. (MOD)


The required capacity of each door opening shall be sufficient for the occupant load thereof and shall provide a minimum clear opening width of 32 inches (813 mm). The clear opening width of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees (1.57 rad). Where this section requires a minimum clear opening width of 32 inches (813 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a minimum clear opening width of 32 inches (813 mm). In Group I-2, doors serving as means of egress doors where used for the movement of beds shall provide a minimum clear opening width of 41 1/2 inches (1054 mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. The minimum clear opening height of doors shall be not less than 80 inches (2032 mm).



1010.1.1 SIZE OF DOORS. (MOD)


Exceptions:

1. In Group R-2 and R-3 dwelling and sleeping units that are not required to be an Accessible unit, Type A unit or Type B unit, the minimum and maximum width shall not apply to door openings that are not part of the required means of egress.
2. In Group I-3, door openings to resident sleeping units that are not required to be an Accessible unit shall have a minimum clear opening width of 28 inches (711 mm).
3. Door openings to storage closets less than 10 square feet (0.93 m²) in area shall not be limited by the minimum clear opening width.
4. The width of door leaves in revolving doors that comply with Section 1010.1.4.1 shall not be limited.
5. The maximum width of door leaves in power-operated doors that comply with Section 1010.1.4.2 shall not be limited.




1010.1.1 SIZE OF DOORS. (MOD)

- 6. Door openings within a dwelling unit or sleeping unit shall have a minimum clear opening height of 78 inches (1981 mm).
- 7. In dwelling and sleeping units that are not required to be Accessible, Type A or Type B units, exterior door openings other than the required exit door shall have a minimum clear opening height of 76 inches (1930 mm).
- 8. In Groups I-1, R-2, R-3 and R-4, in dwelling and sleeping units that are not required to be Accessible, Type A or Type B units, the minimum clear opening widths shall not apply to interior egress doors.
- 9. Door openings required to be accessible within Type B units intended for user passage shall have a minimum clear opening width of 31.75 inches (806 mm).
- 10. Doors to walk-in freezers and coolers less than 1,000 square feet (93 m2) in area shall have a maximum width of 60 inches (1524 mm) nominal.



1010.1.1 SIZE OF DOORS. (MOD)


- 11. The minimum clear opening width shall not apply to doors for non-accessible shower or sauna compartments.
- 12. The minimum clear opening width shall not apply to the doors for non-accessible toilet stalls.




1010.1.4.4 LOCKING ARRANGEMENTS IN EDUCATIONAL OCCUPANCIES. (NEW)

In Group E and Group B educational occupancies, egress doors from classrooms, offices and other occupied rooms shall be permitted to be provided with locking arrangements designed to keep intruders from entering the room where all of the following conditions are met:


- 1. The door shall be capable of being unlocked from outside the room with a key or other approved means.
- 2. The door shall be openable from within the room in accordance with Section 1010.1.9.
- 3. Modifications shall not be made to listed panic hardware, fire door hardware or door closers.



1010.1.4.4.1 REMOTE OPERATION OF LOCKS. (NEW)
Remote operation of locks complying with Section 1010.1.4.4 shall be permitted.




1010.1.9.3 MONITORED OR RECORDED EGRESS. (NEW)
Where electrical systems that monitor or record egress activity are incorporated, the locking system shall comply with Section 1010.1.9.7, 1010.1.9.8, 1010.1.9.9, 1010.1.9.10 or 1010.1.9.11 or shall be readily openable from the egress side without the use of a key or special knowledge or effort.



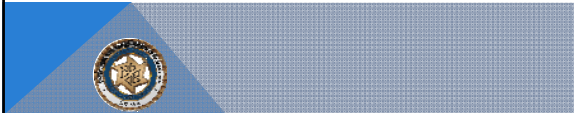
1010.1.9.4 LOCKS AND LATCHES. (MOD)
Locks and latches shall be permitted to prevent operation of doors where any of the following exist:

6. Doors serving roofs not intended to be occupied shall be permitted to be locked preventing entry to the building from the roof.



1010.1.9.6.1 CLOSET DOORS. (MOD)

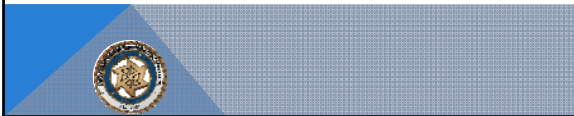
Closet doors that latch in the closed position shall be openable from inside the closet.



