2019 North Carolina Fire Prevention Code Ad-Hoc Committee Acknowledgements

Dan Austin
NC Department of Insurance
1202 Mail Service Center
Raleigh, NC 27699

Betsy Bailey
Carolinas Association of General Contractors
6115 Park South Drive, Suite 350
Charlotte, NC 28210

Robbie Davis
Turn-Key Contractors
5998 Dortches Boulevard
Rocky Mount NC 27804

Wayne Hamilton
Asheville Fire Service
PO Box 7148
Asheville NC 28802

Jeff Johnson
Jeff Johnson Consulting, Inc.
225 Red Hill Lane
New Hill, NC 27562

Carl P. Martin
NC Department of Insurance
1202 Mail Service Center
Raleigh, NC 27699

Robbie M. Pate (Retired)
3620 Joyner Rd.
Elm City, NC 27822

Daniel Priest
Priest Architecture PO Box 5295
Charlotte NC 28299

Bryan Robinson
City of Raleigh
One Exchange Plaza
Raleigh, NC 27602

Dan Tingen
Tingen Construction Company, Inc.
8411-101 Garvey Drive
Raleigh, NC 27616

CHAPTER 1 CHANGES

[A] 101.1 Title.

~~These regulations shall be known as the *Fire Code* of [NAME OF JURISDICTION], hereinafter referred to as "this code."~~

These regulations shall be known as the *North Carolina Fire Code* as adopted by the NC Carolina Building Code Council on September 14, 2010 to be effective September 1, 2011. References to the *International Code* shall mean the North Carolina Codes. The North Carolina amendments to the *International Code* are underlined.

[A] 101.2.1 Appendices.

~~Provisions in the appendices shall not apply unless specifically adopted.~~

Provisions in the appendices shall not be enforceable unless specifically adopted by the local governing authority having jurisdiction and subsequently approved for use by the Building Code Council.

Exception: Appendix H is adopted and enforceable.

101.6 Requirements of other State agencies, occupational licensing boards or commissions.

The *North Carolina State Building Codes* do not include all additional requirements for buildings and structures that may be imposed by other State agencies, occupational licensing boards and commissions. It shall be the responsibility of a permit holder, design professional, contractor or occupational license holder to determine whether any additional requirements exist.

[A] 102.3 Change of use or occupancy.
~~Changes shall not be made in the use or occupancy of any structure that would place the structure in a different division of the same group or occupancy or in a different group of occupancies, unless such structure is made to comply with the requirements of this code and the *International Building Code*. Subject to the approval of the *fire code official*, the use or occupancy of an existing structure shall be allowed to be changed and the structure is allowed to be occupied for purposes in other groups without conforming to all of the requirements of this code and the *International Building Code* for those groups, provided the new or proposed use is less hazardous, based on life and fire risk, than the existing use.~~
The provisions of the *North Carolina Administrative Code and Policies* and applicable North Carolina General Statutes shall apply to all buildings undergoing a change of occupancy.

[A] 102.4 Application of building code.
The design and construction of new structures shall comply with the *International Building Code*, and any *alterations*, additions, changes in use or changes in structures required by this code, which are within the scope of the *International Building Code* or the *International Existing Building Code*, shall be made in accordance therewith.

[A] 102.6 Historic buildings.
The provisions of this code relating to the construction, *alteration*, repair, enlargement, restoration, relocation or moving of buildings or structures shall not be mandatory for existing buildings or structures identified and classified by the state or local jurisdiction as historic buildings where such buildings or structures do not constitute a distinct hazard to life or property. Fire protection in designated historic buildings shall be provided with an *approved* fire protection plan~~. as required in Section 1103.1.1.~~
in accordance with NFPA 914. The fire protection plans shall comply with the maintenance and availability provisions in Sections 404.3 and 404.4.

[A] 102.9 Matters not provided for.
Requirements that are essential for the public safety of an existing or proposed activity, building or structure, or for the safety of the occupants thereof, that are not specifically provided for by this code, ~~shall be determined by the *fire code official*.~~ *shall comply with N.C.G.S 58-79-20.*

102.13 Exception to applicability.
The provisions of this code shall not apply to the following:

1. Occupancy of one- and two-family dwellings.

2. Farm buildings located outside the building rules jurisdiction of any municipality.

   Exception: All buildings used for sleeping purposes shall conform to the provisions of the technical codes.

3. The design, construction, location, installation or operation of equipment for storing, handling, and transporting liquefied petroleum gases for fuel purposes up to the first stage regulator, liquefied natural gases, and anhydrous ammonia or other liquid fertilizers.

4. The design, construction, location, installation or operation of equipment or facilities of a public utility, as defined in *N.C.G.S* 62-3, or an electric or telephone membership corporation, including without limitation poles, towers and other structures supporting electric or communication lines from the distribution network up to the meter location.

Exception: All buildings owned and operated by a public utility or an electric or telephone membership corporation shall meet the provisions of the code.

5. The Storage and Handling of Hazardous Chemicals Right to Know Act. ~~North Carolina~~ *N.C.G.S*~~-~~95-173 through 95-218.

6. Open burning pursuant to *N.C.G.S*. 106 - 940 through 106 - 950 under the jurisdiction of the North Carolina Department of Agriculture and Consumer Services.

[A] 103.2 Appointment.

~~The *fire code official* shall be appointed by the chief appointing authority of the jurisdiction; and the *fire code official* shall not be removed from office except for cause and after full opportunity to be heard on specific and relevant charges by and before the appointing authority.~~

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 103.3 Deputies.

~~In accordance with the prescribed procedures of this jurisdiction and with the concurrence of the appointing authority, the *fire code official* shall have the authority to appoint a deputy *fire code official*, other related technical officers, inspectors and other employees.~~

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 103.4 Liability.

~~The *fire code official*, member of the board of appeals, officer or employee charged with the enforcement of this code, while acting for the jurisdiction, in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered civilly or criminally liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of an act or by reason of an act or omission in the discharge of official duties.~~

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 103.4.1 Legal defense.

~~Any suit or criminal complaint instituted against any officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the~~

provisions of this code shall be defended by the legal representatives of the jurisdiction until the final termination of the proceedings. The *fire code official* or any subordinate shall not be liable for costs in an action, suit or proceeding that is instituted in pursuance of the provisions of this code; and any officer of the department of fire prevention, acting in good faith and without malice, shall be free from liability for acts performed under any of its provisions or by reason of any act or omission in the performance of official duties in connection therewith.

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 104.3 Right of entry.

Where it is necessary to make an inspection to enforce the provisions of this code, or where the *fire code official* has reasonable cause to believe that there exists in a building or upon any premises any conditions or violations of this code that make the building or premises unsafe, dangerous or hazardous, the *fire code official* shall have the authority to enter the building or premises at all reasonable times to inspect or to perform the duties imposed upon the *fire code official* by this code. If such building or premises is occupied, the *fire code official* shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the *fire code official* shall first make a reasonable effort to locate the *owner*, the owner's authorized agent or other person having charge or control of the building or premises and request entry. If entry is refused, the *fire code official* has recourse to every remedy provided by law to secure entry.

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 104.3.1 Warrant.

Where the *fire code official* has first obtained a proper inspection warrant or other remedy provided by law to secure entry, an *owner*, the *owner's* authorized agent or occupant or person having charge, care or control of the building or premises shall not fail or neglect, after proper request is made as herein provided, to permit entry therein by the *fire code official* for the purpose of inspection and examination pursuant to this code.

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 104.4 Identification.

The *fire code official* shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 104.5 Notices and orders.

The *fire code official* is authorized to issue such notices or orders as are required to affect compliance with this code in accordance with Sections 109.1 and 109.2.

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 104.6 Official records.

The *fire code official* shall keep official records as required by Sections 104.6.1 through 104.6.4. Such official records shall be retained for not less than 5 years or for as long as the structure or

activity to which such records relate remains in existence, unless otherwise provided by other regulations.

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 104.8 Modifications.

Where there are practical difficulties involved in carrying out the provisions of this code, the *fire code official* shall have the authority to grant modifications for individual cases, provided the *fire code official* shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, life and fire safety requirements. The details of action granting modifications shall be recorded and entered in the files of the department of fire prevention.

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 104.9 Alternative materials and methods.

The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. The *fire code official* is authorized to approve an alternative material or method of construction where the *fire code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, *fire resistance*, durability and safety. Where the alternative material, design or method of construction is not approved, the *fire code official* shall respond in writing, stating the reasons why the alternative was not approved.

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 104.9.1 Research reports.

Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

[A] 104.9.2 Tests.

Where there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the *fire code official* shall have the authority to require tests as evidence of compliance to be made at no expense to the jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the *fire code official* shall approve the testing procedures. Tests shall be performed by an *approved* agency. Reports of such tests shall be retained by the *fire code official* for the period required for retention of public records.

104.10 Fire investigations.

The *fire code official*, the fire department or other responsible authority shall have the authority to investigate the cause, origin and circumstances of any fire, explosion or other hazardous condition. Information that could be related to trade secrets or processes shall not be made part of the public record, except as directed by a court of law.

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

~~**104.10.1 Assistance from other agencies.**~~
~~Police and other enforcement agencies shall have authority to render necessary assistance in the investigation of fires when requested to do so.~~

~~**105.1.2 Types of permits.**~~
~~There shall be two types of permits as follows:~~

~~1. Operational permit. An operational permit allows the applicant to conduct an operation or a business for which a permit is required by Section 105.6 for either:~~

~~1.1. A prescribed period.~~

~~1.2. Until renewed or revoked.~~

~~1. Construction permit. A construction permit allows the applicant to install or modify systems and equipment for which a permit is required by Section 105.7.~~

105.1.2 Permits.
Operational permits listed as mandatory in Section 105.6 shall be obtained from the fire code official. For decisions on any appeals of the provisions of mandatory permits, see the provisions of the *North Carolina Administrative Code and Policies* and applicable North Carolina General Statutes.
Operational permits listed as optional in Section 105.6 must be adopted by local ordinance to be legally issued by the fire code official. A permit listed as optional does not make any of the technical provisions of this code optional.

~~**[A] 105.1.4 Emergency repairs.**~~
~~Where equipment replacement and repairs must be performed in an emergency situation, the permit application shall be submitted within the next working business day to the *fire code official*.~~

~~**[A] 105.1.5 Repairs.**~~
~~Application or notice to the *fire code official* is not required for ordinary repairs to structures, equipment or systems. Such repairs shall not include the cutting away of any wall, partition or portion thereof, the removal or change of any required *means of egress*, or rearrangement of parts of a structure affecting the egress requirements; nor shall any repairs include addition to, alteration of, replacement or relocation of any standpipe, fire protection water supply, *automatic sprinkler system*, fire alarm system or other work affecting fire protection or life safety.~~

~~**[A] 105.1.6 Annual permit.**~~
~~Instead of an individual construction permit for each alteration to an already *approved* system or equipment installation, the *fire code official* is authorized to issue an annual permit upon application therefor to any person, firm or corporation regularly employing one or more qualified tradespersons in the building, structure or on the premises owned or operated by the applicant for the permit.~~

~~**[A] 105.1.6.1 Annual permit records.**~~
~~The person to whom an annual permit is issued shall keep a detailed record of alterations made under such annual permit. The *fire code official* shall have access to such records at all times or such records shall be filed with the *fire code official* as designated.~~

[A] 105.2.3 Time limitation of application.
~~An application for a permit for any proposed work or operation shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been diligently prosecuted or a permit shall have been issued; except that the *fire code official* is authorized to grant one or more extensions of time for additional periods not exceeding 90 days each. The extension shall be requested in writing and justifiable cause demonstrated.~~
See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 105.3.1 Expiration.
~~An operational permit shall remain in effect until reissued, renewed or revoked, or for such a period of time as specified in the permit. Construction permits shall automatically become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. Before such work recommences, a new permit shall be first obtained and the fee to recommence work, if any, shall be one-half the amount required for a new permit for such work, provided that changes have not been made and will not be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year. Permits are not transferable and any change in occupancy, operation, tenancy or ownership shall require that a new permit be issued.~~
An operational permit shall remain in effect until reissued, renewed or revoked or for such a time as prescribed in the permit. Permits are not transferable and any change in occupancy, operation, tenancy, or ownership shall require a new permit to be issued.

[A] 105.3.2 Extensions of operational permits.
A permittee holding an unexpired permit shall have the right to apply for an extension of the time within which the permittee will commence work under that permit where work is unable to be commenced within the time required by this section for good and satisfactory reasons. The *fire code official* is authorized to grant, in writing, one or more extensions of the time period of a permit for periods of not more than 180 days each. Such extensions shall be requested by the permit holder in writing and justifiable cause demonstrated.

[A] 105.3.6 Compliance with code.
The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinance of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on *construction documents* and other data shall not prevent the *fire code official* from requiring the correction of errors in the *construction documents* and other data. ~~Any addition to or alteration of *approved construction documents* shall be *approved* in advance by the *fire code official*, as evidenced by the issuance of a new or amended permit.~~ Work shall not

deviate substantially from that described on the permit documents unless prior approval is obtained from the registered design professional and fire code official.

[A] 105.3.8 Validity of permit.
~~The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other ordinances of the jurisdiction. Permits presuming to give authority to violate or cancel the provisions of this code or other ordinances of the jurisdiction shall not be valid. The issuance of a permit based on *construction documents*, operational documents and other data shall not prevent the *fire code official* from requiring correction of errors in the documents or other data.~~
See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 105.4 Construction documents.
Construction documents shall be in accordance this section. ~~with Sections 105.4.1 through 105.4.6.~~ See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 105.4.4.1 Phased approval.
The *fire code official* is authorized to issue a permit for the construction of part of a structure, system or operation before the *construction documents* for the whole structure, system or operation have been submitted, provided that adequate information and detailed statements have been filed complying with pertinent requirements of this code. The holder of such permit for parts of a structure, system or operation shall proceed at the holder's own risk with the building operation and without assurance that a permit for the entire structure, system or operation will be granted. Phased approval permits shall include the start and end dates of such approval including submittal of construction documents for the whole structure.

[A] 105.4.6 Retention of construction documents.
~~One set of *construction documents* shall be retained by the *fire code official* for a period of not less than 180 days from date of completion of the permitted work, or as required by state or local laws. One set of *approved construction documents* shall be returned to the applicant, and said set shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress.~~
See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 105.5 Revocation.
The *fire code official* is authorized to revoke an operational permit issued under the provisions of this code where it is found by inspection or otherwise that there has been a false statement or misrepresentation as to the material facts in the application or *construction documents* on which the permit or approval was based ~~including, but not limited to,~~ on any one of the following:

1. The permit is used for a location or establishment other than that for which it was issued.

2. The permit is used for a condition or activity other than that listed in the permit.

3. Conditions and limitations set forth in the permit have been violated.

4. There have been any false statements or misrepresentations as to the material fact in the application for permit or plans submitted or a condition of the permit.

5. The permit is used by a different person or firm than the name for which it was issued.

6. The permittee failed, refused or neglected to comply with orders or notices duly served in accordance with the provisions of this code within the time provided therein.

7. The permit was issued in error or in violation of an ordinance, regulation or this code.

105.6.1 Aerosol products (optional permit).
An operational permit is required to manufacture, store or handle an aggregate quantity of Level 2 or Level 3 aerosol products in excess of 500 pounds (227 kg) net weight.

105.6.2 Amusement buildings (mandatory permit).
An operational permit is required to operate a special amusement building.

105.6.3 Aviation facilities (optional permit).
An operational permit is required to use a Group H or Group S occupancy for aircraft servicing or repair and aircraft fuel-servicing vehicles. Additional permits required by other sections of this code include, but are not limited to, hot work, hazardous materials and flammable or combustible finishes.

105.6.4 Carbon dioxide systems used in beverage dispensing applications (optional permit).
An operational permit is required for carbon dioxide systems used in beverage dispensing applications having more than 100 pounds of carbon dioxide.

105.6.5 Carnivals and fairs (mandatory permit).
An operational permit is required to conduct a carnival or fair.

105.6.6 Cellulose nitrate film (optional permit).
An operational permit is required to store, handle or use cellulose nitrate film in a Group A occupancy.

105.6.7 Combustible dust-producing operations (mandatory permit).
An operational permit is required to operate a grain elevator, flour starch mill, feed mill, or a plant pulverizing aluminum, coal, cocoa, magnesium, spices or sugar, or other operations producing *combustible dusts* as defined in Chapter 2.

105.6.8 Combustible fibers (optional permit).
An operational permit is required for the storage and handling of *combustible fibers* in quantities greater than 100 cubic feet (2.8 m^3).

Exception: A permit is not required for agricultural storage.

105.6.9 Compressed gases (optional permit).
An operational permit is required for the storage, use or handling at *normal temperature and pressure* (NTP) of *compressed gases* in excess of the amounts listed in Table 105.6.9.

105.6.10 Covered and open mall buildings (mandatory permit).
An operational permit is required for:

1. The placement of retail fixtures and displays, concession equipment, displays of highly combustible goods and similar items in the mall.

2. The display of liquid- or gas-fired equipment in the mall.

3. The use of open-flame or flame-producing equipment in the mall.

105.6.11 Cryogenic fluids (optional permit).
An operational permit is required to produce, store, transport on site, use, handle or dispense *cryogenic fluids* in excess of the amounts listed in Table 105.6.11.

105.6.12 Cutting and welding (optional permit).
An operational permit is required to conduct cutting or welding operations within the jurisdiction.

105.6.13 Dry cleaning (optional permit).
An operational permit is required to engage in the business of dry cleaning or to change to a more hazardous cleaning solvent used in existing dry cleaning equipment.

105.6.14 Exhibits and trade shows (mandatory permit).
An operational permit is required to operate exhibits and trade shows.

105.6.15 Explosives (mandatory permit).
An operational permit is required for the manufacture, storage, handling, sale or use of any quantity of *explosives*, *explosive materials*, fireworks or pyrotechnic special effects within the scope of Chapter 56.

Exceptions:
1. Fireworks allowed by North Carolina *N.C.G.S.* 14-414.
2. Storage in Group R-3 occupancies of smokeless propellant, black powder and small arms primers for personal use, not for resale and in accordance with Section 5606.

105.6.16 Fire hydrants and valves (optional permit).
An operational permit is required to use or operate fire hydrants or valves intended for fire suppression purposes that are installed on water systems and accessible to a fire apparatus access road that is open to or generally used by the public.

Exception: A permit is not required for authorized employees of the water company that supplies the system or the fire department to use or operate fire hydrants or valves.

105.6.17 Flammable and combustible liquids.
An operational permit is required:

1. **Optional permit.** To use or operate a pipeline for the transportation within facilities of flammable or *combustible liquids*. This requirement shall not apply to the off-site transportation in pipelines regulated by the Department of Transportation (DOTn) nor does it apply to piping systems.

2. **Optional permit.** To store, handle or use Class I liquids in excess of 5 gallons (19 L) in a building or in excess of 10 gallons (37.9 L) outside of a building, except that a permit is not required for the following:

    2.1. The storage or use of Class I liquids in the fuel tank of a motor vehicle, aircraft, motorboat, mobile power plant or mobile heating plant, unless such storage, in the opinion of the *fire code official*, would cause an unsafe condition.

    2.2. The storage or use of paints, oils, varnishes or similar flammable mixtures where such liquids are stored for maintenance, painting or similar purposes for a period of not more than 30 days.

3. **Optional permit.** To store, handle or use Class II or Class IIIA liquids in excess of 25 gallons (95 L) in a building or in excess of 60 gallons (227 L) outside a building, except for fuel oil used in connection with oil-burning equipment.

4. **Optional permit.** To store, handle or use Class IIIB liquids in tanks or portable tanks for fueling motor vehicles at motor fuel-dispensing facilities or where connected to fuel-burning equipment.

    Exception: Fuel oil and used motor oil used for space heating or water heating.

5. **Optional permit.** To remove Class I or II liquids from an underground storage tank used for fueling motor vehicles by any means other than the *approved*, stationary on-site pumps normally used for dispensing purposes.

6. **Mandatory permit.** To operate tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and *combustible liquids* are produced, processed, transported, stored, dispensed or used.

7. **Mandatory permit.** To place temporarily out of service (for more than 90 days) an underground, protected above-ground or above-ground flammable or *combustible liquid* tank.

8. **Mandatory permit.** To change the type of contents stored in a flammable or *combustible liquid* tank to a material that poses a greater hazard than that for which the tank was designed and constructed.

9. **Mandatory permit.** To manufacture, process, blend or refine flammable or *combustible liquids*.

10. **Mandatory permit.** To engage in the dispensing of liquid fuels into the fuel tanks of motor vehicles at commercial, industrial, governmental or manufacturing establishments.

11. **Mandatory permit.** To utilize a site for the dispensing of liquid fuels from tank vehicles into the fuel tanks of motor vehicles, marine craft and other special equipment at commercial, industrial, governmental or manufacturing establishments.

105.6.18 Floor finishing (optional permit).
An operational permit is required for floor finishing or surfacing operations exceeding 350 square feet (33 m^2) using Class I or Class II liquids.

105.6.19 Fruit and crop ripening (optional permit).
An operational permit is required to operate a fruit- or crop-ripening facility or conduct a fruit-ripening process using ethylene gas.

105.6.20 Fumigation and insecticidal fogging (mandatory permit).
An operational permit is required to operate a business of fumigation or insecticidal fogging, and to maintain a room, vault or chamber in which a toxic or flammable fumigant is used.

105.6.21 Hazardous materials (optional permit).
An operational permit is required to store, transport on site, dispense, use or handle hazardous materials in excess of the amounts listed in Table 105.6.21.

105.6.22 HPM facilities (optional permit).
An operational permit is required to store, handle or use hazardous production materials.

105.6.23 High-piled storage (optional permit).
An operational permit is required to use a building or portion thereof as a *high-piled storage area* exceeding 500 square feet (46 m^2).

105.6.24 Hot work operations (optional permit).
An operational permit is required for hot work including. ~~, but not limited to:~~

1. Public exhibitions and demonstrations where hot work is conducted.

2. Use of portable hot work equipment inside a structure.

   Exception: Work that is conducted under a construction permit.

3. Fixed-site hot work equipment, such as welding booths.

4. Hot work conducted within a wildfire risk area.

5. Application of roof coverings with the use of an open-flame device.

6. Where *approved*, the *fire code official* shall issue a permit to carry out a hot work program. This program allows *approved* personnel to regulate their facility's hot work

operations. The *approved* personnel shall be trained in the fire safety aspects denoted in this chapter and shall be responsible for issuing permits requiring compliance with the requirements found in Chapter 35. These permits shall be issued only to their employees or hot work operations under their supervision.

105.6.25 Industrial ovens (optional permit).
An operational permit is required for operation of industrial ovens regulated by Chapter 30.

105.6.26 Lumber yards and woodworking plants (optional permit).
An operational permit is required for the storage or processing of lumber exceeding 100,000 board feet (8,333 ft3) (236 m^3).