1010.1.9.8 DELAYED EGRESS. (MOD)

Delayed egress locking systems shall be permitted to be installed on doors serving the following 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.

1. Group B, F, I, M, R, S and U occupancies.
2. Group E classrooms with an occupant load of less than 50.



1010.1.9.8 DELAYED EGRESS. (MOD)

Exception: Delayed egress locking systems shall be permitted to be installed on exit or exit access doors, other than the main exit or exit access door, serving a courtroom in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.




1010.1.9.8.1 DELAYED EGRESS LOCKING SYSTEM. (MOD)

5. The egress path from any point shall not pass through more than one delayed egress locking system.

Exceptions:


2. In Group I-1 or I-4 occupancies, the egress path from any point in the building shall pass through not more than two delayed egress locking systems provided the combined delay does not exceed 30 seconds and the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.



1010.1.9.9 SENSOR RELEASE OF ELECTRICALLY LOCKED EGRESS DOORS. (MOD)


Sensor release of electric locking systems shall be permitted on doors located in the means of egress in any occupancy except Group H where installed and operated in accordance with all of the following criteria:

1. The sensor shall be installed on the egress side, arranged to detect an occupant approaching the doors, and shall cause the electric locking system to unlock.
2. The electric locks shall be arranged to unlock by a signal from or loss of power to the sensor.
3. Loss of power to the lock or locking system shall automatically unlock the electric locks.



1010.1.9.9 SENSOR RELEASE OF ELECTRICALLY LOCKED EGRESS DOORS. (MOD)

4. 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 electric lock— independent of other electronics—and the electric lock shall remain unlocked for not less than 30 seconds.



1010.1.9.9 SENSOR RELEASE OF ELECTRICALLY LOCKED EGRESS DOORS. (MOD)

- 5. Activation of the building fire alarm system, where provided, shall automatically unlock the electric lock, and the electric lock shall remain unlocked until the fire alarm system has been reset.
- 6. Activation of the building automatic sprinkler system or fire detection system, where provided, shall automatically unlock the electric lock. The electric lock shall remain unlocked until the fire alarm system has been reset.



1010.1.9.10 DOOR HARDWARE RELEASE OF ELECTRICALLY LOCKED EGRESS DOORS. (MOD)

Door hardware release of electric locking systems shall be permitted on doors in the means of egress in any occupancy except Group H where installed and operated in accordance with all of the following:

- 1. The door hardware that is affixed to the door leaf has an obvious method of operation that is readily operated under all lighting conditions.
- 2. The door hardware is capable of being operated with one hand and shall comply with Section 1010.1.9.6.



1010.1.9.10 DOOR HARDWARE RELEASE OF ELECTRICALLY LOCKED EGRESS DOORS. (MOD)

- 3. Operation of the door hardware directly interrupts the power to the electric lock and unlocks the door immediately.
- 4. Loss of power to the electric locking system automatically unlocks the door.
- 5. Where panic or fire exit hardware is required by Section 1010.1.10, operation of the panic or fire exit hardware also releases the electric lock.
- 6. The locking system units shall be listed in accordance with UL 294.



**1010.1.10 PANIC AND FIRE EXIT HARDWARE.
(MOD)**

Swinging doors serving a Group H occupancy and swinging doors serving rooms or spaces with an occupant load of 50 or more in a Group A or E occupancy shall not be provided with a latch or lock other than panic hardware or fire exit hardware.

Exceptions:

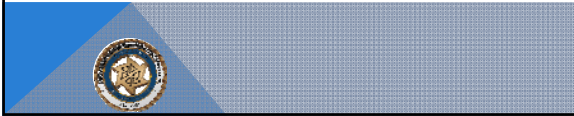
1. A main exit of a Group A occupancy shall be permitted to have locking devices in accordance with Section 1010.1.9.4, item 2.
2. Doors provided with panic hardware or fire exit hardware and serving a Group A or E occupancy shall be permitted to be electrically locked in accordance with Section 1010.1.9.9 or 1010.1.9.10.



**1010.3.2 SECURITY ACCESS TURNSTILES.
(NEW)**

Security access turnstiles that inhibit travel in the direction of egress utilizing a physical barrier shall be permitted to be considered as a component of the means of egress, provided that all of the following criteria are met:

1. The building is protected throughout by an automatic sprinkler system in accordance with Section 903.3.1.1.
2. Each security access turnstile lane configuration has a minimum clear passage width of 22 inches (559 mm).
3. Any security access turnstile lane configuration providing a clear passage width of less than 32 inches (810 mm) shall be credited with a maximum egress capacity of 50 persons.
4. Any security access turnstile lane configuration providing a clear passage width of 32 inches (810 mm) or more shall be credited with a maximum egress capacity as calculated in accordance with Section 1005.



**1010.3.2 SECURITY ACCESS TURNSTILES.
(NEW)**

5. Each secured physical barrier shall automatically retract or swing to an unobstructed open position in the direction of egress, under each of the following conditions:
 - 5.1. Upon loss of power to the turnstile or any part of the access control system that secures the physical barrier.
 - 5.2. Upon actuation of a clearly identified manual release device with ready access that results in direct interruption of power to each secured physical barrier, after which such barriers remain in the open position for not less than 30 seconds. The manual release device shall be positioned at one of the following locations:
 - 5.2.1. On the egress side of each security access turnstile lane.
 - 5.2.2. At an approved location where it can be actuated by an employee assigned to the area at all times that the building is occupied.




1010.3.2 SECURITY ACCESS TURNSTILES. (NEW)

5.3. Upon actuation of the building fire alarm system, if provided, after which the physical barrier remains in the open position until the fire alarm system is manually reset.

Exception: Actuation of a manual fire alarm box.


5.4. Upon actuation of the building automatic sprinkler or fire detection system, after which the physical barrier remains in the open position until the fire alarm system is manually reset.



1010.3.4 ADDITIONAL DOOR. (MOD)

Where serving an occupant load greater than 300, each turnstile that is not portable shall have a side-hinged swinging door that conforms to Section 1010.1 within 50 feet (15 240 mm).

Exception: A side-hinged swinging door is not required at security access turnstiles that comply with Section 1010.3.2.




1015.3 HEIGHT. (MOD)

Required guards shall be not less than 42 inches (1067 mm) high, measured vertically as follows:

Exceptions:

6. In Group F occupancies where exit access stairways serve fewer than three stories and such stairways are not open to the public, and where the top of the guard also serves as a handrail, the top of the guard shall be not less than 34 inches (864 mm) and not more than 38 inches (965 mm) measured vertically from a line connecting the leading edges of the treads.



1015.6 MECHANICAL EQUIPMENT, SYSTEMS AND DEVICES. (MOD)

Guards shall be provided where various components that require service are located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall extend not less than 30 inches (762 mm) beyond each end of such components. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

Exception: Guards are not required where personal fall arrest anchorage connector devices that comply with ANSI/ASSE Z 359.1 are installed.



1015.7 ROOF ACCESS. (MOD)

Guards shall be provided where the roof hatch opening is located within 10 feet (3048 mm) of a roof edge or open side of a walking surface and such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below. The guard shall be constructed so as to prevent the passage of a sphere 21 inches (533 mm) in diameter.

Exception: Guards are not required where personal fall arrest anchorage connector devices that comply with ANSI/ASSE Z 359.1 are installed.



1017.3 MEASUREMENT. (MOD)

Exit access travel distance shall be measured from the most remote point of each room, area or space along the natural and unobstructed path of horizontal and vertical egress travel to the entrance to an exit.



1023.3.1 EXTENSION. (MOD)

Exceptions:

- 3. Separation between an interior exit stairway or ramp and the exit passageway extension shall not be required where the interior exit stairway and the exit passageway extension are pressurized in accordance with Section 909.20.5.



1023.5 PENETRATIONS. (MOD)

Penetrations into or through interior exit stairways and ramps are prohibited except for the following:

- 1. Equipment and ductwork necessary for independent ventilation or pressurization.
- 2. Fire protection systems.
- 3. Security systems.
- 4. Two-way communication systems.
- 5. Electrical raceway for fire department communication systems.
- 6. Electrical raceway serving the interior exit stairway and ramp and terminating at a steel box not exceeding 16 square inches (0.010 m²).



1029.7 TRAVEL DISTANCE. (MOD)

The exit access travel distance shall comply with Section 1017. Where aisles are provided for seating, the distance shall be measured along the aisles and aisle accessways without travel over or on the seats.