105.6.27 Liquid- or gas-fueled vehicles or equipment in assembly buildings (mandatory permit).
An operational permit is required to display, operate or demonstrate liquid- or gas-fueled vehicles or equipment in assembly buildings.

105.6.28 LP-gas.
~~An operational permit is required for:~~

~~1. Storage and use of LP-gas.~~

~~**Exception:** A permit is not required for individual containers with a 500-gallon (1893 L) water capacity or less or multiple container systems having an aggregate quantity not exceeding 500 gallons (1893 L), serving occupancies in Group R-3.~~

~~3. Operation of cargo tankers that transport LP-gas.~~
A permit may be required and issued by the North Carolina Department of Agriculture and Consumer Services for LP-gas equipment used for storage, handling, transporting, and utilizing liquefied petroleum gas for fuel purposes.

105.6.29 Magnesium (optional permit).
An operational permit is required to melt, cast, heat treat or grind more than 10 pounds (4.54 kg) of magnesium.

105.6.30 Miscellaneous combustible storage (optional permit).
An operational permit is required to store in any building or upon any premises in excess of 2,500 cubic feet (71 m^3) gross volume of combustible empty packing cases, boxes, barrels or similar containers, rubber tires, rubber, cork or similar combustible material.

105.6.31 Motor fuel-dispensing facilities (optional permit).
An operational permit is required for the operation of automotive, marine and fleet motor fuel-dispensing facilities.

105.6.32 Open burning (optional permit).
An operational permit is required for the kindling or maintaining of an open fire or a fire on any public street, alley, road, or other public or private ground. Instructions and stipulations of the permit shall be adhered to.

Exception: *Recreational fires*.

105.6.33 Open flames and torches (optional permit).
An operational permit is required to remove paint with a torch; or to use a torch or open-flame device in a wildfire risk area.

105.6.34 Open flames and candles (optional permit).
An operational permit is required to use open flames or candles in connection with assembly areas, dining areas of restaurants or drinking establishments.

105.6.35 Organic coatings (optional permit).
An operational permit is required for any organic-coating manufacturing operation producing more than 1 gallon (4 L) of an organic coating in one day.

105.6.36 Places of assembly (optional permit).
An operational permit is required to operate a place of assembly.

105.6.37 Private fire hydrants (mandatory permit).
An operational permit is required for the removal from service, use or operation of private fire hydrants.

> **Exception:** A permit is not required for private industry with trained maintenance personnel, private fire brigade or fire departments to maintain, test and use private hydrants.

105.6.38 Pyrotechnic special effects material (mandatory permit).
An operational permit is required for use and handling of pyrotechnic special effects material.

105.6.39 Pyroxylin plastics (optional permit).
An operational permit is required for storage or handling of more than 25 pounds (11 kg) of cellulose nitrate (pyroxylin) plastics, and for the assembly or manufacture of articles involving pyroxylin plastics.

105.6.40 Refrigeration equipment (optional permit).
An operational permit is required to operate a mechanical refrigeration unit or system regulated by Chapter 6.

105.6.41 Repair garages ~~and motor fuel-dispensing facilities~~ (optional permit).
An operational permit is required for operation of repair garages.

105.6.42 Rooftop heliports (optional permit).
An operational permit is required for the operation of a rooftop heliport.

105.6.43 Spraying or dipping (mandatory permit).
An operational permit is required to conduct a spraying or dipping operation utilizing flammable or *combustible liquids*, or the application of combustible powders regulated by Chapter 24.

105.6.44 Storage of scrap tires and tire byproducts (optional permit).
An operational permit is required to establish, conduct or maintain storage of scrap tires and

tire byproducts that exceeds 2,500 cubic feet (71 m^3) of total volume of scrap tires, and for indoor storage of tires and tire byproducts.

105.6.45 Temporary membrane structures and tents (mandatory permit).
An operational permit is required to operate an air-supported temporary membrane structure, a temporary stage canopy or a tent having an area in excess of 400 square feet (37 m^2).

Exceptions:

1. Tents used exclusively for recreational camping purposes.

2. Tents open on all sides, which comply with all of the following:

   2.1. Individual tents having a maximum size of 700 square feet (65 m^2).

   2.2. The aggregate area of multiple tents placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceed 700 square feet (65 m^2) total.

   2.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be provided.

3. Funeral tents and curtains or extensions attached thereto, when used for funeral services.

105.6.46 Tire-rebuilding plants (optional permit).
An operational permit is required for the operation and maintenance of a tire-rebuilding plant.

105.6.47 Waste handling (optional permit).
An operational permit is required for the operation of wrecking yards, junk yards and waste material-handling facilities.

105.6.48 Wood products (optional permit).
An operational permit is required to store chips, hogged material, lumber or plywood in excess of 200 cubic feet (6 m^3).

[A] 105.7 Required construction permits.
The *fire code official* is authorized to issue construction permits for work as set forth in Sections 105.7.1 through 105.7.18. See the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes for general information concerning construction permits.

[A] 105.7.3 Compressed gases.
Where the compressed gases in use or storage exceed the amounts listed in Table 105.6.9, a construction permit is required to install, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a *compressed gas* system.

Exceptions:

1. Routine maintenance.

2. For emergency repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

[A] 105.7.8 Flammable and combustible liquids.
A construction permit is required:

1. To install, repair or modify a pipeline for the transportation of flammable or *combustible liquids*.

2. To install, construct or alter tank vehicles, equipment, tanks, plants, terminals, wells, fuel-dispensing stations, refineries, distilleries and similar facilities where flammable and *combustible liquids* are produced, processed, transported, stored, dispensed or used. . Maintenance performed in accordance with this code is not considered to be a modification and does not require a construction permit. Maintenance performed in accordance with this code is not considered an installation, construction or alteration and does not require a permit.

3. To install, alter, remove, abandon or otherwise dispose of a flammable or *combustible liquid* tank.

[A] 105.7.10 Hazardous materials.
A construction permit is required to install, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a storage facility or other area regulated by Chapter 50 where the hazardous materials in use or storage exceed the amounts listed in Table 105.6.21.

Exceptions:

1. Routine maintenance.

2. For repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

[A] 105.7.11 Industrial ovens.
A construction permit is required for installation of industrial ovens covered by Chapter 30.

Exceptions:

1. Routine maintenance.

2. For repair work performed on an emergency basis, application for permit shall be made within two working days of commencement of work.

[A] 105.7.12 LP-gas.
A construction permit is required for installation of or modification to an LP-gas system may be required and approved by the North Carolina Department of Agriculture and Consumer

Services. Maintenance performed in accordance with this code is not considered to be a modification and does not require a permit.

SECTION 106
INSPECTIONS

In order to preserve and protect public health and safety and to satisfy the requirements of *N.C.G.S*. 153A-364 and *N.C.G.S*-160A-424, political subdivisions assuming inspection duties, as set out in *N.C.G.S*. 153A-351 and *N.C.G.S*. 160A-411, shall have a periodic inspection schedule for the purpose of identifying activities and conditions in buildings, structures and premises that pose dangers of fire, explosion or related hazards. Such inspection schedule shall be *approved* by the local governing body and shall be submitted to the Office of State Fire Marshal of the Department of Insurance. In no case shall inspections be conducted less frequently than described in the schedule below:

Once every year
Hazardous, institutional, high-rise assembly except those noted below, and Residential except one- and two family dwellings and only interior common areas of dwelling units of multi-family occupancies.
New and existing lodging establishments, including hotels, motels, and tourist homes that provide accommodations for seven or more continuous days (extended-stay establishments), bed and breakfast inns and bed and breakfast homes as defined in *N.C.G.S* 130A-247 for the installation and maintenance of carbon monoxide alarms and detectors in accordance with *N.C.G.S*. 143-138(b2).

Once every two years
Industrial and educational (except public schools).

Once every three years
Assembly occupancies with an occupant load less than 100, business, mercantile, storage, churches, synagogues, and miscellaneous Group U occupancies.

Frequency rates for inspections of occupancies as mandated by the *N.C.G.S*. shall supersede this schedule. Nothing in this section is intended to prevent a jurisdiction from conducting more frequent inspections than the schedule listed above or the schedule filed with the Office of State Fire Marshal of the Department of Insurance.

On unattended or vacant structures, the fire code official shall affix a letter on the premises in a conspicuous place at or near the entrance to such premises requesting an inspection in accordance with this section. This order of notice shall be mailed by registered or certified mail with return receipt requested, to the last known address of the owner, occupant or both. If the owner, occupant or both shall fail to respond to said notice within 10 calendar days, these actions by the fire code official shall be deemed to constitute an inspection in accordance with this section.

[A] 106.3 Concealed work.
It shall be the duty of the permit applicant to cause the work to remain accessible and exposed for inspection purposes. Where any installation subject to inspection prior to use is covered or concealed without having first been inspected, the *fire code official* shall have the authority to require that such work be exposed for inspection. ~~Neither the *fire code official* nor the jurisdiction shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.~~

[A] 107.2.1 Reinspection and testing.
Where any work or installation does not pass an initial test or inspection, the necessary corrections shall be made so as to achieve compliance with this code~~. The work or installation~~ and shall then be ~~resubmitted~~ reinspected by ~~to~~ the *fire code official* ~~for inspection and testing~~.

SECTION 108
BOARD OF APPEALS

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

~~**[A] 108.1 Board of appeals established.**~~
~~In order to hear and decide appeals of orders, decisions or determinations made by the *fire code official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The *fire code official* shall be an ex officio member of said board but shall not have a vote on any matter before the board. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the *fire code official*.~~

~~**[A] 108.2 Limitations on authority.**~~
~~An application for appeal shall be based on a claim that the intent of this code or the rules legally adopted hereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equivalent method of protection or safety is proposed. The board shall not have authority to waive requirements of this code.~~

~~**[A] 108.3 Qualifications.**~~
~~The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to hazards of fire, explosions, hazardous conditions or *fire protection systems*, and are not employees of the jurisdiction.~~

SECTION 109
VIOLATIONS

For violations of the *North Carolina Fire Prevention Code* or a local Fire Prevention Code that has received prior approval of the Building Code Council, either the local Fire Official or the State Commissioner of Insurance or other State Official with responsibility under *N.C.G.S.* 143-139 may, in addition to other remedies, institute any appropriate action or proceedings, including civil remedies set out in *N.C.G.S*–160A-175 or *N.C.G.S*–153A-143, that have been adopted as ordinances within that jurisdiction.

[A] 109.4 Violation penalties.
Persons who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the *approved construction documents* or directive of the *fire code official*, or of a permit or certificate used under provisions of this code, shall be guilty of a [SPECIFY OFFENSE], punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF DAYS], or both such fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

[A] 109.4.1 Abatement of violation.
In addition to the imposition of the penalties herein described, the *fire code official* is authorized to institute appropriate action to prevent unlawful construction or to restrain, correct or abate a violation; or to prevent illegal occupancy of a structure or premises; or to stop an illegal act, conduct of business or occupancy of a structure on or about any premises.

SECTION 111
STOP WORK ORDER

See the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

[A] 111.1 Order.
Where the *fire code official* finds any work regulated by this code being performed in a manner contrary to the provisions of this code, or in a dangerous or unsafe manner, the *fire code official* is authorized to issue a stop work order.

[A] 111.2 Issuance.
A stop work order shall be in writing and shall be given to the *owner* of the property, or to the *owner's* authorized agent, or to the person doing the work. Upon issuance of a stop work order, the cited work shall immediately cease. The stop work order shall state the reason for the order, and the conditions under which the cited work is authorized to resume.

[A] 111.3 Emergencies.
Where an emergency exists, the *fire code official* shall not be required to give a written notice prior to stopping the work.

[A] 111.4 Failure to comply.
Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine of not less than [AMOUNT] dollars or more than [AMOUNT] dollars.

SECTION 113
FEES
Deleted

[A] 113.1 Fees.
A permit shall not be issued until the fees have been paid, nor shall an amendment to a permit be released until the additional fee, if any, has been paid.

~~**[A] 113.2 Schedule of permit fees.**~~
~~A fee for each permit shall be paid as required, in accordance with the schedule as established by the applicable governing authority.~~

~~**[A] 113.3 Work commencing before permit issuance.**~~
~~A person who commences any work, activity or operation regulated by this code before obtaining the necessary permits shall be subject to an additional fee established by the applicable governing authority, which shall be in addition to the required permit fees.~~

~~**[A] 113.4 Related fees.**~~
~~The payment of the fee for the construction, *alteration*, removal or demolition of work done in connection to or concurrently with the work or activity authorized by a permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.~~

~~**[A] 113.5 Refunds.**~~
~~The applicable governing authority is authorized to establish a refund policy.~~

SECTION 114
MAINTAINING A FIRE HAZARD

114.1 Fire Hazard. No person shall knowingly maintain a fire hazard.

SECTION 115
LOCAL MODIFICATION

115.1 Local Modifications. For local modification see the provisions of the North Carolina Administrative Code and Policies and applicable North Carolina General Statutes.

115.2 Local government modification approved by the Building Code Council. A list of jurisdictions shall be maintained by the NC Department of Insurance, Office of State Fire Marshal.

CHAPTER 2 CHANGES

ACCEPTED ENGINEERING PRACTICE. Design analysis and testing methods that are used in developing design solutions for compliance with the requirements of this code. Accepted engineering practice is the level at which the average, prudent designer in a given community would practice.

[A] APPROVED. Acceptable to the *fire code official*~~.~~ for compliance with the provisions of the applicable code or referenced standard.

BED AND BREAKFAST HOME. A detached single family dwelling occupied by the dwelling owner and containing eight or fewer guest rooms for rent for a period of less than one week.

[M] CHIMNEY. A primarily vertical structure containing one or more flues for the purpose of carrying gaseous products of combustion and air from a fuel-burning appliance to the outdoor atmosphere.

Factory-built chimney. A listed and labeled chimney composed of factory-made components, assembled in the field in accordance with manufacturer's instructions and the conditions of the listing.

Masonry chimney. A field-constructed chimney composed of ~~solid~~ masonry units, bricks, stones, or concrete.

Metal chimney. A field-constructed chimney of metal.

CIRCULATION PATH. An exterior or interior way of passage from one place to another for pedestrians.

COOPERATIVE INNOVATIVE HIGH SCHOOL PROGRAM. A program to supplement the required curriculum for high school students that may require attendance at a college, community college or university.

DISPLAY OPERATOR – An individual who exhibits, uses, handles, manufactures, or discharges pyrotechnics at a concert or public exhibition in this State and possesses a Display Operator's License issued by the Office of State Fire Marshal.

DISPLAY OPERATOR'S LICENSE – A license issued by the Office of State Fire Marshal to an individual in accordance with North Carolina General Statutes, Chapter 58, Article 82A.

ELECTRICAL CIRCUIT PROTECTIVE SYSTEM. A specific construction of devices, materials, or coatings installed as a fire-resistive barrier system applied to electrical system components.~~, such as cable trays, conduits and other raceways, open run cables and conductors, cables and conductors.~~

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

FIRE HAZARD. Any thing or act which increases or may cause an increase of the hazard or menace of fire to a greater degree than that customarily recognized as normal by persons in the public service regularly engaged in preventing, suppressing or extinguishing fire, or which may obstruct, delay, hinder or interfere with the operations of the fire department or the egress of occupants in the event of fire.

Fireworks, 1.4G. ~~Small fireworks devices containing restricted amounts of pyrotechnic composition designed primarily to produce visible or audible effects by combustion. Such 1.4G fireworks which comply with the construction, chemical composition and labeling regulations of the DOTn for Fireworks, UN 0336, and the U.S. Consumer Product Safety Commission as set forth in CPSC 16 CFR Parts 1500 and 1507, are not *explosive materials* for the purpose of this code.~~

~~(Formerly known as Class C Common Fireworks.)~~ **North Carolina General Statute 14-414.** The following fireworks are allowed to be sold, used or possessed without a permit:

1. Explosive caps designed to be fired in toy pistols, provided that the explosive

mixture of the explosive caps shall not exceed twenty-five hundredths (0.25) of a gram for each cap;

2. Snake and glow worms composed of pressed pellets of a pyrotechnic mixture that produce a large, snake-like ash when burning;

3. Smoke devices consisting of tube or sphere containing a pyrotechnic mixture that produce white or colored smoke;

4. Trick noise makers which produce a small report designed to surprise the user which include:

    4.1 A party popper, which is a small plastic or paper item containing not in excess of 16 milligrams of explosive mixture. A string protruding from the device is pulled to ignite the device, expelling paper streamers and producing a small report.

    4.2 A string popper, which is small tube containing not in excess of 16 milligrams of explosive mixture with a string protruding from both ends. The strings are pulled to ignite the friction-sensitive mixture, producing a small report.

    4.3 A snapper or drop pop, which is a small paper-wrapped item containing no more than 16 milligrams of explosive mixture coated on small bits of sand. When dropped, the device produces a small report.

5. Wire sparklers consisting of wire or stick coated with nonexplosive mixture that produces a shower of sparks upon ignition. These items must not exceed 100 grams of mixture per item;

6. Other sparkling devices which emit showers of sparks and sometimes a whistling or crackling effect when burning, do not detonate or explode, do not spin, are hand-held or ground-based, cannot propel themselves through the air and contain not more than 75 grams of chemical compound per tube or not more than 200 grams of chemical compound if multiple tubes are used.

[BE]FIXED SEATING. Furniture or fixture designed and installed for the use of sitting and permanently secured in place including bench-type seats and seats with or without backs or arm rests.

[BS] GYPSUM BOARD. The generic name for a family of sheet products consisting of a noncombustible core primarily of gypsum with paper surfacing. Gypsum wallboard, gypsum sheathing, gypsum base for gypsum veneer plaster, exterior gypsum soffit board, predecorated gypsum board or water-resistant gypsum backing board complying with the standards listed in Tables 2506.2 and 2507.2 and Chapter 35 of the *International Building Code*.

[A] LABELED. Appliances, ~~E~~equipment, materials or products to which have been affixed a label, seal, symbol or other identifying mark of a nationally recognized testing laboratory,

approved agency or other organization concerned with product evaluation that maintains periodic inspection of the production of the labeled items and whose labeling indicates either that the equipment, material or product meets identified standards or has been tested and found suitable for a specified purpose. (Laboratories, agencies or organizations that have been identified by approval and accreditation bodies, such as ANSI, IAS, ICC or OSHA, are acceptable.)

LADDER. As described by OSHA standard 29 CFR 1910 – General Industry, Part 1910.27 – Fixed Ladders.

[A] LISTED. Appliances, ~~E~~equipment**,** materials, products or services included in a list published by an organization acceptable to the *fire code official* and concerned with evaluation of products or services that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services and whose listing states either that the equipment, material, product or service meets identified standards or has been tested and found suitable for a specified purpose.

LODGING HOUSE. ~~A one-family dwelling where one or more occupants are primarily permanent in nature and rent is paid for guest rooms.~~ See definition of *Bed and Breakfast Home*.

NIGHTCLUB. An A-2 occupancy meeting all of the following conditions:
1. The aggregate floor area of concentrated use and standing space that is used for dancing and/or viewing of performers exceeds 10 percent of the Group A-2 fire area, excluding adjacent lobby areas ; and
2. Provides live or recorded entertainment by performing artist; and
3. Allows alcoholic beverages consumption.

~~**OCCUPANCY CLASSIFICATION.** For the purposes of this code, certain occupancies are defined as follows:~~ See Section 203
REVIEW WITH COMMITTEE. APPROVED 02SEP16

~~**[BG] Assembly Group A.** Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering of persons for purposes such as civic, social or religious functions; recreation, food or drink consumption; or awaiting transportation.~~

~~**[BG] Small buildings and tenant spaces.** A building or tenant space used for assembly purposes with an *occupant load* of less than 50 persons shall be classified as a Group B occupancy.~~

~~**[BG] Small assembly spaces.** The following rooms and spaces shall not be classified as assembly occupancies:~~

~~1. A room or space used for assembly purposes with an *occupant load* of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.~~

2. A room or space used for assembly purposes that is less than 750 square feet (70 m^2) in area and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.

[BG] Associated with Group E occupancies. A room or space used for assembly purposes that is associated with a Group E occupancy is not considered a separate occupancy.

[BG] Accessory with to places of religious worship. Accessory religious educational rooms and religious auditoriums with *occupant loads* of less than 100 per room or space are not considered separate occupancies

[BG] Assembly Group A-1. Group A occupancy includes assembly uses, usually with fixed seating, intended for the production and viewing of performing arts or motion pictures including, but not limited to:

Motion picture theaters

Symphony and concert halls

Television and radio studios admitting an audience

Theaters

[BG] Assembly Group A-2. Group A-2 occupancy includes assembly uses intended for food and/or drink consumption including, but not limited to:

Banquet halls

Casinos (gaming areas)

Nightclubs

Restaurants, cafeterias and similar dining facilities (including associated commercial kitchens)

Taverns and bars

[BG] Assembly Group A-3. Group A-3 occupancy includes assembly uses intended for worship, recreation or amusement and other assembly uses not classified elsewhere in Group A, including, but not limited to:

Amusement arcades

Art galleries

Bowling alleys

Community halls

~~Courtrooms~~

~~Dance halls (not including food or drink consumption)~~

~~Exhibition halls~~

~~Funeral parlors~~

~~Gymnasiums (without spectator seating)~~

~~Indoor swimming pools (without spectator seating)~~

~~Indoor tennis courts (without spectator seating)~~

~~Lecture halls~~

~~Libraries~~

~~Museums~~

~~Places of religious worship~~

~~Pool and billiard parlors~~

~~Waiting areas in transportation terminals~~

~~**[BG] Assembly Group A-4.** Group A-4 occupancy includes assembly uses intended for viewing of indoor sporting events and activities with spectator seating including, but not limited to:~~

~~Arenas~~

~~Skating rinks~~

~~Swimming pools~~

~~Tennis courts~~

~~**[BG] Assembly Group A-5.** Group A-5 occupancy includes assembly uses intended for participation in or viewing outdoor activities including, but not limited to:~~

~~Amusement park structures~~

~~*Bleachers*~~

~~Grandstands~~

~~Stadiums~~

[BG] Business Group B. Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

- Airport traffic control towers
- Ambulatory care facilities
- Animal hospitals, kennels and pounds
- Banks
- Barber and beauty shops
- Car wash
- Civic administration
- Clinic-outpatient
- Dry cleaning and laundries: pick-up and delivery stations and self-service
- Education occupancies for high school students participating in Cooperative Innovative High School Programs taught at colleges, community colleges or universities.
- Educational occupancies for students above the 12th grade
- Electronic data processing
- Food processing establishments and commercial kitchens not associated with restaurants, cafeterias and similar dining facilities not more than 2,500 square feet (232 m^2) in area.
- Laboratories: testing and research
- Motor vehicle showrooms
- Post offices
- Print shops
- Professional services (architects, attorneys, dentists, physicians, engineers, etc.)
- Radio and television stations

Telephone exchanges

Training and skill development not in a school or academic program (This shall include, but not be limited to, tutoring centers, martial arts studios, gymnastics and similar uses regardless of the ages served, and where not classified as a Group A occupancy)

[BG] Educational Group E. Educational Group E occupancy includes, among others, the use of a building or structure, or a portion thereof, by six or more persons at any one time for educational purposes through the 12th grade. Education occupancies for high school students participating in Cooperative Innovative High School Programs taught at colleges, community colleges or universities shall be classified as Group B occupancies.