Exceptions:

- 1. In facilities with smoke-protected assembly seating, the total exit access travel distance shall be not greater than 400 feet (122 m). That portion of the total permitted exit access travel distance from each seat to the nearest entrance to a vomitory or concourse shall not exceed 200 feet (60 960 mm). The portion of the total permitted exit access travel distance from the entrance to the vomitory or concourse to one of the following shall not exceed 200 feet (60 960 mm):
 - 1.1. The closest riser of an exit access stairway.
 - 1.2. The closest slope of an exit access ramp.
 - 1.3. An exit.




1029.7 TRAVEL DISTANCE. (MOD)

2. In facilities with open-air assembly seating of Type III, IV or V construction, the total exit access travel distance to one of the following shall not exceed 400 feet (122 m):

- 2.1. The closest riser of an exit access stairway.
- 2.2. The closest slope of an exit access ramp.
- 2.3. An exit.


3. In facilities with open-air assembly seating of Type I or II construction, the total exit access travel distance shall not be limited.



1030.1 GENERAL. (MOD)

In addition to the means of egress required by this chapter, emergency escape and rescue openings shall be provided in the following occupancies:


- 1. Group R-2 occupancies located in stories with only one exit or access to only one exit as permitted by Tables 1006.3.3(1) and 1006.3.3(2).
- 2. Group R-3 and R-4 occupancies.



1030.1 GENERAL. (MOD)

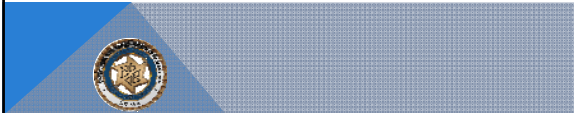
Exceptions:

- 4. Within individual dwelling and sleeping units in Groups R-2 and R-3, where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3, sleeping rooms in basements shall not be required to have emergency escape and rescue openings provided that the basement has one of the following:
 - 4.1. One means of egress and one emergency escape and rescue opening.
 - 4.2. Two means of egress.



1030.1.1 OPERATIONAL CONSTRAINTS AND OPENING CONTROL DEVICES. (NEW)

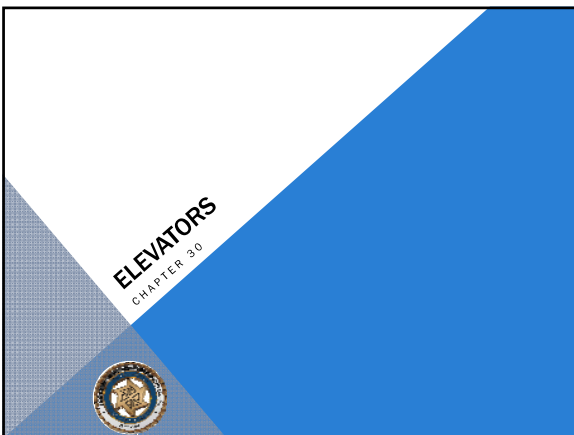
Emergency escape and rescue openings shall be operational from inside the room without the use of keys or tools. Window-opening control devices complying with ASTM F2090 shall be permitted for use on windows serving as a required emergency escape and rescue opening.



1030.5 BARS, GRILLES, COVERS AND SCREENS. (MOD)

Bars, grilles, covers, screens or similar devices are permitted to be placed over emergency escape and rescue openings, bulkhead enclosures or window wells that serve such openings, provided that the minimum net clear opening size complies with Sections 1030.1.1 through 1030.4.2 and such devices shall be releasable or removable from the inside without the use of a key, tool or force greater than that which is required for normal operation of the emergency escape and rescue opening. Where such bars, grilles, covers, screens or similar devices are installed in existing buildings, they shall not reduce the net clear opening of the emergency escape and rescue opening and smoke alarms shall be installed in accordance with Section 907.2.10 regardless of the valuation of the alteration.





PENNSYLVANIA ADOPTION

- 3002.1 Hoistway enclosure protection.
- 3002.2 Number of elevator cars in a hoistway.
- 3002.4 Elevator car to accommodate ambulance stretcher.
- 3002.7 Common enclosure with stairway.
- 3004.2.1 Enclosure.
- 3004.3.1 Enclosure.
- 3005.4 Machine rooms, control rooms, machinery spaces, and control spaces.
- SECTION 3006 ELEVATOR LOBBIES AND HOISTWAY OPENING PROTECTION
- SECTION 3007 FIRE SERVICE ACCESS ELEVATOR
- SECTION 3008 OCCUPANT EVACUATION ELEVATORS



QUESTIONS