[BG] Accessory to places of religious worship. Religious educational rooms and religious auditoriums, which are accessory to places of religious worship in accordance with Section 508.3.1 of the *International Building Code* and have *occupant loads* of less than 100 per room or space shall be classified as Group A-3 occupancies.

[BG] Group E, day care facilities. This group includes buildings and structures or portions thereof occupied by more than five children older than 2 1/2 years of age who receive educational, supervision or *personal care services* for less than 24 hours per day.

Day care. The use of a building or structure, or portion thereof, for educational, supervision or personal care services for more than five children older than 2 ½ years of age shall be classified as a Group E occupancy.

[BG] Within places of worship. Rooms and spaces within places of worship providing such care during religious functions shall be classified as part of the primary occupancy.

[BG] Five or fewer children. A facility having five or fewer children receiving such care shall be classified as part of the primary occupancy.

[BG] Five or fewer children in a dwelling unit. A facility such as the above within a dwelling unit and having five or fewer children receiving such care shall be classified as a Group R-3 occupancy or shall comply with the *International Residential Code*.

[BG] Factory Industrial Group F. Factory Industrial Group F occupancy includes, among others, the use of a building or structure, or a portion thereof, for assembling, disassembling, fabricating, finishing, manufacturing, packaging, repair or processing operations that are not classified as a Group H high-hazard hazardous or Group S storage occupancy.

[BG] Factory Industrial F-1 Moderate-hazard occupancy. Factory industrial uses that are not classified as Factory Industrial F-2 Low Hazard shall be classified as F-1 Moderate Hazard and shall include, but not be limited to, the following:

~~Aircraft (manufacturing, not to include repair)~~

~~Appliances~~

~~Athletic equipment~~

~~Automobiles and other motor vehicles~~

~~Bakeries~~

~~Beverages; over 16-percent alcohol content~~

~~Bicycles~~

~~Boats~~

~~Brooms or brushes~~

~~Business machines~~

~~Cameras and photo equipment~~

~~Canvas or similar fabric~~

~~Carpets and rugs (includes cleaning)~~

~~Clothing~~

~~Construction and agricultural machinery~~

~~Disinfectants~~

~~Dry cleaning and dyeing~~

~~Electric generation plants~~

~~Electronics~~

~~Engines (including rebuilding)~~

~~Food processing~~ establishments ~~and commercial kitchens not associated with restaurants, cafeterias and similar dining facilities more than 2,500 square feet (232 m^2) in area.~~

~~Furniture~~

~~Hemp products~~

~~Jute products~~

~~Laundries~~

~~Leather products~~

~~Machinery~~

~~Metals~~

~~Millwork (sash and door)~~

~~Motion pictures and television filming (without spectators)~~

~~Musical instruments~~

~~Optical goods~~

~~Paper mills or products~~

~~Photographic film~~

~~Plastic products~~

~~Printing or publishing~~

~~Recreational Vehicles~~

~~Refuse incineration~~

~~Shoes~~

~~Soaps and detergents~~

~~Textiles~~

~~Tobacco~~

~~Trailers~~

~~Upholstering~~

~~Wood; distillation~~

~~Woodworking (cabinet)~~

~~**[BG] Factory Industrial F-2 Low-hazard Occupancy.** Factory industrial uses involving the fabrication or manufacturing of noncombustible materials that, during finishing,~~

packaging or processing do not involve a significant fire hazard, shall be classified as Group F-2 occupancies and shall include, but not be limited to, the following:

Beverages; up to and including 16-percent alcohol content

Brick and masonry

Ceramic products

Foundries

Glass products

Gypsum

Ice

Metal products (fabrication and assembly)

High-hazard Group H. High-hazard Group H occupancy includes, among others, the use of a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or *health hazard* in quantities in excess of those allowed in *control areas* complying with Section 5003.8.3, based on the maximum allowable quantity limits for *control areas* set forth in Tables 5003.1.1(1) and 5003.1.1(2). Hazardous occupancies are classified in Groups H-1, H-2, H-3, H-4 and H-5 and shall be in accordance with this code and the requirements of Section 415 of the *International Building Code*. Hazardous materials stored or used on top of roofs or canopies shall be classified as outdoor storage or use and shall comply with this code.

Uses other than Group H. The storage, use or handling of An occupancy that stores, uses or handles hazardous materials as described in one or more of the following items shall not cause the occupancy to be classified as Group H, but it shall be classified as the occupancy that it most nearly resembles:

1. Buildings and structures occupied for the application of flammable finishes, provided that such buildings or areas conform to the requirements of Chapter 24 of this code and Section 416 of the *International Building Code*.

2. Wholesale and retail sales and storage of flammable and *combustible liquids* in mercantile occupancies conforming to Chapter 57.

3. Closed piping system containing flammable or *combustible liquids* or gases utilized for the operation of machinery or equipment.

4. Cleaning establishments that utilize *combustible liquid* solvents having a *flash point* of 140°F (60°C) or higher in *closed systems* employing equipment *listed* by an *approved* testing agency, provided that this

occupancy is separated from all other areas of the building by 1-hour *fire barriers* in accordance with Section 707 of the *International Building Code* or 1-hour *horizontal assemblies* in accordance with Section 711 of the *International Building Code*, or both.

5. Cleaning establishments that utilize a liquid solvent having a *flash point* at or above 200°F (93°C).

6. Liquor stores and distributors without bulk storage.

7. Refrigeration systems.

8. The storage or utilization of materials for agricultural purposes on the premises.

9. Stationary batteries utilized for facility emergency power, uninterruptible power supply or telecommunication facilities, provided that the batteries are equipped with safety venting caps and ventilation is provided in accordance with the *International Mechanical Code*.

10. *Corrosive* personal or household products in their original packaging used in retail display.

11. Commonly used *corrosive* building materials.

12. Buildings and structures occupied for aerosol storage shall be classified as Group S-1, provided that such buildings conform to the requirements of Chapter 51.

13. Display and storage of nonflammable solid and nonflammable or noncombustible liquid hazardous materials in quantities not exceeding the *maximum allowable quantity per control area* in Group M or S occupancies complying with Section 5003.8.3.5.

14. The storage of black powder, smokeless propellant and small arms primers in Groups M and R-3 and special industrial explosive devices in Groups B, F, M and S, provided such storage conforms to the quantity limits and requirements of this code.

Hazardous materials.
Hazardous materials in any quantity shall conform to the requirements of this code and Section 414 of the *International Building Code*.

High-hazard Group H-1. Buildings and structures containing materials that pose a *detonation* hazard shall be classified as Group H-1. Such materials shall include, but not be limited to, the following:

Detonable pyrophoric materials

Explosives:

Division 1.1

Division 1.2

Division 1.3

Division 1.4

Division 1.5

Division 1.6

Organic peroxides, unclassified detonable

Oxidizers, Class 4

Unstable (reactive) materials, Class 3 detonable, and Class 4

Occupancies containing explosives not classified as H-1. The following occupancies containing explosive materials shall be classified as follows:

1. Division 1.3 explosive materials that are used and maintained in a form where either confinement or configuration will not elevate the hazard from a mass fire hazard to mass explosion hazard shall be allowed in Group H-2 occupancies.

2. Articles, including articles packaged for shipment, that are not regulated as a Division 1.4 explosive under Bureau of Alcohol, Tobacco, Firearms and Explosives regulations, or unpackaged articles used in process operations that do not propagate a *detonation* or deflagration between articles shall be allowed in H-3 occupancies.

High-hazard Group H-2. Buildings and structures containing materials that pose a *deflagration* hazard or a hazard from accelerated burning shall be classified as Group H-2. Such materials shall include, but not be limited to, the following:

Class I, II or IIIA flammable or *combustible liquids* that are used or stored in normally open containers or systems, or in closed containers or systems pressurized at more than 15 pounds per square inch gauge (103.4 kPa)

Combustible dusts where manufactured, generated or used in such a manner that the concentration and conditions create a fire or explosion hazard based on information prepared in accordance with Section 414.1.3 of the *International Building Code*

Cryogenic fluids, flammable

Flammable gases

Organic peroxides, Class I

Oxidizers, Class 3, that are used or stored in normally open containers or systems, or in closed containers or systems pressurized at more than 15 pounds per square inch gauge (103.4 kPa)

Pyrophoric liquids, solids and gases, nondetonable

Unstable (reactive) materials, Class 3, nondetonable

Water-reactive materials, Class 3

High-hazard Group H-3. Buildings and structures containing materials that readily support combustion or that pose a *physical hazard* shall be classified as Group H-3. Such materials shall include, but not be limited to, the following:

Class I, II or IIIA flammable or combustible liquids that are used or stored in normally closed containers or systems pressurized at 15 pounds per square inch gauge (103.4 kPa) or less.

Combustible fibers, other than densely packed baled cotton, where manufactured, generated or used in such a manner that the concentration and conditions create a fire or explosion hazard based on information prepared in accordance with Section 414.1.3 of the *International Building Code*

Consumer fireworks, 1.4G (Class C, Common)

Cryogenic fluids, oxidizing

Flammable solids

Organic peroxides, Class II and III

Oxidizers, Class 2

Oxidizers, Class 3, that are used or stored in normally closed containers or systems pressurized at 15 pounds per square inch gauge (103 kPa) or less

Oxidizing gases

Unstable (reactive) materials, Class 2

Water-reactive materials, Class 2

High-hazard Group H-4. Buildings and structures containing materials that are *health hazards* shall be classified as Group H-4. Such materials shall include, but not be limited to, the following:

Corrosives

Highly toxic materials

Toxic materials

High-hazard Group H-5. Semiconductor fabrication facilities and comparable research and development areas in which hazardous production materials (HPM) are used and the aggregate quantity of materials is in excess of those listed in Tables 5003.1.1(1) and 5003.1.1(2) shall be classified as Group H-5. Such facilities and areas shall be designed and constructed in accordance with Section 415.11 of the *International Building Code*.

Multiple hazards.
Buildings and structures containing a material or materials representing hazards that are classified in one or more of Groups H-1, H-2, H-3 and H-4 shall conform to the code requirements for each of the occupancies so classified.

[BG] Institutional Group I. Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which care or supervision is provided to persons who are or are not capable of self-preservation without physical assistance or in which persons are detained for penal or correctional purposes or in which the liberty of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-3 or I-4.

[BG] Institutional Group I-1. Institutional Group I-1 occupancy shall include buildings, structures or portions thereof for more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised environment and receive custodial care. Buildings of Group I-1 shall be classified as one of the occupancy conditions indicated below. This group shall include, but not be limited to, the following:

Alcohol and drug centers

Assisted living facilities

Congregate care facilities

Group homes

Halfway houses

Residential board and care facilities

Residential board and custodial care facilities

Social rehabilitation facilities

[BG] Condition 1. This occupancy condition shall include buildings in which all persons receiving custodial care who, without any assistance, are capable of responding to an emergency situation to complete building evacuation.

[BG] Condition 2. This occupancy condition shall include buildings in which there are any persons receiving custodial care who require limited verbal or physical assistance while responding to an emergency situation to complete building evacuation.

[BG] Six to 16 persons receiving custodial care. A facility housing not fewer than six and not more than 16 persons receiving custodial care shall be classified as Group R-4.

[BG] Five or fewer persons receiving custodial care. A facility with five or fewer persons receiving custodial care shall be classified as Group R-3 or shall comply with the *International Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or with Section P2904 of the *International Residential Code*.

[BG] Institutional Group I-2. Institutional Group I-2 occupancy shall include buildings and structures used for medical care on a 24-hour basis for more than five persons who are not capable incapable of self-preservation. This group shall include, but not be limited to, the following:

- Foster care facilities
- Detoxification facilities
- Hospitals
- Nursing homes
- Psychiatric hospitals

[BG] Occupancy Conditions. Buildings of Group I-2 shall be classified as one of the following occupancy conditions:

[BG] Condition 1. This occupancy condition shall include facilities that provide nursing and medical care but do not provide emergency care, surgery, obstetrics, or in-patient stabilization units for psychiatric or detoxification, including, but not limited to, nursing homes and foster care facilities.

[BG] Condition 2. This occupancy condition shall include facilities that provide nursing and medical care and could provide emergency care, surgery, obstetrics, or inpatient stabilization units for psychiatric or detoxification, including, but not limited to, hospitals.

[BG] Five or fewer persons receiving medical care. A facility with five or fewer persons receiving medical care shall be classified as Group R-3 or shall comply with the *International Residential Code* provided an *automatic sprinkler system* is

installed in accordance with Section 903.3.1.3 or with Section P2904 of the *International Residential Code*.

[BG] Institutional Group I-3. Institutional Group I-3 occupancy shall include buildings and structures which that are inhabited by more than five persons who are under restraint or security. A Group I-3 facility is occupied by persons who are generally incapable of self-preservation due to security measures not under the occupants' control. This group shall include, but not be limited to, the following:

Correctional centers

Detention centers

Jails

Prerelease centers

Prisons

Reformatories

Buildings of Group I-3 shall be classified as one of the following occupancy conditions:

[BG] Condition 1. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and other spaces where access or occupancy is permitted to the exterior via *means of egress* without restraint. A Condition 1 facility is permitted to be constructed as Group R.

[BG] Condition 2. This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and any other occupied smoke compartment to one or more other smoke compartments. Egress to the exterior is impeded by locked *exits*.

[BG] Condition 3. This occupancy condition shall include buildings in which free movement is allowed within individual smoke compartments, such as within a residential unit comprised of individual *sleeping units* and group activity spaces, where egress is impeded by remote-controlled release of *means of egress* from such smoke compartment to another smoke compartment.

[BG] Condition 4. This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Remote-controlled release is provided to permit movement from *sleeping units*, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.

[BG] Condition 5. This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Staff-controlled manual release is provided to permit movement from *sleeping units*, activity spaces and other occupied areas within the smoke compartment to other smoke compartments.

[BG] Institutional Group I-4, day care facilities. Institutional Group I-4 shall include buildings and structures occupied by more than five persons of any age who receive custodial care for less than 24 hours per day by persons other than parents or guardians, relatives by blood, marriage, or adoption, and in a place other than the home of the person cared for. This group shall include, but not be limited to, the following:

Adult day care

Child day care

[BG] Classification as Group E. A child day care facility that provides care for more than five but not more than 100 children 2 1/2 years or less of age, where the rooms in which the children are cared for are located on a *level of exit discharge* serving such rooms and each of these child care rooms has an *exit* door directly to the exterior, shall be classified as Group E.

[BG] Within a place of religious worship. Rooms and spaces within places of religious worship providing such care during religious functions shall be classified as part of the primary occupancy.

[BG] Five or fewer occupants persons receiving care. A facility having five or fewer persons receiving custodial care shall be classified as part of the primary occupancy.

[BG] Five or fewer occupants persons care in a dwelling unit. A facility such as the above within a *dwelling unit* and having five or fewer persons receiving custodial care shall be classified as a Group R-3 occupancy or shall comply with the *International Residential Code*.

[BG] Mercantile Group M. Mercantile Group M occupancy includes, among others, the use of a building or structure or a portion thereof, for the display and sale of merchandise, and involves stocks of goods, wares or merchandise incidental to such purposes and accessible to the public. Mercantile occupancies shall include, but not be limited to, the following:

Department stores

Drug stores

Markets

Motor fuel-dispensing facilities

Retail or wholesale stores

Sales rooms

Quantity of hazardous materials.
The aggregate quantity of nonflammable solid and nonflammable or noncombustible liquid hazardous materials stored or displayed in a single control area of a Group M occupancy shall not exceed the quantities in Table 414.2.5(1) of the *International Building Code*.

[BG] Residential Group R. Residential Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I or when not regulated by the *International Residential Code* in accordance with Section 101.2 of the *International Building Code*.

[BG] Residential Group R-1. Residential Group R-1 occupancies containing *sleeping units* where the occupants are primarily transient in nature, including:

- Bed & Breakfast (NC licensed with nine or more guest rooms)
- *Boarding houses* (transient) with more than 10 occupants
- Congregate living facilities (transient) with more than 10 occupants
- Hotels (transient)
- Motels (transient)

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

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

Vacation timeshare properties

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

Boarding houses (nontransient) with 16 or fewer occupants

Boarding houses (transient) with 10 or fewer occupants

Buildings that do not contain more than two *dwelling units*

Adult Care facilities that provide accommodations for five or fewer persons receiving care

Child Care facilities that provide accommodations for eight or fewer persons with no more than five for a preschool for less than 24 hours.

Congregate living facilities (nontransient) with 16 or fewer occupants

Congregate living facilities (transient) with 10 or fewer occupants

Licensed Small Residential Care Facilities complying with Section 428.3 of the *International Building Code*.

Lodging houses with five or fewer guest rooms

[BG] Care facilities within a dwelling. Care facilities for five or fewer persons receiving care that are within a single-family dwelling are permitted to comply with the *International Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or Section P2904 of the *International Residential Code*.

[BG] Lodging houses. Owner-occupied *lodging houses* with five or fewer guest rooms shall be permitted to be constructed in accordance with the *International Residential Code*.

[BG] Residential Group R-4. Residential Group R-4 shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive custodial care. Buildings of Group R-4 shall be classified as one of the occupancy conditions indicated below. This group shall include, but not be limited to, the following:

Alcohol and drug centers

Assisted living facilities

Congregate care facilities

Group homes

Halfway houses

Residential board and care facilities

Social rehabilitation facilities

Adult and child day care facilities that provided accommodations in a residence occupied as a home by the caregiver for persons of any age for less than 24 hours.

Large Residential Care Facilities complying with Section 328.5 of the *International Building Code*

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in the *International Building Code*.

[BG] Condition 1. This occupancy condition shall include buildings in which all persons receiving custodial care, without any assistance, are capable of responding to an emergency situation to complete building evacuation.

[BG] Condition 2. This occupancy condition shall include buildings in which there are any persons re-ceiving custodial care who require limited verbal or physical assistance while responding to an emergency situation to complete building evacuation.

[BG] Storage Group S. Storage Group S occupancy includes, among others, the use of a building or structure, or a portion thereof, for storage that is not classified as a hazardous occupancy.

[BG] Accessory storage spaces. A room or space used for storage purposes that is less than 100 square feet (9.3 m^2) in area and accessory to another occupancy shall be classified as part of that occupancy. The aggregate area of such rooms or spaces shall not exceed the allowable area limits of Section 508.2 of the *International Building Code*.

[BG] Moderate-hazard storage, Group S-1. Storage Group S-1 occupancies are buildings occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of the following:

Aerosols, Levels 2 and 3

~~Aircraft hangar (storage and repair)~~

~~Bags: cloth, burlap and paper~~

~~Bamboos and rattan~~

~~Baskets~~

~~Belting: canvas and leather~~

~~Books and paper in rolls or packs~~

~~Boots and shoes~~

~~Buttons, including cloth covered, pearl or bone~~

~~Cardboard and cardboard boxes~~

~~Clothing, woolen wearing apparel Cordage~~

~~Dry boat storage (indoor)~~

~~Furniture~~

~~Furs~~

~~Glues, mucilage, pastes and size~~

~~Grains~~

~~Horns and combs, other than celluloid~~

~~Leather~~

~~Linoleum~~

~~Lumber~~

~~Motor vehicle repair garages complying with the maximum allowable quantities of hazardous materials listed in Table 5003.1.1(1) (see Section 406.8 of the *International Building Code*)~~

~~Photo engravings~~

~~Resilient flooring~~

~~Silks~~

~~Soaps~~

~~Sugar~~

~~Tires, bulk storage of~~

~~Tobacco, cigars, cigarettes and snuff~~

~~Upholstery and mattresses~~

~~Wax candles~~

~~**[BG] Low-hazard storage,** Group S-2. Storage Group S-2 occupancies include, among others, buildings used for the storage of noncombustible materials such as products on wood pallets or in paper cartons with or without single thickness divisions; or in paper wrappings. Such products are permitted to have a negligible amount of plastic trim, such as knobs, handles or film wrapping. Storage uses shall include, but not be limited to, storage of the following:~~

~~Asbestos~~

~~Beverages up to and including 16-percent alcohol in metal, glass or ceramic containers~~

~~Cement in bags~~

~~Chalk and crayons~~

~~Dairy products in nonwaxed coated paper containers~~

~~Dry cell batteries~~

~~Electrical coils~~

~~Electrical motors~~

~~Empty cans~~

~~Food products~~

~~Foods in noncombustible containers~~

~~Fresh fruits and vegetables in nonplastic trays or containers~~

~~Frozen foods~~

~~Glass~~

~~Glass bottles, empty or filled with noncombustible liquids~~

Gypsum board

Inert pigments

Ivory

Meats

Metal cabinets

Metal desks with plastic tops and trim

Metal parts

Metals

Mirrors

Oil-filled and other types of distribution transformers

Parking garages, open or enclosed

Porcelain and pottery

Stoves

Talc and soapstones

Washers and dryers

[BG] Miscellaneous Group U. Buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy shall be constructed, equipped and maintained to conform to the requirements of this code commensurate with the fire and life hazard incidental to their occupancy. Group U shall include, but not be limited to, the following:

Agricultural buildings

Aircraft hangar, accessory to a one- or two-family resdence (see Section 412.5 of the *International Building Code*)

Barns

Carports

Fences more than 6 feet (1829 mm) high

Grain silos, accessory to a residential occupancy

~~Greenhouses~~

~~Livestock shelters~~

~~Photovoltaic panel system (mounted at grade)~~

~~Private garages~~

~~Retaining walls~~

~~Sheds~~

~~Stables~~

~~Tanks~~

~~Towers~~

OPEN AIR CAMP CABIN. A single-story residential building that has three walls consisting of at least twenty percent (20%) screened openings with a maximum height of 44 inches above the finished floor to the bottom of the openings, has no heating or cooling system, is occupied for no more than 150 days within any rolling 365-day time span.

[B] PRIVATE WATERFRONT STRUCTURES. A *dock, pier, bulkhead,* or associated structure not open to the general public and with no more than ten total boat slips and no more than ten owners.

[B] PUBLIC WATERFRONT STRUCTURES. A *dock, pier, bulkhead,* or associated structure located on *multi-family* residential property (greater than ten *dwelling units*), public property or commercial property.

[A] REGISTERED DESIGN PROFESSIONAL. An architect or engineer, registered or licensed to practice professional architecture or engineering, as defined by the statutory requirements of the professional registration laws of the state in which the project is to be constructed. Design by a registered design professional is not required where exempt under the registration or licensure laws.

RESPITE CARE FACILITY. A facility that provides overnight, temporary custodial care to no more than 6 individuals who are elderly, have physical disability or mental impairment. Not to exceed 14 consecutive calendar days and 60 total days annually per recipient.

TEMPORARY OVERFLOW SHELTER. A shelter that provides temporary overflow accommodations from an approved shelter in accordance with Section 319.

[A] TOWNHOUSE. A single-family *dwelling unit* constructed in a group of three or more attached units separated by property lines in which each unit extends from the foundation to roof and with open space on at least two sides.

SECTION 203
OCCUPANCY CLASSIFICATIONS

203.1 General.
Structures or portions of structures shall be classified with respect to occupancy in one or more of the groups listed in this section. A room or space that is intended to be occupied at different times for different purposes shall comply with all of the requirements that are applicable to each of the purposes for which the room or space will be occupied. Structures with multiple occupancies or uses shall comply with Section 508. Where a structure is proposed for a purpose that is not specifically provided for in this code, such structure shall be classified in the group that the occupancy most nearly resembles, according to the fire safety and relative hazard involved.

1. Assembly (see Section 203.3): Groups A-1, A-2, A-3, A-4 and A-5.

2. Business (see Section 203.4): Group B.

3. Educational (see Section 203.5): Group E.

4. Factory and Industrial (see Section 203.6): Groups F-1 and F-2.

5. High Hazard (see Section 203.7): Groups H-1, H-2, H-3, H-4 and H-5.

6. Institutional (see Section 203.8): Groups I-1, I-2, I-3 and I-4.

7. Mercantile (see Section 203.9): Group M.

8. Residential (see Section 203.10): Groups R-1, R-2, R-3 and R-4.

9. Storage (see Section 203.11): Groups S-1 and S-2.

10. Utility and Miscellaneous (see Section 203.12): Group U.

203.3 Assembly Group A.
Assembly Group A occupancy includes, among others, the use of a building or structure, or a portion thereof, for the gathering of persons for purposes such as civic, social or religious functions; recreation, food or drink consumption or awaiting transportation.

203.3.1 Small buildings and tenant spaces.
A building or tenant space used for assembly purposes with an *occupant load* of less than 50 persons shall be classified as a Group B occupancy.

203.3.1.2 Small assembly spaces.
The following rooms and spaces shall not be classified as Assembly occupancies:

1. A room or space used for assembly purposes with an *occupant load* of less than 50 persons and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.

2. A room or space used for assembly purposes that is less than 750 square feet (70 m^2) in area and accessory to another occupancy shall be classified as a Group B occupancy or as part of that occupancy.

203.3.1.3 Associated with Group E occupancies.
A room or space used for assembly purposes that is associated with a Group E occupancy is not considered a separate occupancy.

203.3.1.4 Accessory to places of religious worship.
Accessory religious educational rooms and religious auditoriums with *occupant loads* of less than 100 per room or space are not considered separate occupancies.

203.3.2 Assembly Group A-1.
Group A-1 occupancy includes assembly uses, usually with fixed seating, intended for the production and viewing of the performing arts or motion pictures including, but not limited to:

Motion picture theaters

Symphony and concert halls

Television and radio studios admitting an audience

Theaters

203.3.3 Assembly Group A-2.
Group A-2 occupancy includes assembly uses intended for food and/or drink consumption including, but not limited to:

Banquet halls

Casinos (gaming areas)

Nightclubs

Restaurants, cafeterias and similar dining facilities (including associated commercial kitchens)

Taverns and bars

203.3.4 Assembly Group A-3.
Group A-3 occupancy includes assembly uses intended for worship, recreation or amusement and other assembly uses not classified elsewhere in Group A including, but not limited to:

Amusement arcades

Art galleries

Bowling alleys

Community halls

Courtrooms

Dance halls (not including food or drink consumption)

Exhibition halls

Funeral parlors

Gymnasiums (without spectator seating)

Indoor *swimming pools* (without spectator seating) Indoor tennis courts (without spectator seating)

Lecture halls

Libraries

Museums

Places of religious worship

Pool and billiard parlors

Waiting areas in transportation terminals

203.3.5 Assembly Group A-4.
Group A-4 occupancy includes assembly uses intended for viewing of indoor sporting events and activities with spectator seating including, but not limited to:

Arenas

Skating rinks

Swimming pools

Tennis courts

203.3.6 Assembly Group A-5.
Group A-5 occupancy includes assembly uses intended for participation in or viewing outdoor activities including, but not limited to:

Amusement park structures

Bleachers

Grandstands

Stadiums

203.4 Business Group B.

Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

Airport traffic control towers

Ambulatory care facilities

Animal hospitals, kennels and pounds

Banks

Barber and beauty shops

Car wash

Civic administration

Clinic, outpatient

Dry cleaning and laundries: pick-up and delivery stations and self-service

Educational occupancies for students above the 12th grade

Electronic data processing

Food processing establishments and commercial kitchens not associated with restaurants, cafeterias and similar dining facilities not more than 2,500 square feet (232 m^2) in area.

Laboratories: testing and research

Motor vehicle showrooms

Post offices

Print shops

Professional services (architects, attorneys, dentists, physicians, engineers, etc.)

Radio and television stations

Telephone exchanges

Training and skill development not in a school or academic program (this shall include, but not be limited to, tutoring centers, martial arts studios, gymnastics and similar uses regardless of the ages served, and where not classified as a Group A occupancy).

Educational occupancies for high school students participating in *Cooperative Innovative High School Programs* taught at colleges, community colleges or universities.

203.5 Educational Group E.
Educational Group E occupancy includes, among others, the use of a building or structure, or a portion thereof, by six or more persons at any one time for educational purposes through the 12th grade.

203.5.1 Accessory to places of religious worship.
Religious educational rooms and religious auditoriums, which are accessory to *places of religious worship* in accordance with Section 303.1.4 and have *occupant loads* of less than 100 per room or space, shall be classified as Group A-3 occupancies.

203.5.2 Cooperative innovative high school programs. Educational occupancies for high school students participating in Cooperative Innovative High School Programs taught at colleges, community colleges or universities shall be classified as Group B occupancies.

203.5.3 Drop-in/short-term child care. Drop-in/short-term child care facility as defined in North Carolina G.S. 110-86(2)(d) & (d1) shall be classified as Group E.

203.5.4 Group E, day care facilities.
This group includes buildings and structures or portions thereof occupied by more than five children older than $2^{1}/_{2}$ years of age who receive educational, supervision or personal care services for fewer than 24 hours per day.

203.5.4.1 Within places of religious worship.
Rooms and spaces within *places of religious worship* providing such day care during religious functions shall be classified as part of the primary occupancy.

203.5.4.2 Five or fewer children.
A facility having five or fewer children receiving such day care shall be classified as part of the primary occupancy.

203.5.4.3 Five or fewer children in a dwelling unit.
A facility such as the above within a *dwelling unit* and having five or fewer children receiving such day care shall be classified as a Group R-3 occupancy or shall comply with the *International Residential Code*.

203.6 Factory Industrial Group F.
Factory Industrial Group F occupancy includes, among others, the use of a building or structure, or a portion thereof, for assembling, disassembling, fabricating, finishing, manufacturing, packaging, repair or processing operations that are not classified as a Group H hazardous or Group S storage occupancy.

203.6.1 Moderate-hazard factory industrial, Group F-1.
Factory industrial uses that are not classified as Factory Industrial F-2 Low Hazard shall be classified as F-1 Moderate Hazard and shall include, but not be limited to, the following:

Aircraft (manufacturing, not to include repair)

Appliances

Athletic equipment

Automobiles and other motor vehicles

Bakeries

Beverages: over 16-percent alcohol content

Bicycles

Boats

Brooms or brushes

Business machines

Cameras and photo equipment

Canvas or similar fabric

Carpets and rugs (includes cleaning)

Clothing

Construction and agricultural machinery

Disinfectants

Dry cleaning and dyeing

Electric generation plants

Electronics

Engines (including rebuilding)

Food processing establishments and commercial kitchens not associated with restaurants, cafeterias and similar dining facilities more than 2,500 square feet (232 m^2) in area.

Furniture

Hemp products

Jute products

Laundries

Leather products

Machinery

Metals

Millwork (sash and door)

Motion pictures and television filming (without spectators)

Musical instruments

Optical goods

Paper mills or products

Photographic film

Plastic products

Printing or publishing

Recreational vehicles

Refuse incineration

Shoes

Soaps and detergents

Textiles

Tobacco

Trailers

Upholstering

Wood; distillation

Woodworking (cabinet)

203.6.2 Low-hazard factory industrial, Group F-2.
Factory industrial uses that involve the fabrication or manufacturing of noncombustible materials that during finishing, packing or processing do not involve a significant fire hazard shall be classified as F-2 occupancies and shall include, but not be limited to, the following:

Beverages: up to and including 16-percent alcohol content

Brick and masonry

Ceramic products

Foundries

Glass products

Gypsum

Ice

Metal products (fabrication and assembly)

[F] 203.7 High-hazard Group H.

High-hazard Group H occupancy includes, among others, the use of a building or structure, or a portion thereof, that involves the manufacturing, processing, generation or storage of materials that constitute a physical or health hazard in quantities in excess of those allowed in *control areas* complying with Section 5003.8.3, based on the maximum allowable quantity limits for *control areas* set forth in Tables 5003.1.1(1) and 5003.1.1(2). Hazardous occupancies are classified in Groups H-1, H-2, H-3, H-4 and H-5 and shall be in accordance with this code, the requirements of Sections 414 and 415 of the *International Building Code*. Hazardous materials stored, or used on top of roofs or canopies, shall be classified as outdoor storage or use and shall comply with the *International Fire Code*.

[F] 203.7.1 Uses other than Group H.

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.

1. Buildings and structures occupied for the application of flammable finishes, provided that such buildings or areas conform to the requirements of this code and Section 416 of the *International Building Code*.

2. Wholesale and retail sales and storage of flammable and combustible liquids in mercantile occupancies conforming to this code.

3. Closed piping system containing flammable or combustible liquids or gases utilized for the operation of machinery or equipment.

4. Cleaning establishments that utilize combustible liquid solvents having a flash point of 140°F (60°C) or higher in closed systems employing equipment *listed* by an *approved* testing agency, provided that this occupancy is separated from all other areas of the building by 1-hour *fire barriers* constructed in accordance with Section

707 of the *International Building Code* or 1hour *horizontal assemblies* constructed in accordance with Section 711 of the *International Building Code*, or both.

5. Cleaning establishments that utilize a liquid solvent having a flash point at or above 200°F (93°C).

6. Liquor stores and distributors without bulk storage.

7. Refrigeration systems.

8. The storage or utilization of materials for agricultural purposes on the premises.

9. Stationary batteries utilized for facility emergency power, uninterruptable power supply or telecommunication facilities, provided that the batteries are provided with safety venting caps and *ventilation* is provided in accordance with the *International Mechanical Code*.

10. Corrosive personal or household products in their original packaging used in retail display.

11. Commonly used corrosive building materials.

12. Buildings and structures occupied for aerosol storage shall be classified as Group S-1, provided that such buildings conform to the requirements of this code.

13. Display and storage of nonflammable solid and nonflammable or noncombustible liquid hazardous materials in quantities not exceeding the maximum allowable quantity per *control area* in Group M or S occupancies complying with Section 414.2.5 of the *International Building Code*.

14. The storage of black powder, smokeless propellant and small arms primers in Groups M and R-3 and special industrial explosive devices in Groups B, F, M and S, provided such storage conforms to the quantity limits and requirements prescribed in this code.

[F] 203.7.1.2 Hazardous materials.
Hazardous materials in any quantity shall conform to the requirements of this code, including Section 414 of the *International Building Code*.

[F] 207.7.3 High-hazard Group H-1.
Buildings and structures containing materials that pose a detonation hazard shall be classified as Group H-1. Such materials shall include, but not be limited to, the following:

Detonable pyrophoric materials

Explosives:

Division 1.1

Division 1.2

Division 1.3

Division 1.4

Division 1.5

Division 1.6

Organic peroxides, unclassified detonable

Oxidizers, Class 4

Unstable (reactive) materials, Class 3 detonable and Class 4

[F] 203.7.3.1 Occupancies containing explosives not classified as H-1.
The following occupancies containing explosive materials shall be classified as follows:

1. Division 1.3 explosive materials that are used and maintained in a form where either confinement or configuration will not elevate the hazard from a mass fire to mass explosion hazard shall be allowed in H-2 occupancies.

2. Articles, including articles packaged for shipment, that are not regulated as a Division 1.4 explosive under Bureau of Alcohol, Tobacco, Firearms and Explosives regulations, or unpackaged articles used in process operations that do not propagate a detonation or deflagration between articles shall be allowed in H-3 occupancies.

[F] 203.7.4 High-hazard Group H-2.
Buildings and structures containing materials that pose a deflagration hazard or a hazard from accelerated burning shall be classified as Group H-2. Such materials shall include, but not be limited to, the following:

Class I, II or IIIA flammable or combustible liquids that are used or stored in normally open containers or systems, or in closed containers or systems pressurized at more than 15 pounds per square inch gauge (103.4 kPa).

Combustible dusts where manufactured, generated or used in such a manner that the concentration and conditions create a fire or explosion hazard based on information prepared in accordance with Section 414.1.3 of the *International Building Code*.

Cryogenic fluids, flammable.

Flammable gases.

Organic peroxides, Class I.

Oxidizers, Class 3, that are used or stored in normally open containers or systems, or in closed containers or systems pressurized at more than 15 pounds per square inch gauge (103 kPa).

Pyrophoric liquids, solids and gases, nondetonable. Unstable (reactive) materials, Class 3, nondetonable. Water-reactive materials, Class 3.

[F] 203.7.5 High-hazard Group H-3.
Buildings and structures containing materials that readily support combustion or that pose a physical hazard shall be classified as Group H-3. Such materials shall include, but not be limited to, the following:

Class I, II or IIIA flammable or combustible liquids that are used or stored in normally closed containers or systems pressurized at 15 pounds per square inch gauge (103.4 kPa) or less.

Combustible fibers, other than densely packed baled cotton, where manufactured, generated or used in such a manner that the concentration and conditions create a fire or explosion hazard based on information prepared in accordance with Section 414.1.3 of the *International Building Code*.

Consumer fireworks, 1.4G (Class C, Common)

Cryogenic fluids, oxidizing

Flammable solids

Organic peroxides, Class II and III

Oxidizers, Class 2

Oxidizers, Class 3, that are used or stored in normally closed containers or systems pressurized at 15 pounds per square inch gauge (103 kPa) or less

Oxidizing gases

Unstable (reactive) materials, Class 2

Water-reactive materials, Class 2

[F] 203.7.6 High-hazard Group H-4.
Buildings and structures containing materials that are health hazards shall be classified as Group H-4. Such materials shall include, but not be limited to, the following:

Corrosives

Highly toxic materials

Toxic materials

[F] 203.7.7 High-hazard Group H-5.
Semiconductor fabrication facilities and comparable research and development areas in which hazardous production materials (HPM) are used and the aggregate quantity of materials is in excess of those listed in Tables 5003.1.1(1) and 5003.1.1(2) shall be classified as Group H-5. Such facilities and areas shall be designed and constructed in accordance with Section 415.11 of the *International Building Code*.

[F] 203.7.8 Multiple hazards.
Buildings and structures containing a material or materials representing hazards that are classified in one or more of Groups H-1, H-2, H-3 and H-4 shall conform to the code requirements for each of the occupancies so classified.

203.8.1 Institutional Group I.
Institutional Group I occupancy includes, among others, the use of a building or structure, or a portion thereof, in which care or supervision is provided to persons who are or are not capable of self-preservation without physical assistance or in which persons are detained for penal or correctional purposes or in which the liberty of the occupants is restricted. Institutional occupancies shall be classified as Group I-1, I-2, I-3 or I-4.

203.8.2 Institutional Group I-1.
Institutional Group I-1 occupancy shall include buildings, structures or portions thereof for more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised environment and receive custodial care. Buildings of Group I-1 shall be classified as one of the occupancy conditions specified in Section 203.8.3.1 or 203.8.3.2 . This group shall include, but not be limited to, the following:

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

203.8.2.1 Condition 1 (Ambulatory).
This occupancy condition shall include buildings in which all persons receiving custodial care who, without any assistance, are capable of responding to an emergency situation to complete building evacuation.

203.8.2.2 Condition 2 (Nonambulatory).
This occupancy condition shall include buildings in which there are any persons receiving custodial care who require ~~limited~~ verbal or physical assistance while responding to an emergency situation to complete building evacuation.

203.8.2.3 Six to 16 persons receiving custodial care.
A facility housing not fewer than six and not more than 16 persons receiving custodial care shall be classified as Group R-4.

203.8.2.4 Five or fewer persons receiving custodial care.
A facility with five or fewer persons receiving custodial care shall be classified as Group R-3 or shall comply with the *International Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or Section P2904 of the *International Residential Code*.

203.8.3 Institutional Group I-2.
Institutional Group I-2 occupancy shall include buildings and structures used for *medical care* on a 24-hour basis for more than five persons who are *incapable of self-preservation*. This group shall include, but not be limited to, the following:

Foster care facilities

Detoxification facilities

Hospitals

Nursing homes

Psychiatric hospitals

203.8.3.1 Occupancy conditions.
Buildings of Group I-2 shall be classified as one of the occupancy conditions specified in Section 308.4.1.1 or 308.4.1.2.

203.8.3.1.1 Condition 1.
This occupancy condition shall include facilities that provide nursing and medical care but do not provide emergency care, surgery, obstetrics or in-patient stabilization units for psychiatric or detoxification, including but not limited to nursing homes and foster care facilities.

203.8.3.1.2 Condition 2.
This occupancy condition shall include facilities that provide nursing and medical care and could provide emergency care, surgery, obstetrics or in-patient stabilization units for psychiatric or detoxification, including but not limited to hospitals.

203.8.3.2 Five or fewer persons receiving medical care.
A facility with five or fewer persons receiving medical care shall be classified as Group R-3 or shall comply with the *International Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or Section P2904 of the *International Residential Code*.

203.8.4 Institutional Group I-3.
Institutional Group I-3 occupancy shall include buildings and structures that are inhabited by more than five persons who are under restraint or security. A Group I-3 facility is occupied

byspersons who are generally *incapable of self-preservation* due to security measures not under the occupants' control. This group shall include, but not be limited to, the following:

Correctional centers

Detention centers Jails

Prerelease centers

Prisons

Reformatories

Buildings of Group I-3 shall be classified as one of the occupancy conditions specified in Sections 308.5.1 through 308.5.5 (see Section 408.1).

203.8.1 Condition 1.
This occupancy condition shall include buildings in which free movement is allowed from sleeping areas, and other spaces where access or occupancy is permitted, to the exterior via *means of egress* without restraint. A Condition 1 facility is permitted to be constructed as Group R.

203.8.2 Condition 2.
This occupancy condition shall include buildings in which free movement is allowed from sleeping areas and any other occupied *smoke compartment* to one or more other *smoke compartments.* Egress to the exterior is impeded by locked *exits*.

203.8.3 Condition 3.
This occupancy condition shall include buildings in which free movement is allowed within individual *smoke compartments*, such as within a residential unit comprised of individual *sleeping units* and group activity spaces, where egress is impeded by remotecontrolled release of *means of egress* from such a *smoke compartment* to another *smoke compartment*.

203.8.4 Condition 4.
This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Remote-controlled release is provided to permit movement from *sleeping units*, activity spaces and other occupied areas within the *smoke compartment* to other *smoke compartments.*

203.8.5 Condition 5.
This occupancy condition shall include buildings in which free movement is restricted from an occupied space. Staff-controlled manual release is provided to permit movement from *sleeping units*, activity spaces and other occupied areas within the *smoke compartment* to other *smoke compartments*.

203.8.5 Institutional Group I-4, day care facilities.
Institutional Group I-4 occupancy shall include buildings and structures occupied by more than five persons of any age who receive *custodial care* for fewer than 24 hours per day by persons other than parents or guardians, relatives by blood, marriage or adoption, and in a place other

than the home of the person cared for. This group shall include, but not be limited to, the following:

Adult day care

Child day care

Respite Care Facility licensed as I-4 day care facilities

203.8.5.1 Classification as Group E.
A child day care facility that provides care for more than five but not more than 100 children $2\frac{1}{2}$ years or less of age, where the rooms in which the children are cared for are located on a *level of exit discharge* serving such rooms and each of these child care rooms has an *exit* door directly to the exterior, shall be classified as Group E.

203.8.5.2 Within a place of religious worship.
Rooms and spaces within *places of religious worship* providing such care during religious functions shall be classified as part of the primary occupancy.

203.8.5.3 Five or fewer persons receiving care.
A facility having five or fewer persons receiving *custodial care* shall be classified as part of the primary occupancy.

203.8.5.4 Five or fewer persons receiving care in a dwelling unit.
A facility such as the above within a *dwelling unit* and having five or fewer persons receiving *custodial care* shall be classified as a Group R-3 occupancy or shall comply with the *International Residential Code*.

203.8.5.5 Drop-in/short-term child care. Drop-in/short-term child care facility as defined in North Carolina G.S. 110-86(2)(d) & (d1) shall be classified as Group E.

203.9 Mercantile Group M.
Mercantile Group M occupancy includes, among others, the use of a building or structure or a portion thereof for the display and sale of merchandise, and involves stocks of goods, wares or merchandise incidental to such purposes and accessible to the public. Mercantile occupancies shall include, but not be limited to, the following:

Department stores

Drug stores Markets

Motor fuel-dispensing facilities

Retail or wholesale stores

Sales rooms

203.9.1 Quantity of hazardous materials.
The aggregate quantity of nonflammable solid and nonflammable or noncombustible liquid hazardous materials stored or displayed in a single *control area* of a Group M occupancy shall not exceed the quantities in Table 414.2.5(1).

203.10 Residential Group R.
Residential Group R includes, among others, the use of a building or structure, or a portion thereof, for sleeping purposes when not classified as an Institutional Group I or when not regulated by the *International Residential Code*.

203.10.1 Residential Group R-1.
Residential Group R-1 occupancies containing *sleeping units* where the occupants are primarily *transient* in nature, including:

- *Boarding houses* (*transient*) with more than 10 occupants
- *Congregate living facilities* (*transient)* with more than 10 occupants
- Hotels (*transient*)
- Motels (*transient*)
- Open air camp cabin (transient) with 17 to 36 occupants

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

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

Vacation timeshare properties

Open air camp cabin (nontransient) with 17 to 36 occupants

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

Buildings that do not contain more than two *dwelling units*

Boarding houses (nontransient) with 16 or fewer occupants

Boarding houses (*transient*) with 10 or fewer occupants

Adult Day Care facilities that provide accommodations for five or fewer persons receiving care

Child Day Care facilities that provide accommodations for eight or fewer persons with no more than five for a preschool for less than 24 hours.

Congregate living facilities (nontransient) with 16 or fewer occupants

Congregate living facilities (*transient*) with 10 or fewer occupants

Lodging houses (Bed and Breakfast) with ~~five~~ eight or fewer *guest rooms*

Licensed Small Residential Care Facilities complying with Section 428.3

Open air camp cabin with 16 or fewer occupants

Respite Care Facilities licensed as Small Residential Care Facilities

203.10.3.1 Care facilities within a dwelling.
Care facilities for five or fewer persons receiving care that are within a single-family dwelling are permitted to comply with the *International Residential Code* provided an *automatic sprinkler system* is installed in accordance with Section 903.3.1.3 or Section P2904 of the *International Residential Code*.

Exception: Respite Care Facilities shall be provided with a NFPA 13 sprinkler system complying with Section 903.3.1.1.

203.10.3.2 Lodging houses.
Owner-occupied *lodging houses* with ~~five~~ eight or fewer *guest rooms* shall be permitted to be constructed in accordance with the *International Residential Code*.

203.10.4 Residential Group R-4.
Residential Group R-4 occupancy shall include buildings, structures or portions thereof for more

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

Alcohol and drug centers

Assisted living facilities

Congregate care facilities

Group homes

Halfway houses

Large Residential Care Facilities complying with Section 428.5

Adult Day Care facilities, less than 24-hour basis

Child Day Care facilities, less than 24-hour basis

Residential board and care facilities

Social rehabilitation facilities

Respite Care Facilities licensed as Large Residential Care Facilities

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

203.10.4.1 Condition 1.
This occupancy condition shall include buildings in which all persons receiving custodial care, without any assistance, are capable of responding to an emergency situation to complete building evacuation.

203.10.4.2 Condition 2.
This occupancy condition shall include buildings in which there are any persons receiving custodial care who require limited verbal or physical assistance while responding to an emergency situation to complete building evacuation.

203.11 Storage Group S.
Storage Group S occupancy includes, among others, the use of a building or structure, or a portion thereof, for storage that is not classified as a hazardous occupancy.

203.11.1 Accessory storage spaces.

A room or space used for storage purposes that is less than 100 square feet (9.3 m^2) in area and accessory to another occupancy shall be classified as part of that occupancy. The aggregate area of such rooms or spaces shall not exceed the allowable area limits of Section 508.2.

203.11.2 Moderate-hazard storage, Group S-1.
Storage Group S-1 occupancies are buildings occupied for storage uses that are not classified as Group S-2, including, but not limited to, storage of the following:

- Aerosols, Levels 2 and 3
- Aircraft hangar (storage and repair)
- Bags: cloth, burlap and paper
- Bamboos and rattan
- Baskets
- Belting: canvas and leather
- Books and paper in rolls or packs
- Boots and shoes
- Buttons, including cloth covered, pearl or bone
- Cardboard and cardboard boxes
- Clothing, woolen wearing apparel
- Cordage
- Dry boat storage (indoor)
- Furniture
- Furs
- Glues, mucilage, pastes and size
- Grains
- Horns and combs, other than celluloid
- Leather
- Linoleum
- Lumber
- Motor vehicle repair garages complying with the maximum allowable quantities of hazardous materials listed in Table 307.1(1) (see Section 406.8)

Photo engravings

Resilient flooring

Silks

Soaps

Sugar

Tires, bulk storage of

Tobacco, cigars, cigarettes and snuff

Upholstery and mattresses

Wax candles

203.11.3 Low-hazard storage, Group S-2.
Storage Group S-2 occupancies include, among others, buildings used for the storage of noncombustible materials such as products on wood pallets or in paper cartons with or without single thickness divisions; or in paper wrappings. Such products are permitted to have a negligible amount of plastic *trim*, such as knobs, handles or film wrapping. Group S-2 storage uses shall include, but not be limited to, storage of the following:

Asbestos

Beverages up to and including 16-percent alcohol in metal, glass or ceramic containers

Cement in bags

Chalk and crayons

Dairy products in nonwaxed coated paper containers

Dry cell batteries

Electrical coils

Electrical motors

Empty cans

Food products

Foods in noncombustible containers

Fresh fruits and vegetables in nonplastic trays or containers

Frozen foods

Glass

Glass bottles, empty or filled with noncombustible liquids

Gypsum board

Inert pigments

Ivory

Meats

Metal cabinets

Metal desks with plastic tops and *trim*

Metal parts

Metals

Mirrors

Oil-filled and other types of distribution transformers

Parking garages, open or enclosed

Porcelain and pottery

Stoves

Talc and soapstones

Washers and dryers

203.12 Utility and Miscellaneous, Group U.
Buildings and structures of an accessory character and miscellaneous structures not classified in any specific occupancy shall be constructed, equipped and maintained to conform to the requirements of this code commensurate with the fire and life hazard incidental to their occupancy. Group U shall include, but not be limited to, the following:

Agricultural buildings

Aircraft hangars, accessory to a one- or two-family residence (see Section 412.5)

Barns

Carports

Fences more than 6 feet (1829 mm) in height

Grain silos, accessory to a residential occupancy

Greenhouses

Livestock shelters

Photovoltaic panel system (mounted at grade)

Private garages

Retaining walls

Sheds

Stables

Tanks

Towers

CHAPTER 3 CHANGES

308.1.4 Open-flame cooking devices.
Charcoal burners and other open-flame cooking devices shall not be operated on combustible balconies or within 10 feet (3048 mm) of combustible construction.

Exceptions:

1. One- and two-family *dwellings*.
2. Where buildings, balconies and decks are protected by an *automatic sprinkler system* and in accordance with Chapter 61.
3. LP-gas cooking devices having LP-gas container with a water capacity not greater than $2\frac{1}{2}$ pounds [nominal 1 pound (0.454 kg) LP-gas capacity].

310.9 Hookah or water pipe use. The use of hookahs or similar devices within buildings shall comply with all of the following:

1. An *approved* ventilation system is required.
   1.1 The room or building shall comply with the *North Carolina Mechanical Code* Section 403.3 for a smoking lounge.

1.2 Carbon monoxide accumulation shall be controlled in accordance with the *North Carolina Mechanical Code* Section 502.

2. Coals shall be transported from the preparation area in an *approved* noncombustible container.

3. Hookah pipes shall be located and positioned in such a manner as to prevent overturning.

4. Disposal, use, or handling of ashes and coals shall comply with Sections 305.1 and 305

311.1.1 Abandoned premises.
Buildings, structures and premises for which an *owner* cannot be identified or located by dispatch of a certificate of mailing to the last known or registered address, which persistently or repeatedly become unprotected or unsecured, which have been occupied by unauthorized persons or for illegal purposes, or which present a danger of structural collapse or fire spread to adjacent properties shall be considered abandoned, declared unsafe and abated by demolition or rehabilitation in accordance with the ~~*International Property Maintenance Code* and~~ the *International Building Code*.

311.2.1 Security.
Exterior and interior openings accessible to other tenants or unauthorized persons shall be boarded, locked, blocked or otherwise protected to prevent entry by unauthorized individuals. The *fire code official* is authorized to placard, post signs, erect barrier tape or take similar measures as necessary to secure public safety.

311.2.2 Fire protection.
Fire alarm, sprinkler and stand-pipe systems shall be maintained in an operable condition at all times.

Exceptions:

1. Where the premises have been cleared of all combustible materials and debris and, in the opinion of the *fire code official*, the type of construction, *fire separation distance* and security of the premises do not create a fire hazard.

2. Where ~~*approved* by the fire chief,~~ buildings that will not be heated and where *fire protection systems* will be exposed to freezing temperatures, fire alarm and sprinkler systems are permitted to be placed out of service and standpipes are permitted to be maintained as dry systems (without an automatic water supply), provided the building has no contents or storage, and windows, doors and other openings are secured to prohibit entry ~~by unauthorized persons~~.

316.6.3 Parking. Transient parking of passenger vehicles is allowed as follows:
1. The utility provider grants permission to park within their easement or right of way;
2. Each vehicle shall be 10,000lb GVW or less;
3. The lowest conductor of the transmission line shall be 25ft. above parking lot surface;
4. The transmission line voltage shall be 230kv or less; and
5. Transient parking is a time period of no more than twelve consecutive hours

SECTION 319

TEMPORARY OVERFLOW SHELTER

~~**319.1 Temporary overflow shelter.** Subject to the approval of the building and fire code official, temporary overflow shelters shall be permitted in churches and other similar Group A-3 occupancies, and Group R fire protection systems may be omitted.~~

319.1 General.
Existing A-2 and A-3 Occupancies shall be permitted to provide facilities for temporary overflow emergency shelters for the homeless provided that all of the following conditions are met and approved by the local building and fire code official ~~and fire marshal~~:

319.1.1 Occupant load and age.
~~The total number of homeless Occupants is limited to 20 individuals who are ambulatory. The homeless Occupants must be 18 years of age or older.~~

The maximum number of homeless occupants is 20 individuals who are ambulatory. The homeless occupants must be 18 years of age or older.

Exception: Occupants may be less than 18 years of age if the temporary shelter meets]

1. Is intended to serve homeless families with children and their parents or other legal guardian;
2. Consists of a group of churches or other nonprofit religious entities that have agreed to host the shelter occupants on the premises of each church or religious entity on a rotating basis; and
3. Equipped with smoke detectors meeting applicable code provisions for such devices in all sleeping areas.

319.1.2 Construction Type.
The building must be of Type I, II, or III construction.

319.1.3 Staff.
The temporary overflow emergency shelter must be staffed by a minimum of two individuals of 21 years of age or older trained in accordance with Chapter 4 of the NC Fire Code and at least one trained individual shall be awake to monitor the sleeping room and restrooms throughout the time the facility is occupied by the homeless.

319.1.4 Fire alarm and detection systems.
Functioning smoke detection and a local fire alarm system per 907.2.8 shall be provided throughout the sleeping room and exit access corridors and stairs of the temporary overflow emergency shelter.

Building Owner shall submit documentation illustrating that the fire alarm system is approved and that all emergency batteries have been tested and are operational.

319.1.5 Means of egress.
There shall be a minimum of two separate code compliant means of egress serving the temporary overflow emergency shelter. An evacuation route approved by the local building and fire code officials shall be posted and be in compliance with Sections 403 and 404 of this code.

319.1.5.1 Illumination.

The temporary overflow emergency shelter sleeping room and exit access corridors and stairs shall have unswitched illumination and emergency powered illumination with a duration of not less than 90-minutes.

319.1.6 Automatic sprinkler system.
No fire protection sprinkler system is required per 903.2.8, Exception #2.

319.1.7 Ventilation and temperature control.
Heating, cooling, and ventilation must be provided by equipment installed and approved for such use. Use of space heaters shall be prohibited.

319.1.8 Fire extinguishers.
There must be an adequate number of fire extinguishers to serve the temporary overflow emergency shelter as determined by the local fire marshal. Travel distance to an approved fire extinguisher shall not exceed 50 feet. Minimum rating of extinguishers shall be 3A40BC.

319.1.9 Occupant restrictions.
No smoking is permitted in the temporary overflow emergency shelter.

319.1.10 Permits.
Temporary overflow emergency shelters must be approved by the local code official for Occupancy by issuance of an approved Occupancy Permit. Life Safety drawings of the temporary overflow emergency shelter sealed by a NC licensed architect or engineer must be provided for local code official review and approval.

Occupancy of a temporary overflow emergency shelter shall be for a maximum of 150 calendar days within any 365 day time span

319.1.11 Accessibility.
For temporary overflow emergency shelters compliance with Chapter 11 and Section 1007 is not required provided that the local jurisdiction has other shelter facilities that are accessible by the disabled.

SECTION 320

GROUP E IN CHURCHES, PRIVATE SCHOOLS AND PUBLIC SCHOOLS

320.1 Group E in churches, private schools and public schools. Rooms used for first grade children and younger shall be located on the *level of exit discharge*. Rooms used for second grade children shall not be located more than one *story* above the *level of exit discharge*.

CHAPTER 5 CHANGES

403.8.1.4 Drill frequency.
In addition to the evacuation drills required in Section 405.2, employees shall participate in drills an additional two times a year on each shift. Twelve drills with all occupants shall be conducted in the first year of operation. ~~Drills are not required to comply with the time requirements of Section 405.4.~~

~~**403.8.1.7 Emergency evacuation drill deferral.**~~
~~In severe climates, the *fire code official* shall have the authority to modify the emergency evacuation drill frequency specified in Section 405.2.~~

403.11.5 Other occupancy groups having a fire alarm system.
An approved fire safety and evacuation plan shall be prepared and maintained.

TABLE 405.2
FIRE AND EVACUATION DRILL
FREQUENCY AND PARTICIPATION [a]

GROUP OR OCCUPANCY	FREQUENCY	PARTICIPATION
Group A	Quarterly	Employees
Group B[b]	Annually	All occupants
Group B[e]	Quarterly	All occupants
Group B[b, c] (Ambulatory care facilities)	Annually	Employees
Group B[b] (Clinic, outpatient)	Annually	Employees
Group E	Monthly[a]	All occupants
Group F	Annually	Employees
Group I-1	Semiannually on each shift	All occupants
Group I-2	Quarterly on each shift[a]	Employees
Group I-3	Quarterly on each shift[a]	Employees
Group I-4	Monthly on each shift[a]	All occupants
Group R-1	Quarterly on each shift	Employees
Group R-2[d]	Four annually	All occupants
Group R-4	Semiannually on each shift[a]	All occupants

a. In severe climates, the *fire code official* shall have the authority to modify the emergency evacuation drill frequency.
b. Emergency evacuation drills are required in Group B buildings having an *occupant load* of 500 or more persons or more than 100 persons above or below the lowest *level of exit discharge*.
c. Emergency evacuation drills are required in ambulatory care facilities in accordance with Section 403.3.
d. Emergency evacuation drills in Group R-2 college and university buildings shall be in accordance with Section 403.10.2.1. Other Group R-2 occupancies shall be in accordance with Section 403.10.2.2.
e. Cooperative innovative high school programs taught at colleges, community colleges or universities when required to have a fire alarm system in accordance with Section 907.2.2 or as required in accordance with Section 403.4.

CHAPTER 5 CHANGES

503.1.1 Buildings and facilities.
Approved fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within 150 feet (45 720 mm) of all portions of the facility and all portions of the *exterior walls* of the first story of the building as measured by an *approved* route around the exterior of the building or facility.

Exceptions:

1. The *fire code official* is authorized to increase the dimension of 150 feet (45 720 mm) where any of the following conditions occur:

    1.1. When t~~T~~he building is equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1~~,~~or 903.3.1.2 ~~or 903.3.1.3.~~ the dimension shall increase to a minimum of 200ft (60 960mm).

    1.2. Fire apparatus access roads cannot be installed because of location on property, topography, waterways, nonnegotiable grades or other similar conditions, and an *approved* alternative means of fire protection is provided.

    1.3. There are not more than two Group R-3 or Group U occupancies.

2. ~~Where approved by the *fire code official*,~~ The *fire code official* is authorized to modify or exempt fire apparatus access roads ~~shall be permitted to be exempted or modified~~ for solar photovoltaic power generation facilities.

503.2.1 Dimensions.
Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), exclusive of shoulders, except for *approved* security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than 13 feet 6 inches (4115 mm).

Exception: Fire apparatus access roads constructed and maintained in accordance with NC DOT Minimum Construction Standards for Subdivision Roads, when approved by the fire code official.

505.1 Address identification.
New and existing buildings shall be provided with *approved* address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than ~~4~~ 6 inches (~~102~~ 153 mm) high with a minimum stroke width of ~~1/2~~ ¾ inch (~~12.7~~ 20 mm).

Where required by the *fire code official*, address identification shall be provided in additional *approved* locations to facilitate emergency response. Where access is by means of a private road and the building cannot be viewed from the *public way*, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained.

507.3 Fire flow.
Fire flow requirements for buildings or portions of buildings and facilities shall be determined by ~~an~~ the ISO Fire Suppression Rating Schedule, NFPA 1142 or other *approved* method.

~~**510.2 Emergency responder radio coverage in existing buildings.**~~
~~Existing buildings shall be provided with *approved* radio coverage for emergency responders as required in Chapter 11.~~

CHAPTER 6 CHANGES

603.4.2.3.4 Indoor storage prohibited.
Gas containers shall not be stored inside of buildings except in accordance with ~~Section 6109.9.~~ Chapter 61.

603.5.3 Special day care provisions. In adult and child day care facilities, masonry fireplaces, listed fuel-burning space heaters, fireplaces and floor furnaces that are provided with a protective screen attached securely with supports that will prevent accidental burning will be allowed. Unvented fuel-burning heaters and portable electric heaters of all types are prohibited.

604.6 Emergency lighting equipment.
Emergency lighting, including means of egress illumination and exit signs, not covered by NFPA 110 and NFPA 111 shall be inspected and tested in accordance with Sections 604.6.1 through 604.6.2.1.

604.6.1 Activation test.
An activation test of the emergency lighting equipment shall be completed monthly. The activation test shall ensure the emergency lighting activates automatically upon normal electrical disconnect and stays sufficiently illuminated for not less than 30 seconds.

Exception: Self-testing/self-diagnostic, battery-operated emergency lighting unit equipment that automatically performs a test for not less than 30 seconds and diagnostic routine not less than once every 30 days and indicates failures by a status indicator shall be exempt from the 30-day functional test, provided that a visual inspection is performed at 30-day intervals.

605.11 Solar photovoltaic power systems.
Solar photovoltaic power systems shall be installed in accordance with Sections 605.11.1 through 605.11.2, the *International Building Code* ~~or *International Residential Code*,~~ and NFPA 70.

605.11.2 Ground-mounted photovoltaic arrays.
Ground-mounted photovoltaic arrays shall comply with Section 605.11 and this section. Setback requirements shall not apply to ground-mounted, free-standing photovoltaic arrays. A clear~~, brush-free~~ area free of brush, leaves, trash, debris and similar combustible materials of 10 feet (3048 mm) shall be required for ground-mounted photovoltaic arrays.

~~**605.12 Abandoned wiring in plenums.**~~
~~Accessible portions of abandoned cables in air-handling plenums shall be removed. Cables that are unused and have not been tagged for future use shall be considered abandoned.~~

607.1 Emergency operation.
~~Existing elevators with a travel distance of 25 feet (7620 mm) or more shall comply with the requirements in Chapter 11.~~ New elevators shall be provided with Phase I emergency recall operation and Phase II emergency in-car operation in accordance with ASME A17.1./CSA B44-2013.

[M] 609.2 Where required.
A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease ~~vapors~~ or smoke.

Exception:
1. A Type I hood shall not be required for an electric cooking appliance where an approved testing agency provides documentation that the appliance effluent contains 5 mg/m^3 or less of grease when tested at an exhaust flow rate of 500 cfm (0.236 m^3/s) in accordance with UL 710B.

2. Domestic cooking appliances used for commercial purposes in accordance with Section 507.1.2 of the International Mechanical Code.

CHAPTER 7 CHANGES

[B] 703.5 Identification. Walls and partitions required to have protected openings (fire walls, fire barriers, fire partitions, smoke barriers, smoke partitions) shall be permanently identified with signs or stenciling. Such identification shall be:
1. Where there is an accessible concealed floor, floor-ceiling or attic space.
2. Maintained in accordance with the code applicable at the time of construction.
3. Suggested wording:
"2-HOUR FIRE BARRIER, PROTECT ALL OPENINGS."

704.1 Enclosure.
~~Interior vertical shafts including, but not limited to, *stairways*, elevator hoistways, service and utility shafts, that connect two or more stories of a building shall be enclosed or protected as required in Chapter 11. New floor openings in existing buildings shall comply with the *International Building Code*.~~ Deleted.

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805.2 Group I-2~~, nursing homes and hospitals.~~
The requirements in Sections 805.2.1 through 805.2.2 shall apply to ~~nursing homes and hospitals~~ facilities classified in Group I-2.

808.4 Combustible lockers or cubbies.
Where lockers or cubbies constructed of combustible materials are used, ~~the lockers~~ and shall be considered interior finish and shall comply with Section 803.

Exception: Lockers or cubbies constructed entirely of wood and noncombustible materials shall be permitted to be used wherever interior finish materials are required to meet a Class C classification in accordance with Section 803.1.1.

CHAPTER 9 CHANGES

901.4.1 Required fire protection systems.
Fire protection systems required by this code or the *International Building Code* shall be installed, repaired, operated, tested and maintained in accordance with this code. A *fire protection system* for which a design option, exception or reduction to the provisions of this code or the *International Building Code* or the *International Existing Building Code* has been granted shall be considered to be a required system.

901.4.2 Nonrequired fire protection systems.
A *fire protection system* or portion thereof not required by this code or the *International Building Code* or the *International Existing Building* Code shall be allowed to be furnished for partial or complete protection provided such installed system meets the applicable requirements of this code and the *International Building Code*.

901.4.3 Fire areas.
Where buildings, or portions thereof, are divided into *fire areas* so as not to exceed the limits established for requiring a *fire protection system* in accordance with this chapter, such *fire areas* shall be separated by *fire barriers* constructed in accordance with Section 707 of the *International Building Code* or *horizontal assemblies* constructed in accordance with Section 711 of the *International Building Code*, or both, having a fire-resistance rating of not less than that determined in accordance with Section ~~707.3.10~~ 508.4 of the *International Building Code*.

901.4.7 Hose Threads.
Threads provided for the fire department connections to sprinkler systems, standpipes, yard hydrants or any other fire hose connection shall be compatible with the connections used by the local fire department.

901.6 Inspection, testing and maintenance.
Fire detection, alarm, and extinguishing systems, mechanical smoke exhaust systems, and smoke and heat vents shall be maintained in an operative condition at all times, and shall be replaced or repaired where defective. Nonrequired *fire protection systems* and equipment shall be inspected, tested and maintained or the exposed components of such systems shall be removed.

902.1 Definitions.
The following terms are defined in Chapter 2:

ALARM NOTIFICATION APPLIANCE.

ALARM SIGNAL.

ALARM VERIFICATION FEATURE.

ANNUNCIATOR.

AUDIBLE ALARM NOTIFICATION APPLIANCE.

AUTOMATIC.

AUTOMATIC FIRE-EXTINGUISHING SYSTEM.

AUTOMATIC SMOKE DETECTION SYSTEM.

AUTOMATIC SPRINKLER SYSTEM.

AUTOMATIC WATER MIST SYSTEM.

AVERAGE AMBIENT SOUND LEVEL.

CARBON DIOXIDE EXTINGUISHING SYSTEM.

CLEAN AGENT.

COMMERCIAL MOTOR VEHICLE.

CONSTANTLY ATTENDED LOCATION.

DELUGE SYSTEM.

DETECTOR, HEAT.

DRY-CHEMICAL EXTINGUISHING AGENT.

ELEVATOR GROUP.

ELECTRICAL CIRCUIT PROTECTIVE SYSTEM

EMERGENCY ALARM SYSTEM.

EMERGENCY VOICE/ALARM COMMUNICATIONS.

FIRE ALARM BOX, MANUAL.

FIRE ALARM CONTROL UNIT.

FIRE ALARM SIGNAL.

FIRE ALARM SYSTEM.

FIRE AREA.

FIRE DETECTOR, AUTOMATIC.

FIRE PROTECTION SYSTEM.

FIRE SAFETY FUNCTIONS.

FIXED BASE OPERATOR (FBO).

FOAM-EXTINGUISHING SYSTEM.

HALOGENATED EXTINGUISHING SYSTEM.

IMPAIRMENT COORDINATOR.

INITIATING DEVICE.

MANUAL FIRE ALARM BOX.

MULTIPLE-STATION ALARM DEVICE.

MULTIPLE-STATION SMOKE ALARM.

NIGHTCLUB.

NOTIFICATION ZONE.

NUISANCE ALARM.

PRIVATE GARAGE.

RECORD DRAWINGS.

SINGLE-STATION SMOKE ALARM.

SLEEPING UNIT.

SMOKE ALARM.

SMOKE DETECTOR.

STANDPIPE SYSTEM, CLASSES OF.

- **Class I system.**
- **Class II system.**
- **Class III system.**

STANDPIPE, TYPES OF.

- **Automatic dry.**

Automatic wet.

Manual dry.

Manual wet.

Semiautomatic dry.

SUPERVISING STATION.

SUPERVISORY SERVICE.

SUPERVISORY SIGNAL.

SUPERVISORY SIGNAL-INITIATING DEVICE.

TIRES, BULK STORAGE OF.

TRANSIENT AIRCRAFT.

TROUBLE SIGNAL.

VISIBLE ALARM NOTIFICATION APPLIANCE.

WET-CHEMICAL EXTINGUISHING AGENT.

WIRELESS PROTECTION SYSTEM.

ZONE.

ZONE, NOTIFICATION.

903.2.1 Group A.
An *automatic sprinkler system* shall be provided throughout buildings and portions thereof used as Group A occupancies as provided in this section. For Group A-1, A-2, A-3 and A-4 occupancies, the *automatic sprinkler system* shall be provided throughout ~~the story~~ ~~where~~ the *fire area* containing the Group A-1, A-2, A-3 or A-4 occupancy ~~is located~~ and any fire area traversed to the entrance of an exit, and throughout all stories from the Group A occupancy to, and including, the *levels of exit discharge* serving the Group A occupancy. For Group A-5 occupancies, the *automatic sprinkler system* shall be provided in the spaces indicated in Section 903.2.1.5.

903.2.1.2 Group A-2.
An *automatic sprinkler system* shall be provided for *fire areas* containing Group A-2 occupancies and intervening floors of the building where one of the following conditions exists:

1. The *fire area* exceeds 5,000 square feet (464 m^2).

2. The *fire area* has an *occupant load* of ~~100~~ 300 or more, except 100 or more for nightclubs.

3. The *fire area* is located on a floor other than a *level of exit discharge* serving such occupancies.

903.2.1.3 Group A-3.
An *automatic sprinkler system* shall be provided for *fire areas* containing Group A-3 occupancies and intervening floors of the building where one of the following conditions exists:

1. The *fire area* exceeds 12,000 square feet (1115 m^2).

2. The *fire area* has an *occupant load* of 300 or more.

Exceptions:

1. This requirement shall not apply to assembly occupancies used primarily for worship, with fixed seating and part of a separated use.

2. This requirement shall not apply to assembly occupancies used primarily for worship consisting of a single multipurpose room that are not used for exhibition or display and are part of a separated use.

3. The *fire area* is located on a floor other than a *level of exit discharge* serving such occupancies.

903.2.1.6 Assembly occupancies on roofs.
Where an occupied roof has an assembly occupancy with an *occupant load* exceeding 100 for Group A-2 nightclubs and 300 for other Group A occupancies, all floors between the occupied roof and the *level of exit discharge* shall be equipped with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2.

Exception: Open parking garages of Type I or Type II construction.

903.2.2 Ambulatory care facilities.
An *automatic sprinkler system* shall be installed throughout a fire area ~~entire floor~~ containing an ambulatory care facility where either of the following conditions exist at any time:

1. Four or more care recipients are incapable of self-preservation, whether rendered incapable by staff or staff has accepted responsibility for care recipients already incapable.

2. One or more care recipients that are incapable of self-preservation are located at other than the level of exit discharge serving such a facility.

In buildings where ambulatory care is provided on levels other than the *level of exit discharge*, an *automatic sprinkler system* shall be installed throughout the ~~entire floor~~ fire area containing an ambulatory care facility where such care is provided and any fire area traversed to the entrance of an exit as well as all floors below, and all floors between the

level of ambulatory care and the nearest *level of exit discharge*, including the *level of exit discharge*.

903.2.4 Group F-1.
An *automatic sprinkler system* shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

1. A Group F-1 *fire area* exceeds 12,000 square feet (1115 m^2).
2. A Group F-1 *fire area* is located more than three stories above grade plane.
3. The combined area of all Group F-1 *fire areas* on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2).

~~4. A Group F-1 occupancy used for the manufacture of upholstered furniture or mattresses exceeds 2,500 square feet (232 m^2).~~

~~**903.2.4.1 Woodworking operations.**~~
~~An *automatic sprinkler system* shall be provided throughout all Group F-1 occupancy *fire areas* that contain woodworking operations in excess of 2,500 square feet in area (232 m^2) that generate finely divided combustible waste or use finely divided combustible materials.~~

903.2.6.1 Dry pipe system. When dry-pipe sprinkler systems are installed, upon activation a full flow of water shall be delivered to the most remote point of the system in no more than 60 seconds.

903.2.7 Group M.
An *automatic sprinkler system* shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

1. A Group M *fire area* exceeds 12,000 square feet (1115 m^2).
2. A Group M *fire area* is located more than three stories above grade plane.
3. The combined area of all Group M *fire areas* on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2).

~~4. A Group M occupancy used for the display and sale of upholstered furniture or mattresses exceeds 5,000 square feet (464 m^2).~~

903.2.8 Group R.
An *automatic sprinkler system* installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R *fire area*.

Exceptions:
1. An *automatic sprinkler system* is not required in new adult and child day care

facilities located in existing Group R-3 and R-4 occupancies.

2. An *automatic sprinkler system* is not required in *temporary overflow shelters*.

3. An *automatic sprinkler system* is not required in camping units located within a campground where all of the following conditions exist.

3.1. The camping unit is limited to one story in height,

3.2. The camping unit is less than 400 square feet (37 m^2) in area.
3.3. The camping unit does not have a kitchen

4. An automatic sprinkler system is not required in an *Open Air Camp Cabin* that complies with the following:

4.1. The open air camp cabin shall have at least two remote unimpeded exits. Lighted exit signs shall not be required.

4.2 The open air camp cabin shall not be required to have plumbing or electrical systems, but if the cabin has these systems, then the provisions of the Code otherwise applicable to those systems shall apply.

4.3 Smoke detectors and portable fire extinguishers shall be installed as required by other sections of this Code.

903.2.8.1 Group R-3.
An *automatic sprinkler system* installed in accordance with Section 903.3.1.3 shall be permitted in Group R-3 occupancies.

Exception: An automatic sprinkler system installed in accordance with Section 903.3.1.1 shall be installed in all Licensed Respite Care Facilities.

[F] 903.2.8.2 Group R-4 Condition 1.
An *automatic sprinkler system* installed in accordance with Section 903.3.1.3 shall be permitted in Group R-4 Condition 1 occupancies.

Exception: An automatic sprinkler system installed in accordance with Section 903.3.1.1 shall be installed in all Licensed Respite Care Facilities.

[F] 903.2.8.3 Group R-4 Condition 2.
An *automatic sprinkler system* installed in accordance with Section 903.3.1.2 shall be permitted in Group R-4 Condition 2 occupancies. Attics shall be protected in accordance with Section 903.2.8.3.1 or 903.2.8.3.2.

Exception: An automatic sprinkler system installed in accordance with Section 903.3.1.1 shall be installed in all Licensed Respite Care Facilities.

[F] 903.2.8.4 Care facilities.
~~An *automatic sprinkler system* installed in accordance with Section 903.3.1.3 shall be permitted in care facilities with five or fewer individuals in single-family dwelling.~~ Deleted.

[F]903.2.8.5 Group R Migrant Housing. Group R-2 buildings housing farm workers and their families located outside of a municipality's building rules jurisdiction ~~that are not exempted by Section 903.2.8.5~~ may install a 13D multipurpose sprinkler system where all of the following conditions exist:

1. Building cannot exceed two stories in height;

2. Building cannot exceed 2500 square feet (232 m^2) in area; and

3. Building shall have two remote means of egress.

903.2.8.5.1 Group R Migrant Housing. Migrant housing as defined by GS 95-223 shall be exempt ~~from the requirements of Section 903.2.8~~ when all of the following conditions exist:

1. Building is not more than one story in height.

2. Building meets all of the requirements of GS 95-222 through GS 95-229.1 (Chapter 95, Article 19) and 29 CFR 1910.142, as amended.

903.2.8.6 Emergency Service Sleeping Area. Group R-2 *fire areas* in fire stations may install a 13D sprinkler system in accordance with Section 903.3.5.1 when separated from other occupancies by a *fire wall* where all of the following conditions exist.

1. Building cannot exceed one story in height,

2. Fire area cannot exceed 2500 square feet (232 m^2) in area.

3. Fire area has two remote means of egress.

Research statute

903.2.9 Group S-1.
An *automatic sprinkler system* shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

1. A Group S-1 *fire area* exceeds 12,000 square feet (1115 m^2).

2. A Group S-1 *fire area* is located more than three stories above grade plane.

3. The combined area of all Group S-1 *fire areas* on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m^2).

4. A Group S-1 *fire area* used for the storage of commercial motor vehicles where the *fire area* exceeds 5,000 square feet (464 m^2).

~~5. A Group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2,500 square feet (232 m^2).~~

903.2.11.7 Woodworking operations.
An *automatic sprinkler system* shall be provided throughout *fire areas* that contain woodworking operations in excess of 2,500 square feet in area (232 m^2) that generate finely divided combustible waste or use finely divided combustible materials.

903.2.11.8 Manufacture of upholstered furniture or mattresses.
An *automatic sprinkler system* shall be provided throughout *fire areas* that contain manufacturing operations for upholstered furniture of mattresses in excess of 2,500 square feet in area (232 m^2).

903.3.1.2 NFPA 13R sprinkler systems.
Automatic sprinkler systems in Group R occupancies up to and including four stories in height in buildings not exceeding 60 feet (18 288 mm) in height above grade plane shall be permitted to be installed throughout in accordance with NFPA 13R.

> **Exception**: Respite Care Facilities shall be provided with a NFPA 13 sprinkler system complying with Section 903.3.1.1.

903.3.1.3 NFPA 13D sprinkler systems.
Automatic sprinkler systems installed in one- and two-family *dwellings*; Group R-3; Group R-4 Condition 1 and *townhouses* shall be permitted to be installed throughout in accordance with NFPA 13D or Section P2904 of the *International Residential Code*.

> **Exception**: Respite Care Facilities shall be provided with a NFPA 13 sprinkler system complying with Section 903.3.1.1.

903.4.1 Monitoring.
Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an *approved* supervising station or, where *approved* by the *fire code official*, shall sound an audible signal at a constantly attended location.

Exceptions:

1. Underground key or hub valves in roadway boxes provided by the municipality or public utility are not required to be monitored.

2. Backflow prevention device test valves located in limited area sprinkler system supply piping shall be locked in the open position. In occupancies required to be equipped with a fire alarm system, the backflow preventer valves shall be electrically supervised by a tamper switch installed in accordance with NFPA 72 and separately annunciated.

3. A group R-2 building sprinklered in accordance with NFPA 13R where sprinklers are provided for porches, balconies, corridors and stairs that are open and attached and ~~installed~~ supervised in accordance with Section 903.4. At a minimum an approved audible alarm device shall be provided on every sprinklered R-2 building in accordance with Section 903.4.2 of the North Carolina Fire Code. No on-site supervision is required at a constantly attended location.

904.1.1 Certification of service personnel for fire-extinguishing equipment.
~~Service personnel providing or conducting maintenance on automatic fire-extinguishing systems, other than *automatic sprinkler systems*, shall possess a valid certificate issued by an *approved* governmental agency, or other *approved* organization for the type of system and work performed.~~
Deleted.

905.11 Existing buildings.
~~Where required in Chapter 11, existing structures shall be equipped with standpipes installed in accordance with Section 905.~~ Deleted.

906.2 General requirements.
Portable fire extinguishers shall be selected, installed and maintained in accordance with this section and NFPA 10.

Exceptions:

1. The distance of travel to reach an extinguisher shall not apply to the spectator seating portions of Group A-5 occupancies.

2. Thirty-day inspections shall not be required ~~and maintenance shall be allowed to be once every 3 years~~ for dry-chemical or halogenated agent portable fire extinguishers that are supervised by a *listed* and *approved* electronic monitoring device, provided that all of the following conditions are met:

   2.1. Electronic monitoring shall confirm that extinguishers are ~~properly~~ positioned, ~~properly~~ charged and unobstructed.

   2.2. Loss of power or circuit continuity to the electronic monitoring device shall initiate a trouble signal.

   2.3. The extinguishers shall be installed inside of a building or cabinet in a noncorrosive environment.

   2.4. Electronic monitoring devices and supervisory circuits shall be tested every 3 years when extinguisher maintenance is performed.

   2.5. A written log of required hydrostatic test dates for extinguishers shall be maintained by the *owner* to verify that hydrostatic tests are conducted at the frequency required by NFPA 10.

3. In Group I-3, portable fire extinguishers shall be permitted to be located at staff locations.

907.2 Where required—new buildings and structures.
An *approved* fire alarm system installed in accordance with the provisions of this code and NFPA 72 shall be provided in new buildings and structures in accordance with Sections 907.2.1 through 907.2.23 and provide occupant notification in accordance with Section 907.5, unless other requirements are provided by another section of this code.

Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed when a manual fire alarm system is required. ~~Not fewer than~~ A minimum of one manual fire alarm box shall be provided in an *approved* location to initiate a fire alarm signal for fire alarm systems employing automatic fire detectors or waterflow detection devices. ~~Where other sections of this code allow elimination of fire alarm boxes due to sprinklers, a single fire alarm box shall be installed.~~

Exceptions:

1. The manual fire alarm box is not required for fire alarm systems dedicated to elevator recall control and supervisory service.

2. The manual fire alarm box is not required for Group R-2 occupancies unless required by the *fire code official* to provide a means for fire watch personnel to initiate an alarm during a sprinkler system impairment event. Where provided, the manual fire alarm box shall not be located in an area that is accessible to the public.

907.2.1 Group A.
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. Group A occupancies not separated from one another in accordance with Sections 707.3.10 and 711.2.4 of the *International Building Code* 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.

Exception: Manual fire alarm boxes are not required where the building is equipped throughout with an automatic sprinkler system installed in accordance with Section 903.3.1.1 and the occupant notification appliances will activate throughout the notification zones upon sprinkler water flow.

907.2.3 Group E.
A manual fire alarm system that initiates the occupant notification signal utilizing an emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall be installed in Group E occupancies. When *automatic sprinkler systems* or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system.

Exceptions:

1. In other than licensed ~~child~~ day care centers complying with Section 428 of the *International Building Code* a ~~A~~ manual fire alarm system is not required in Group E occupancies with an *occupant load* of 50 or less.a

2. Emergency voice/alarm communication systems meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall not be required in Group E occupancies with occupant loads of 100 or less, provided that activation of the manual fire alarm system initiates an *approved* occupant notification signal in accordance with Section 907.5.

3. Manual fire alarm boxes are not required in Group E occupancies where all of the following apply:

    3.1. Interior *corridors* are protected by smoke detectors.

    3.2. Auditoriums, cafeterias, gymnasiums and similar areas are protected by *heat detectors* or other *approved* detection devices.

    3.3. Shops and laboratories involving dusts or vapors are protected by *heat detectors* or other *approved* detection devices.

4. Manual fire alarm boxes shall not be required in Group E occupancies where all of the following apply:

    4.1. The building is equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1.

    4.2. The emergency voice/alarm communication system will activate on sprinkler water flow.

    4.3. Manual activation is provided from a normally occupied location.

907.2.6.2 Group I-2.
An automatic smoke detection system shall be installed in *corridors* in Group I-2 ~~Condition 1~~ facilities and spaces permitted to be open to the *corridors* by Section 407.2 of the *International Building Code*. The system shall be activated in accordance with Section 907.4. Group I-2 ~~Condition 2~~ occupancies shall be equipped with an automatic smoke detection system as required in Section 407 of the *International Building Code*.

Exceptions:

1. *Corridor* smoke detection is not required in smoke compartments that contain *sleeping units* where such units are provided with smoke detectors that comply with UL 268. Such detectors shall provide a visual display on the *corridor* side of each *sleeping unit* and shall provide an audible and visual alarm at the care providers' station attending each unit.

2. *Corridor* smoke detection is not required in smoke compartments that contain *sleeping units* where *sleeping unit* doors are equipped with automatic door-closing devices with integral smoke detectors on the unit sides installed in accordance with their listing, provided that the integral detectors perform the required alerting function.

907.2.9.3 Group R-2 college and university buildings.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group R-2 occupancies operated by a college or university for student or staff housing in all of the following locations:

1. Common spaces outside of *dwelling units* and *sleeping units.*

2. ~~Laundry rooms, mechanical equipment rooms and~~ ~~s~~Storage rooms.

3. All interior corridors serving *sleeping units* or *dwelling units*.

   Exception: An automatic smoke detection system is not required in buildings that do not have interior *corridors* serving *sleeping units* or *dwelling units* and where each s*leeping unit* or *dwelling unit* either has a *means of egress* door opening directly to an exterior *exit access* that leads directly to an *exit* or a *means of egress* door opening directly to an *exit*.

Required smoke alarms in *dwelling units* and *sleeping units* in Group R-2 occupancies operated by a college or university for student or staff housing shall be interconnected with the fire alarm system in accordance with NFPA 72.

907.2.10.1.1 Adult and child day care in Group R-4. A manual fire alarm system listed for residential use shall be installed in new adult or child day care facilities in existing R-4 occupancies.

907.2.14 Atriums connecting more than two stories.
A fire alarm system shall be installed in occupancies with an atrium that connects more than two stories, with smoke detection in locations required by ~~a rational analysis in~~ Section 909.4 and in accordance with the system operation requirements in Section 909.17. The system shall be activated in accordance with Section 907.5. Such occupancies in Group A, E or M shall be provided with an emergency voice/alarm communication system complying with the requirements of Section 907.5.2.2.

907.5.2 Alarm notification appliances.
Alarm notification appliances shall be provided and shall be *listed* for their purpose.

907.5.2.1 Audible alarms.
Audible alarm notification appliances shall be provided and emit a distinctive sound that is not to be used for any purpose other than that of a fire alarm.

Exceptions:

1. Audible alarm notification appliances are not required in critical care areas of Group I-2 Condition 2 occupancies that are in compliance with Section 907.2.6, Exception 2.

2. A visible alarm notification appliance installed in a nurses' control station or other continuously attended staff location in a Group I-2 Condition 2 suite shall be an acceptable alternative to the installation of audible alarm notification appliances throughout the suite in Group I-2 Condition 2 occupancies that are in compliance with Section 907.2.6, Exception 2.

3. Where provided, audible notification appliances located in each occupant evacuation elevator lobby in accordance with Section 3008.9.1 of the *International Building Code* shall be connected to a separate notification zone

for manual paging only.

4. In Group I-2 occupancies, Group B ambulatory health care facilities and licensed large residential care facilities as per Section 428.5 of the Building Code where occupants are incapable of evacuating themselves because of age, physical or mental disabilities, or physical restraint, audible notification appliances shall be permitted to meet the private mode requirements of NFPA 72 in patient care and treatment areas.

909.4 Analysis.
A rational analysis performed by the registered design professional and *approved* by the *fire code official* supporting the types of smoke control systems to be employed, the methods of their operations, the systems supporting them and the methods of construction to be utilized shall accompany the *construction documents* submission and include, but not be limited to, the items indicated in Sections 909.4.1 through 909.4.7.

909.20.7 Manual smoke removal. Where manually operated panels or windows are required by Section 403.4.6 of the Building Code, they shall be maintained in an operable condition and identified in an *approved* manner.

911.5 Liquefied petroleum gas distribution facilities. Liquefied petroleum gas distribution facilities shall comply with Chapter 119, Article 5 of the General Statutes of North Carolina, and the *North Carolina Administrative Code*, Title 2, Chapter 38, Section 0.700, as enforced by the North Carolina Department of Agriculture and Consumer Services through the provisions of NFPA 58.

SECTION 915
CARBON MONOXIDE ALARM AND DETECTION SYSTEMS

915.1 General.
Carbon monoxide detection shall be installed in new buildings in accordance with Sections 915.1.1 through 915.6. ~~Carbon monoxide detection shall be installed in existing buildings in accordance with Section 1103.9.~~

915.1.1 Where required.
Carbon monoxide detection shall be provided in Group I-1, I-2, I-4 and R occupancies and in classrooms in Group E occupancies in the locations specified in Section 915.2 where any of the conditions in Sections 915.1.2 through 915.1.6 exist.

CHAPTER 10 CHANGES

1001.2 Minimum requirements.
It shall be unlawful to alter a building or structure in a manner that will reduce the number of *exits* or the minimum width or required ~~or the~~ capacity of the *means of egress* to less than required by this code.

[BE] 1002.1 Definitions.
The following terms are defined in Chapter 2:

ACCESSIBLE MEANS OF EGRESS.

AISLE.

AISLE ACCESSWAY.

ALTERNATING TREAD DEVICE.

AREA OF REFUGE.

BLEACHERS.

BREAKOUT.

CIRCULATION PATHS

COMMON PATH OF EGRESS TRAVEL.

CORRIDOR.

DOOR, BALANCED.

EGRESS COURT.

EMERGENCY ESCAPE AND RESCUE OPENING.

EXIT.

EXIT ACCESS.

EXIT ACCESS DOORWAY.

EXIT ACCESS RAMP.

EXIT ACCESS STAIRWAY.

EXIT DISCHARGE.

EXIT DISCHARGE, LEVEL OF.

EXIT, HORIZONTAL.

EXIT PASSAGEWAY.

EXTERIOR EXIT RAMP.

EXTERIOR EXIT STAIRWAY.

FIRE EXIT HARDWARE.

FIXED SEATING.

FLIGHT.

FLOOR AREA, GROSS.

FLOOR AREA, NET.

FOLDING AND TELESCOPIC SEATING.

GRANDSTAND.

GUARD.

HANDRAIL.

INTERIOR EXIT RAMP.

INTERIOR EXIT STAIRWAY.

LOW ENERGY POWER-OPERATED DOOR.

MEANS OF EGRESS.

MERCHANDISE PAD.

NOSING.

OCCUPANT LOAD.

OPEN-ENDED CORRIDOR.

PANIC HARDWARE.

PHOTOLUMINESCENT.

POWER-ASSISTED DOOR.

POWER-OPERATED DOOR.

PUBLIC WAY.

RAMP.

SCISSOR STAIRWAY.

SELF-LUMINOUS.

SMOKE-PROTECTED ASSEMBLY SEATING.

STAIR.

STAIRWAY.

STAIRWAY, INTERIOR.

STAIRWAY, SPIRAL.

WINDER.

TABLE 1004.1.2
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT[c]

FUNCTION OF SPACE	OCCUPANT LOAD FACTOR[a]
Accessory storage areas, mechanical equipment room	300 gross
Agricultural building	300 gross
Aircraft hangars	500 gross
Airport terminal Baggage claim Baggage handling Concourse Waiting areas	 20 gross 300 gross 100 gross 15 gross
Assembly Gaming floors (keno, slots, etc.) Exhibit gallery and museum	 11 gross 30 net
Assembly with fixed seats	See Section 1004.4
Assembly without fixed seats Concentrated (chairs only—not fixed) Standing space and queuing lines Unconcentrated (tables and chairs)	 7 net 5 net 15 net[b]
Bowling centers, allow 5 persons for each lane including 15 feet of runway, and for additional areas	7 net
Business areas	100 gross[b]
Courtrooms—other than fixed seating areas	40 net
Day care	35 net
Dormitories	50 gross
Educational Classroom area Shops and other vocational room areas	 20 net 50 net

Exercise rooms Without exercise equipment With exercise equipment	~~50 gross~~ 35 net 50 gross
Group H-5 Fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas Inpatient treatment areas Outpatient areas Sleeping areas Kitchens, commercial	 240 gross 100 gross 120 gross 200 gross
Library Reading rooms Stack area	 50 net 100 gross
Locker rooms	50 gross
Mall buildings—covered and open	See Section 402.8.2 of the *International Building Code*

Mercantile Storage, stock, shipping areas	60 gross 300 gross
Parking garages	200 gross
Residential	200 gross
Skating rinks, swimming pools, recreational courts Rink ,~~and~~ pool, and recreational court Decks	50 gross 15 gross
Stages and platforms	15 net
Warehouses, repair garages	500 gross
Piers and docks	See Section 3606.8 of the *International Building Code*

For SI: 1 square foot = 0.0929 m^2, 1 foot = 304.8 mm.

a. Floor area in square feet per occupant.

b. An assembly occupancy conference room that is accessory to a Group B office occupancy and meeting the requirements of Section 303.1 of the *International Building Code*, exception 2, shall be calculated at 100 square feet per occupant for determining the overall occupant load of the associated floor. The assembly occupancy shall be calculated at 15 square feet per occupant for the purpose of determining egress from the room containing the assembly occupancy.

c. For mixed uses sum all loads before rounding up to the next whole number.

[BE] 1004.3 Posting of occupant load.

~~Every room or space that is an assembly occupancy shall have the *occupant load* of the room or space posted in a conspicuous place, near the main *exit* or *exit access doorway* from the room or space. Posted signs shall be of an approved legible permanent design and shall be maintained by the owner or the owner's authorized agent.~~

Posting of occupant loading shall be in accordance with Section 204.11.2 of the NC Administrative Code and Policies.

[BE]1005.7.1 Doors.
Doors, when fully opened, shall not reduce the required width by more than 7 inches (178 mm). Doors in any position shall not reduce the required width by more than one-half.

Exceptions:

1. Surface-mounted latch release hardware shall be exempt from inclusion in the 7-inch maximum (178 mm) encroachment where both of the following conditions exist:

   1.1. The hardware is mounted to the side of the door facing away from the adjacent wall where the door is in the open position.

   1.2. The hardware is mounted not less than 34 inches (865 mm) nor more than 48 inches (1219 mm) above the finished floor.

2. The restrictions on door swing shall not apply to ~~doors within individual *dwelling units* and *sleeping units* of Group R-2 occupancies and *dwelling units* of Group R-3 occupancies.~~ the following locations:

   2.1. Within individual dwelling units and sleeping units of Group R-2 occupancies;

   2.2. ~~and~~ Dwelling units of Group R-3 occupancies;

   2.3. Janitor closets 15 square feet or less; and

   2.4. Mechanical rooms that do not include storage.

[BE] TABLE 1006.2.1
SPACES WITH ONE EXIT OR EXIT ACCESS DOORWAY

OCCUPANCY	MAXIMUM OCCUPANT LOAD OF SPACE	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)		
		Without Sprinkler System (feet)		With Sprinkler System (feet)
		Occupant Load		
		OL ≤ 30	OL > 30	
A[c], E[a], M	49	75	75	75[a]
B	49	100	75	100[a]
F	49	75	75	100[a]
H-1, H-2, H-3	3	NP	NP	25[b]

H-4, H-5	10	NP	NP	75[b]
I-1, I-2[d], I-4	10	NP	NP	75[a]
I-3	10	NP	NP	100[a]
R-1	10	NP	NP	75[a]
R-2	10	NP	NP	125[a]
R-3[e]	10	NP	NP	125[a]
R-4[e]	10	75	75	125[a]
S[f]	29	100	75	100[a]
U	49	100	75	75[a]

For SI: 1 foot = 304.8 mm.
NP = Not Permitted

a. Buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2. See Section 903 for occupancies where *automatic sprinkler systems* are permitted in accordance with Section 903.3.1.2.
b. Group H occupancies equipped throughout with an *automatic sprinkler system* in accordance with Section 903.2.5.
c. For a room or space used for assembly purposes having *fixed seating*, see Section 1029.8.
d. For the travel distance limitations in Group I-2, see Section 407.4.
e. The length of *common path of egress travel* distance in a Group R-3 occupancy located in a mixed occupancy building or within a Group R-3 or R-4 *congregate living facility*.
f. The length of *common path of egress travel* distance in a Group S-2 *open parking garage* shall be not more than 100 feet.
g. Day care maximum occupant load is 10.

[BE]1006.3.2(2)
STORIES WITH ONE EXIT OR ACCESS TO ONE EXIT FOR OTHER OCCUPANCIES

STORY	OCCUPANCY	MAXIMUM OCCUPANT LOAD PER STORY	MAXIMUM COMMON PATH OF EGRESS TRAVEL DISTANCE (feet)
First story above or below grade plane	A, B[b], E F[b], M, U	49	75
	H-2, H-3	3	25
	H-4, H-5, I, R-1, R-2[a, c], R-4[e]	10	75
	S[b, d]	29	75
Second story above grade plane	B, F, M, S[d]	29	75
Third story above grade plane and higher	NP	NA	NA

For SI: 1 foot = 304.8 mm.
NP = Not Permitted.
NA = Not Applicable.

a. Buildings classified as Group R-2 equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 and provided with *emergency escape and rescue openings* in accordance with Section 1030.
b. Group B, F and S occupancies in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 shall have a maximum *exit access* travel distance of 100 feet.
c. This table is used for R-2 occupancies consisting of *sleeping units*. For R-2 occupancies consisting of *dwelling units*, use Table 1006.3.2(1).
d. The length of *exit access* travel distance in a Group S-2 *open parking garage* shall be not more than 100 feet
e. R-4 adult and child day care facilities shall have two exits or the rooms where the occupants receive care shall be located on the level of exit discharge and each of these rooms shall have an exit door directly to the exterior.

[BE] 1009.4 Elevators.

In order to be considered part of an *accessible means of egress*, an elevator shall comply with the emergency operation and signaling device requirements of Section 2.27 of ASME A17.1. /CSA B44. Standby power shall be provided in accordance with Section 604 of this code and Section 3003 of the *International Building Code*. Wiring and cables shall be protected in accordance with Section 3008.8.1 of the *International Building Code*. The elevator shall be accessed from an *area of refuge* complying with Section 1009.6.

Exceptions:

1. *Areas of refuge* are not required at the elevator in open parking garages.

2. *Areas of refuge* are not required in buildings and facilities equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.

3. *Areas of refuge* are not required at elevators not required to be located in a shaft in accordance with Section 712 of the *International Building Code*.

4. *Areas of refuge* are not required at elevators serving *smoke protected assembly seating* areas complying with Section 1029.6.2.

5. *Areas of refuge* are not required for elevators accessed from a refuge area in conjunction with a *horizontal exit*.

[BE] 1009.7.2 Separation.

Exterior walls separating the exterior area of assisted rescue from the interior of the building shall have a minimum fire-resistance rating of 1 hour, rated for exposure to fire from the inside. The fire-resistance-rated *exterior wall* construction shall extend horizontally 10 feet (3048 mm) beyond the landing on either side of the landing or equivalent fire-resistance-rated construction is permitted to extend out perpendicular to the *exterior wall* 4 feet (1220 mm) minimum on the side of the landing. The fire-resistance-rated construction shall extend vertically from the ground to a point 10 feet (3048 mm) above the floor level of the area for assisted rescue or to the roof line, whichever is lower. Openings within such fire-resistance-rated *exterior walls* shall be protected in accordance with Section 716 of the *International Building Code*.

Exception: Areas for assisted rescue that are located 10 feet (3048 mm) or more from the exterior face of a building are not required to be separated from the building by fire-resistance rated walls or protected openings.

[BE] 1010.1.9.3 Locks and latches.
Locks and latches shall be permitted to prevent operation of doors where any of the following exist:

1. Places of detention or restraint.

2. In buildings in occupancy Group A having an *occupant load* of ~~300~~100 or less~~,~~and Groups B, F, M and S~~, and in places of religious worship,~~ the main door or doors are permitted to be equipped with a thumb bolt or key-operated locking devices from the egress side provided:

   2.1. The locking device is readily distinguishable as locked and provided with a thumb bolt or key that cannot be removed when locked from the egress side;

   2.2. A readily visible durable sign is posted on the egress side on or adjacent to the door stating: THIS DOOR TO REMAIN UNLOCKED WHEN THIS SPACE IS OCCUPIED. The sign shall be in letters 1 inch (25 mm) high on a contrasting background.

   2.3. The use of the thumb bolt or key-operated locking device is revokable by the *fire code official* for ~~due cause~~ violations of this Section 1008.1.9.3.

3. Where egress doors are used in pairs, *approved* automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts does not have a doorknob or surface-mounted hardware.

4. Doors from individual *dwelling* or *sleeping units* of Group R occupancies having an *occupant load* of 10 or less are permitted to be equipped with a night latch, dead bolt or security chain, provided such devices are openable from the inside without the use of a key or tool.

5. Fire doors after the minimum elevated temperature has disabled the unlatching mechanism in accordance with *listed* fire door test procedures.

1010.1.9.6 Controlled egress doors in Groups I-1 and I-2.

[BE] 1010.1.9.6.1 Group~~s~~ I-1.
Electric locking systems, including electro-mechanical locking systems and electromagnetic locking systems, shall be permitted to be locked in the means of egress in Group I-1 ~~or I-2~~ occupancies where the clinical needs of persons receiving care require their containment. Controlled egress doors shall be permitted in such occupancies where the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or an *approved automatic smoke* or

heat detection system installed in accordance with Section 907, provided that the doors are installed and operate in accordance with all of the following:

1. The door locks shall unlock on actuation of the *automatic sprinkler system* or *automatic fire detection system*.

2. The door locks shall unlock on loss of power controlling the lock or lock mechanism.

3. The door locking system shall be installed to have the capability of being unlocked by a switch located at the *fire command center*, a nursing station or other approved location. The switch shall directly break power to the lock.

4. A building occupant shall not be required to pass through more than one door equipped with a controlled egress locking system before entering an exit.

5. The procedures for unlocking the doors shall be described and approved as part of the emergency planning and preparedness required by Chapter 4 of the *International Fire Code*.

6. All clinical staff shall have the keys, codes or other means necessary to operate the locking systems.

7. Emergency lighting shall be provided at the door.

8. The door locking system units shall be listed in accordance with UL 294.

Exceptions:

1. Items 1 through 4 shall not apply to doors to areas occupied by persons who, because of clinical needs, require restraint or containment as part of the function of a psychiatric treatment area.

2. Items 1 through 4 shall not apply to doors to areas where a *listed* egress control system is utilized to reduce the risk of child abduction from nursery and obstetric areas of a Group I-2 hospital.

1010.1.9.6.2 Group I-2.

1010.1.9.6.2.1Locks and latches.
Door-locking arrangements shall be permitted in Group I-2 where the clinical or security needs of the patients require specialized locking measures for their safety or the safety of others, provided keys are carried at all times by staff that are responsible for the evacuation of the occupants within the locked building unit(s). Provisions for remote locking and unlocking of occupied rooms are required where more than ten locks are necessary to be unlocked in order to move occupants from one smoke compartment to another smoke compartment. These locks may include mechanical locks, electromagnetic locks and other approved locking devices.

1010.1.9.6.2.2 Special locking arrangements for Licensed Group I-2 and large residential care facilities as described in Section 428.5.
Buildings protected throughout by an automatic fire detection system or automatic sprinkler system and in compliance with the following may be equipped with approved, listed locking devices:

1. Doors shall unlock upon actuation of the automatic fire detection system or automatic sprinkler system.

2. Doors shall unlock upon loss of power controlling the locking device.

   Exception: Independent standby power is acceptable as long as the automatic fire detection system, or automatic sprinkler system, when activated has precedence over the standby power and unlocks the door. If a nonemergency situation occurs such as a power outage, the door shall be allowed to remain locked until detection system(s) operate, provided that the power outage does not disable these detection systems. If any of the detection systems are disabled in any way, standby power controlling the locking devices will be interrupted.

3. A special locking system of electromagnetic locks may be utilized when all of the following requirements are met:

   3.1 These types of locks may be used only in wards and wings or other portions of a facility that requires security provisions for the protection of its patients.

   An on/off emergency release switch(es) must be capable of interrupting power to all electromagnetically locked doors within the ward, wing, or other portions of the facility. Release switch(es) shall be located and identified at each nurses/staff station serving the locked ward, wing, or other portions of the facility and any other control situation responsible for the evacuation of the occupants of the locked units which are manned 24 hours.

   3.2 These systems may be used provided not more than one such system is located in any egress path.

   3.3 A wiring diagram and system components location map shall be provided under glass adjacent to the fire alarm panel.

   3.4 An additional on/off emergency release switch shall be provided for each locked door and located within 3 feet (914mm) of the door and shall not depend on relays or other devices to cause the interruption of power.

   3.5 Any required emergency release switch shall interrupt the power to the locking device(s). If any required emergency release switch is of the locking type, all staff that are responsible for the evacuation of the occupants of the locked unit must carry

emergency release switch keys. Additional convenience release devices may be provided.

4. Each special locking installation shall be approved by the appropriate fire and building inspection authority prior to installation, after installation, and prior to initial use and reviewed periodically thereafter.

6. Emergency lighting shall be provided on the egress side of each door such that it illuminates the locking controls invloved in the special locking arrangement.

[BE] 1010.1.9.7 Delayed egress.
Delayed egress locking systems, shall be permitted to be installed on doors serving any occupancy except Group A, E and H 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. The locking system shall be installed and operated in accordance with all of the following:

1. The delay electronics of the delayed egress locking system shall deactivate upon actuation of the *automatic sprinkler system* or automatic fire detection system, allowing immediate, free egress.

2. The delay electronics of the delayed egress locking system shall deactivate upon loss of power controlling the lock or lock mechanism, allowing immediate free egress.

3. The delayed egress locking system shall have the capability of being deactivated at the fire command center and other approved locations. If a fire command center is not required by the *International Building Code*, the door locks shall have the capability of being unlocked by a signal from a location approved by the local fire code official.

4. An attempt to egress shall initiate an irreversible process that shall allow such egress in not more than 15 seconds when a physical effort to exit is applied to the egress side door hardware for not more than 3 seconds. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the delay electronics have been deactivated, rearming the delay electronics shall be by manual means only.

   Exception: Where *approved*, a delay of not more than 30 seconds is permitted on a delayed egress door.

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

   Exception: In Group I-2 or I-3 occupancies, the egress path from any point in the building shall not pass through more than two delayed egress locking systems provided the combined delay does not exceed 30 seconds.

6. A sign shall be provided on the door and shall be located above and within 12 inches (305 mm) of the door exit hardware:

   6.1. For doors that swing in the direction of egress, the sign shall read: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

   6.2. For doors that swing in the opposite direction of egress, the sign shall read: PULL UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

   6.3 The sign shall comply with the visual character requirements in ICC A117.1.

   Exception: Where *approved*, in Group I occupancies, the installation of a sign is not required where care recipients who, because of clinical needs, require restraint or containment as part of the function of the treatment area.

7. Emergency lighting shall be provided on the egress side of the door.

8. The delayed egress locking system units shall be *listed* in accordance with UL 294.

[BE] 1010.1.9.11 Stairway doors.

Interior *stairway means of egress* doors shall be openable from both sides without the use of a key or special knowledge or effort.

Exceptions:

1. *Stairway* discharge doors shall be openable from the egress side and shall only be locked from the opposite side.

2. This section shall not apply to doors arranged in accordance with Section 403.5.3 of the *International Building Code*.

3. In *stairways* serving not more than four stories, doors are permitted to be locked from the side opposite the egress side, provided they are openable from the egress side and capable of being unlocked simultaneously without unlatching upon a signal from the fire command center, if present, or a signal by emergency personnel from a single location inside the main entrance to the building.

4. *Stairway* exit doors shall be openable from the egress side and shall only be locked from the opposite side in Group B, F, M and S occupancies where the only interior access to the tenant space is from a single *exit stairway* where permitted in Section 1006.3.2.

5. *Stairway* exit doors shall be openable from the egress side and shall only be locked from the opposite side in Group R-2 occupancies where the only interior access to the *dwelling unit* is from a single exit stairway where permitted in Section 1006.3.2.

6. In other than high-rise, *stairways* serving floors above a 3 hour horizontal building separation, doors are permitted to be locked from the side opposite

the egress side, provided they are openable from the egress side and capable of being unlocked simultaneously without unlatching upon activation of the building fire alarm system.

[BE] 1010.1.10 Panic and fire exit hardware.
Doors serving a Group H occupancy and 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 be locking in accordance with Section 1010.1.9.3, Item 2.

3. Doors serving a Group A or E occupancy shall be permitted to be electromagnetically locked in accordance with Section 1010.1.9.9.

4. Doors serving Group A or E occupancy in an I-2 facility shall be permitted to be locked in accordance with Section 407.11 or 407.12 where the clinical or security needs of the patients require specialized locking measures for their safety or the safety of others.

5. Outdoor swimming pool barrier gates were the barrier height is a maximum of 48 inches when the area served by the gate has a calculated occupant load less than 300.

See the NC Electrical Code, Article 110 for electrical room egress hardware requirements.
~~Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide, and that contain overcurrent devices, switching devices or control devices with *exit* or *exit access doors*, shall be equipped with *panic hardware* or *fire exit hardware*. The doors shall swing in the direction of egress travel.~~

[BE] 1011.4 Walkline.
The walkline across *winder* treads shall be concentric to the direction of travel through the turn and located 12 inches (305 mm) horizontally from the handrail that is adjacent to the side where the *winders* are narrower. The 12-inch (305 mm) dimension shall be measured ~~from the widest point of the clear *stair* width at the walking surface of the *winder*~~ perpendicular from the handrail surface that faces the walkline. ~~Where *winders* are adjacent within the *flight*, the point of the widest clear *stair* width of the adjacent *winders* shall be used.~~

[BE] 1011.12.2 Roof access.
Where a *stairway* is provided to a roof, access to the roof shall be provided through a penthouse complying with Section 1510.2 of the *International Building Code*.

Exception: In buildings without an occupied roof, access to the roof shall be permitted to be a roof hatch or trap door not less than 16 square feet (1.5 m^2) in area and having a minimum dimension of 2 feet (610 mm). A minimum clearance perpendicular to the ladder or alternating tread device stringer shall be 30 inches (762 mm).

[BE]1011.13 Guards.

Guards shall be provided along stairways and landings where required by Section 1015 and shall be constructed in accordance with Section 1015. Where the roof hatch opening providing the required access is located within ~~10~~ 6 feet (~~3049~~ 1829 mm) of the roof edge, such roof access or roof edge shall be protected by guards installed in accordance with Section 1015.

[BE]1011.15 Ships ladders.
Ships ladders are permitted to be used in Group I-3 as a component of a *means of egress* to and from control rooms or elevated facility observation stations not more than 250 square feet (23 m^2) with not more than three occupants and for access to unoccupied roofs. The minimum clear width at and below the *handrails* shall be 20 inches (508 mm). The maximum width to the outside of the handrails shall be of 30 inches (762 mm). The vertical rise between floor levels or landings shall not exceed 20 feet (6096 mm)

[BE]1011.15.1 Handrails of ships ladders.
1¼-inch (31.75 mm) pipe *handrails* ~~*Handrails*~~ shall be provided on both sides of ships ladders.

[BE]1011.15.2 Treads of ships ladders.
Ships ladders shall have a: ~~minimum tread depth of 5 inches (127 mm). The tread shall be projected such that the total of the tread depth plus the *nosing* projection is not less than 8 1/2 inches (216 mm). The maximum riser height shall be 9 1/2 inches (241 mm).~~

1. Pitch of 60 to 75 degrees,
2. Minimum tread depth of 5",and
3. Riser height of 9-1/2" to 12",

[BE]1013.2 Floor-level exit door signs in Group R-1.
Where exit signs are required in Group R-1 occupancies by Section 1013.1, additional low-level exit signs shall be provided in all areas serving guest rooms in Group R-1 occupancies and shall comply with Section 1013.5.

The bottom of the sign shall be not less than 10 inches (254 mm) nor more than 12 inches (305 mm) above the floor level. The sign shall be flush mounted to the door or wall. Where mounted on the wall, the edge of the sign shall be within 4 inches (102 mm) of the door frame on the latch side.

1013.3 Illumination. Exit signs shall be internally or externally illuminated.
Exceptions:
1. Tactile signs required by Section 1013.4 need not be provided with illumination.
2. Lighted exit signs are not required for Group R *open air cabins*.

[BE]1014.6 Handrail extensions.
Handrails shall return to a wall, *guard* or the walking surface or shall be continuous to the handrail of an adjacent *flight* of *stairs* or *ramp* run. Where *handrails* are not continuous between *flights*, the *handrails* shall extend horizontally not less than 12 inches (305 mm) beyond the top riser and continue to slope for the depth of one tread beyond the bottom riser. At *ramps* where

handrails are not continuous between runs, the *handrails* shall extend horizontally above the landing 12 inches (305 mm) minimum beyond the top and bottom of *ramp* runs. The extensions of *handrails* shall be in the same direction of the *flights* of *stairs* at *stairways* and the *ramp* runs at *ramps*.

Exceptions:

1. *Handrails* within a *dwelling unit* that is not required to be *accessible* need extend only from the top riser to the bottom riser.

2. *Handrails* serving aisles in rooms or spaces used for assembly purposes are permitted to comply with the handrail extensions in accordance with Section 1029.15.

3. *Handrails* for *alternating tread devices* and ships ladders are permitted to terminate at a location vertically above the top and bottom risers. *Handrails* for *alternating tread devices* are not required to be continuous between *flights* or to extend beyond the top or bottom risers.

4. Extensions into a path of travel may return along the face of a continuing wall or column.

[BE] 1015.2 Where required.
Guards shall be located along open-sided walking surfaces, including *mezzanines*, equipment platforms, *aisles*, *stairs*, *ramps* ~~and~~ landings and retaining walls that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. See section 3606.6 of the *International Building Code for piers, docks, catwalks, gangways and floating docks and Section 3607.1.3 for bulkheads.* *Guards* shall be adequate in strength and attachment in accordance with Section 1607.8 of the *International Building Code*.

Exception: *Guards* are not required for the following locations:

1. On the loading side of loading docks or piers.

2. On the audience side of *stages* and raised *platforms*, including *stairs* leading up to the *stage* and raised *platforms*.

3. On raised *stage* and *platform* floor areas, such as runways, *ramps* and side *stages* used for entertainment or presentations.

4. At vertical openings in the performance area of *stages* and *platforms*.

5. At elevated walking surfaces appurtenant to *stages* and *platforms* for access to and utilization of special lighting or equipment.

6. Along vehicle service pits not accessible to the public.

7. In assembly seating areas at cross aisles in accordance with Section 1029.16.2.

8. At retaining walls where the walking surface is more than 6 feet from the adjacent open face of the retaining wall or the retaining wall is in the public right-of-way.

[BE] 1015.4 Opening limitations.
Required *guards* shall not have openings that allow passage of a sphere 4 inches (102 mm) in diameter from the walking surface to the required *guard* height. The sphere shall not pass through the opening with a minimum of 50 psf applied horizontally to the sphere from the direction of the walking surface that is being protected. A bottom rail or curb shall be provided that will reject the passage of a 2-inch-diameter (51mm) sphere.

Exceptions:

1. From a height of 36 inches (914 mm) to 42 inches (1067 mm), *guards* shall not have openings that allow passage of a sphere 43/8 inches (111 mm) in diameter.

2. The triangular openings at the open sides of a *stair*, formed by the riser, tread and bottom rail shall not allow passage of a sphere 6 inches (152 mm) in diameter.

3. At elevated walking surfaces for access to and use of electrical, mechanical or plumbing systems or equipment, *guards* shall not have openings that allow passage of a sphere 21 inches (533 mm) in diameter.

4. In areas that are not open to the public within occupancies in Group I-3, F, H or S, and for *alternating tread devices* and ships ladders, *guards* shall not have openings that allow passage of a sphere 21 inches (533 mm) in diameter.

5. In assembly seating areas, *guards* required at the end of aisles in accordance with Section 1029.16.4 shall not have openings that allow passage of a sphere 4 inches (102 mm) in diameter up to a height of 26 inches (660 mm). From a height of 26 inches (660 mm) to 42 inches (1067 mm) above the adjacent walking surfaces, *guards* shall not have openings that allow passage of a sphere 8 inches (203 mm) in diameter.

6. Within individual *dwelling units* and *sleeping units* in Group R-2 and R-3 occupancies, *guards* on the open sides of *stairs* shall not have openings that allow passage of a sphere 43/8 (111 mm) inches in diameter.

[BE]1015.6 Mechanical equipment, systems and devices.
Guards shall be provided where various components that require service are located within ~~10~~ 6 feet (~~3048~~ 1829 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 permanent fall arrest/restraint anchorage connector devices that comply with ANSI/ASSE Z 359.1 are affixed for use during the entire roof covering lifetime. The devices shall be reevaluated for possible replacement when the entire roof covering is replaced. The devices shall be placed not more than 10 feet (3048

mm) on center along hip and ridge lines and placed not less than 10 feet (3048 mm) from the roof edge or open side of the walking surface.

[BE] 1016.2 Egress through intervening spaces.
Egress through intervening spaces shall comply with this section.

1. Exit access through an enclosed elevator lobby is permitted. Access to not less than one of the required *exits* shall be provided without travel through the enclosed elevator lobbies required by Section 3006.2, 3007 or 3008 of the *International Building Code*. Where the path of *exit access* travel passes through an enclosed elevator lobby the level of protection required for the enclosed elevator lobby is not required to be extended to the *exit* unless direct access to an *exit* is required by other sections of this code.

2. Egress from a room or space shall not pass through adjoining or intervening rooms or areas, except where such adjoining rooms or areas and the area served are accessory to one or the other, are not a Group H occupancy and provide a discernible path of egress travel to an *exit*.

   Exception: *Means of egress* are not prohibited through adjoining or intervening rooms or spaces in a Group H, S or F occupancy where the adjoining or intervening rooms or spaces are the same or a lesser hazard occupancy group.

3. An *exit access* shall not pass through a room that can be locked to prevent egress.

4. *Means of egress* from *dwelling units* or sleeping areas shall not lead through other sleeping areas, toilet rooms or bathrooms.

5. Egress shall not pass through kitchens, storage rooms, closets or spaces used for similar purposes.

   Exceptions:

   1. *Means of egress* are not prohibited through a kitchen area serving adjoining rooms constituting part of the same *dwelling unit* or *sleeping unit.*

   2. *Means of egress* are not prohibited through stockrooms in Group M occupancies where all of the following are met:

      2.1. The stock is of the same hazard classification as that found in the main retail area.

      2.2. Not more than 50 percent of the *exit access* is through the stockroom.

      2.3. The stockroom is not subject to locking from the egress side.

      2.4. There is a demarcated, minimum 44-inch-wide (1118 mm) *aisle* defined by full- or partial-height fixed walls or similar ~~construction~~ barrier that will maintain the required width and lead directly from the retail area to the *exit* without obstructions.

1019.5 Construction.
Exit access stairs and ramps may be unenclosed or in unrated enclosures. Exterior exit access stairs and ramps shall not require separation from the building interior.

Exception: Exit access stair and ramp enclosures required by 1019.4.

BE] 1020.1 Construction.
Corridors shall be fire-resistance rated in accordance with Table 1020.1. The *corridor* walls required to be fire-resistance rated shall comply with Section 708 of the *International Building Code* for fire partitions.

~~**Exceptions:**~~

~~1. A *fire-resistance rating* is not required for *corridors* in an occupancy in Group E where each room that is used for instruction has not less than one door opening directly to the exterior and rooms for assembly purposes have not less than one-half of the required *means of egress* doors opening directly to the exterior. Exterior doors specified in this exception are required to be at ground level.~~

~~2. A *fire-resistance rating* is not required for *corridors* contained within a *dwelling unit* or *sleeping unit* in an occupancy in Groups I-1 and R.~~

~~3. A *fire-resistance rating* is not required for *corridors* in *open parking garages*.~~

~~4. A *fire-resistance rating* is not required for *corridors* in an occupancy in Group B that is a space requiring only a single *means of egress* complying with Section 1006.2.~~

~~5. *Corridors* adjacent to the *exterior walls* of buildings shall be permitted to have unprotected openings on unrated *exterior walls* where unrated walls are permitted by Table 602 and unprotected openings are permitted by Table 705.8 of the *International Building Code*.~~

[BE] TABLE 1020.1
CORRIDOR FIRE-RESISTANCE RATING[e-k]

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	REQUIRED FIRE-RESISTANCE RATING (hours)	
		Without sprinkler system	With sprinkler system[c]
H-1, H-2, H-3	All	Not Permitted	1
H-4, H-5	Greater than 30	Not Permitted	1
A, B[f,j], E[d,g], F, M, S[i], U	Greater than 30	1	0
R[he]	Greater than 10	Not Permitted	0.5
I-2[a], I-4	All	Not Permitted	0
I-1[h], I-3	All	Not Permitted	1[b]

a. For requirements for occupancies in Group I-2, see Sections 407.2 and 407.3 of the *International Building Code*.
b. For a reduction in the *fire-resistance rating* for occupancies in Group I-3, see Section 408.8 of the *International Building Code*.
c. Buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 where allowed.
d. Adult and child day care facilities without automatic sprinkler systems shall have 1-hour fire-resistance-rated corridors regardless of occupant load.
e. For residential care facilities requirements see Section 428 of the *International Building Code*.
f. Exit access corridors are not required to be rated on any single tenant floor or in any single tenant space, if 1-hour fire-resistance-rated floor/ceiling assemblies are provided in multistory buildings and fire partitions are provided between other tenants spaces on the same floor. The structure supporting such floor/ceiling assemblies and fire partitions is not required to be rated in Types IIB, IIB and VB construction.
g. A *fire-resistance rating* is not required for *corridors* in an occupancy in Group E where each room that is used for instruction has not less than one door opening directly to the exterior and rooms for assembly purposes have not less than one-half of the required *means of egress* doors opening directly to the exterior. Exterior doors specified in this exception are required to be at ground level.
h. A *fire-resistance rating* is not required for *corridors* contained within a *dwelling unit* or *sleeping unit* in Groups I-1 and R.
i. A *fire-resistance rating* is not required for *corridors* in *open parking garages*.
j. A *fire-resistance rating* is not required for *corridors* in an occupancy in Group B which is a space requiring only a single *means of egress* complying with Section 1006.2.
k. *Corridors* adjacent to the *exterior walls* of buildings shall be permitted to have unprotected openings on unrated *exterior walls* where unrated walls are permitted by Table 602 of the *International Building Code* and unprotected openings are permitted by Table 705.8 *of the International Building Code*.

[BE] TABLE 1020.2
MINIMUM CORRIDOR WIDTH

OCCUPANCY	MINIMUM WIDTH (inches)
Any facilities not listed below	44
Access to and utilization of mechanical, plumbing or electrical systems or equipment	24
In other than Group I-1, I-2 and I-3 with ~~With~~ an occupant load of less than 50	36
Within a *dwelling unit*	36
In Group E with a *corridor* having an occupant load of 100 or more	72
In *corridors* and areas serving stretcher traffic in ambulatory care facilities and resident areas of Group I-1 and I-2	72
Group I-2 in patient areas and in areas where required for bed movement	96

For SI: 1 inch = 25.4 mm.

[BE] 1020.6 Corridor continuity.
Fire-resistance-rated corridors shall be continuous from the point of entry to an *exit*, and shall not be interrupted by intervening rooms. Where the path of egress travel within a *fire-resistance-rated corridor* to the exit includes travel along unenclosed *exit access stairways* or *ramps*, the *fire-resistance rating* shall be continuous for the length of the *stairway* or *ramp* and for the length of the connecting *corridor* on the adjacent floor leading to the *exit*.

Exceptions:

1. Foyers, lobbies or reception rooms constructed as required for *corridors* shall not be construed as intervening rooms.

2. Enclosed elevator lobbies as permitted by Item 1 of Section 1016.2 shall not be construed as intervening rooms.

3. A toilet room as defined by the NC Plumbing Code that meets all of the following requirements may be included as part of the rated corridor enclosure:

   3.1. The toilet room shall be separated from the remainder of the building by fire-resistant-rated construction meeting the same requirements as the corridor construction;

   3.2. No other rooms open off of the toilet room;

   3.3. No gas or electric appliances other than electric point of use water heaters and hand dryers are located in the toilet room; and

   3.4. The toilet room is not used for any other purpose.

[BE] 1023.2 Construction.
Enclosures for *interior exit stairways* and *ramps* shall be constructed as *fire barriers* in accordance with Section 707 of the *International Building Code* or *horizontal assemblies* constructed in accordance with Section 711 of the *International Building Code*, or both. *Interior exit stairway* and *ramp* enclosures shall have a *fire-resistance rating* of not less than 2 hours where connecting four stories or more and not less than 1 hour where connecting less than four stories. The number of stories connected by the *interior exit stairways* or *ramps* shall include any basements, but not any *mezzanines*. *Interior exit stairways* and *ramps* shall have a fire-resistance rating not less than the floor assembly penetrated, but need not exceed 2 hours.

Exceptions:

1. *Interior exit stairways* and *ramps* in Group I-3 occupancies in accordance with the provisions of Section 408.3.8 of the *International Building Code*.

2. *Interior exit stairways* within an atrium enclosed in accordance with Section 404.6 of the *International Building Code*.

3. In other than Group H and I occupancies, a maximum of 50 percent of egress stairways serving one adjacent floor are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Any two such interconnected floors shall not open to other floors. Unenclosed exit stairways shall be remotely located as required in Section 1007.1.1.

4. In other than Group H and I occupancies, interior egress stairways serving only the first and second stories of a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 are not required to be enclosed, provided at least two means of egress are provided from both floors served by the

unenclosed stairways. Such interconnected stories shall not be open to other stories. Unenclosed exit stairways shall be remotely located as required in Section 1007.1.1.

5. Exit access stairs and ramps that are either unenclosed or in allowed unrated enclosures.

[BE] 1023.8 ~~Discharge identification.~~ Stairway discharge level barrier.
An *interior exit stairway* and *ramp* shall not continue below its *level of exit discharge* unless an *approved* barrier is provided at the *level of exit discharge* to prevent persons from unintentionally continuing into levels below. Directional exit signs shall be provided as specified in Section 1013.

[BE] 1029.9.5 ~~Dead end aisles.~~ Assembly aisle termination.
Each end of an *aisle* shall be continuous to a cross *aisle*, foyer, doorway, vomitory, concourse or *stairway* in accordance with Section 1029.9.7 having access to an *exit*.

Exceptions:

1. Dead-end *aisles* shall be not greater than 20 feet (6096 mm) in length.

2. Dead-end *aisles* longer than ~~16 rows~~ 20 feet (6096 mm) are permitted where seats beyond the ~~16 rows~~ 20 feet (6096 mm) dead-end *aisle* are not more than 24 seats from another *aisle*, measured along a row of seats having a minimum clear width of 12 inches (305 mm) plus 0.6 inch (15.2 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.

3. For *smoke-protected assembly seating*, the dead end *aisle* length of vertical *aisles* shall not exceed a distance of 21 rows.

4. For *smoke-protected assembly seating*, a longer dead-end *aisle* is permitted where seats beyond the 21-row dead-end *aisle* are not more than 40 seats from another *aisle*, measured along a row of seats having an *aisle* accessway with a minimum clear width of 12 inches (305 mm) plus 0.3 inch (7.6 mm) for each additional seat above seven in the row where seats have backrests or beyond 10 where seats are without backrests in the row.

[BE] 1029.13.1.3 Edge protection.
Ramped *aisles* shall have edge protection in accordance with Sections 1012.10 ~~and 1012.10.1~~.

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

[BE] 1030.1 General.
In addition to the *means of egress* required by this chapter, provisions shall be made for *emergency escape and rescue openings* in Group E classrooms, Group R-2 occupancies in accordance with Tables 1006.3.2(1) and 1006.3.2(2), Group R-2 occupancies without automatic fire sprinkler systems in accordance with 903.3.1.1 and 903.3.1.2, and Group R-3 occupancies.

Basements and sleeping rooms below the fourth story above *grade plane* shall have at least one exterior *emergency escape and rescue opening* in accordance with this section. Where *basements* contain one or more sleeping rooms, *emergency escape and rescue openings* shall be required in each sleeping room, but shall not be required in adjoining areas of the *basement*. Such openings shall open directly into a *public way* or to a *yard* or *court* that opens to a *public way*.

Exceptions:

1. *Basements* with a ceiling height of less than 80 inches (2032 mm) shall not be required to have *emergency escape and rescue openings*.

2. ~~*Emergency escape and rescue openings* are not required from~~ Classrooms with 2 means of egress, *basements,* or sleeping rooms that have an *exit* door or *exit access* door that opens directly into a *public way* or to a *yard*, *court* or exterior exit balcony that opens to a *public way* shall not be required to have *emergency escape and rescue openings*.

3. *Basements* without *habitable spaces* and having not more than 200 square feet (18.6 m^2) in floor area shall not be required to have *emergency escape and rescue openings*.

4. In Group E where the room or space complies with the following:

   4.1 Doors open directly to a corridor with exit access in one direction and provide access through adjacent classrooms or directly to a separate smoke compartment with exit access in the other direction, and

   4.2 The compartments are separated by smoke barriers having a 1 hour fire resistance rating with self-closing or automatic closing doors, and

   4.3 The length of travel to exits along such paths shall not exceed 150 ft. (45 m) and

   4.4 Each communicating door shall be identified, and

   4.5 No locking device shall be allowed on the communicating doors.

5. Group E occupancies located in buildings equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1.

[BE] 1030.3 Maximum height from floor.

Emergency escape and rescue openings shall have the bottom of the clear opening not greater than 44 inches (1118 mm) measured from the floor. For classrooms serving children Grade 5 and younger, the bottom of the clear opening shall be not more than 32 inches (810 mm) measured from the floor.

1031.3.2 Fire Escape Maintenance.

Fire escape *stairways* shall be kept clear and unobstructed at all times and shall be maintained in good working order.

1031.9 Floor identification signs.
The floor identification signs required by Sections 1023.9 ~~and 1104.24~~ shall be maintained in an *approved* manner.

CHAPTER 11 CHANGES

Deleted.

~~SECTION 1101~~
~~GENERAL~~

~~**1101.1 Scope.**~~
~~The provisions of this chapter shall apply to existing buildings constructed prior to the adoption of this code.~~

~~**1101.2 Intent.**~~
~~The intent of this chapter is to provide a minimum degree of fire and life safety to persons occupying existing buildings by providing minimum construction requirements where such existing buildings do not comply with the minimum requirements of the *International Building Code*.~~

~~**1101.3 Permits.**~~
~~Permits shall be required as set forth in Sections 105.6 and 105.7 and the *International Building Code*.~~

~~**1101.4 Owner notification.**~~
~~When a building is found to be in noncompliance with this chapter, the *fire code official* shall duly notify the *owner* of the building. Upon receipt of such notice, the *owner* shall, subject to the following time limits, take necessary actions to comply with the provisions of this chapter.~~

~~**1101.4.1 Construction documents.**~~
~~*Construction documents* necessary to comply with this chapter shall be completed and submitted within a time schedule *approved* by the *fire code official*.~~

~~**1101.4.2 Completion of work.**~~
~~Work necessary to comply with this chapter shall be completed within a time schedule *approved* by the *fire code official*.~~

~~**1101.4.3 Extension of time.**~~
~~The *fire code official* is authorized to grant necessary extensions of time when it can be shown that the specified time periods are not physically practical or pose an undue hardship. The granting of an extension of time for compliance shall be based on the showing of good cause and subject to the filing of an acceptable systematic plan of correction with the *fire code official*.~~

~~SECTION 1102~~
~~DEFINITIONS~~

~~**1102.1 Definitions.**~~
~~The following terms are defined in Chapter 2:~~

DUTCH DOOR.

EXISTING.

SECTION 1103
FIRE SAFETY REQUIREMENTS FOR EXISTING BUILDINGS

1103.1 Required construction.
Existing buildings shall comply with not less than the minimum provisions specified in Table 1103.1 and as further enumerated in Sections 1103.2 through 1103.10.

The provisions of this chapter shall not be construed to allow the elimination of *fire protection systems* or a reduction in the level of fire safety provided in buildings constructed in accordance with previously adopted codes.

Exceptions:

1. Where a change in fire-resistance rating has been approved in accordance with Section 803.6 of the *International Existing Building Code*.

2. Group U occupancies.

TABLE 1103.1
OCCUPANCY AND USE REQUIREMENTS[a]

SECTION	USE			OCCUPANCY CLASSIFICATION																		
	High-rise	Atrium or covered mall	Underground building	A	B	E	F	H-1	H-2	H-3	H-4	H-5	I-1	I-2	I-3	I-4	M	R-1	R-2	R-3	R-4	S
1103.2	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
1103.3	R	—	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
1103.4.1	R	—	R	—	—	—	—	—	—	—	—	—	—	R	R	—	—	—	—	—	—	—
1103.4.2	R	—	R	R	R	R	R	R	R	R	R	R	R	—	—	R	R	R	R	—	R	R
1103.4.3	R	—	R	R	R	R	R	R	R	R	R	R	R	—	—	R	R	R	R	—	R	R
1103.4.4	—	R	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1103.4.5	—	—	—	—	R	—	—	—	—	—	—	—	—	—	—	—	R	—	—	—	—	—
1103.4.6	—	—	—	R	—	R	R	R	R	R	R	R	R	R	R	R	—	R	R	R	R	R
1103.4.7	—	—	—	R	—	R	R	R	R	R	R	R	R	R	R	R	—	R	R	R	R	R
1103.4.8	R	—	R	R	R	R	R	R	R	R	R	R	R	—	—	R	R	R	R	R	R	R
1103.4.9	R	—	—	—	—	—	—	—	—	—	—	—	—	R	—	—	—	—	—	—	—	—

(continued)

TABLE 1103.1
OCCUPANCY AND USE REQUIREMENTS[a] **—continued**

SECTION	USE	OCCUPANCY CLASSIFICATION

	High-rise	Atrium or covered mall	Under-ground building	A	B	E	F	H-1	H-2	H-3	H-4	H-5	I-1	I-2	I-3	I-4	M	R-1	R-2	R-3	R-4	S
1103.5.1	—	—	—	R[c]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1103.5.2, 1103.5.3[b]	—	—	—	—	—	—	—	—	—	—	—	—	—	R	—	—	—	—	—	—	—	—
1103.5.4	—	—	—	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
1103.6.1	R	—	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	—	R	R
1103.6.2	R	—	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	—	R	R
1103.7.1	—	—	—	—	—	R	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1103.7.2	—	—	—	—	—	—	—	—	—	—	—	—	R	—	—	—	—	—	—	—	—	—
1103.7.3	—	—	—	—	—	—	—	—	—	—	—	—	—	R	—	—	—	—	—	—	—	—
1103.7.4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	R	—	—	—	—	—	—	—
1103.7.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	R	—	—	—	—
1103.7.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	R	—	—	—
1103.7.7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	R	—
1103.8	—	—	—	—	—	—	—	—	—	—	—	—	R	—	—	—	—	R	R	R	R	—
1103.9	R	—	—	—	—	—	—	—	—	—	—	—	R	R	—	R	—	R	R	R	R	—
1104	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
1105	—	—	—	—	—	—	—	—	—	—	—	—	—	R	—	—	—	—	—	—	—	—
1106	—	—	—	—	—	—	—	—	—	—	—	—	—	R	—	—	—	—	—	—	—	—

a. Existing buildings shall comply with the sections identified as "Required" (R) based on occupancy classification or use, or both, whichever is applicable.
b. Only applies to Group I-2 Condition 2 as established by the adopting ordinance.
c. Only applies to Group A-2 occupancies.
R = The building is required to comply.

1103.1.1 Historic buildings.
Facilities designated as historic buildings shall develop a fire protection plan in accordance with NFPA 914. The fire protection plans shall comply with the maintenance and availability provisions in Sections 404.3 and 404.4.

1103.2 Emergency responder radio coverage in existing buildings.
Existing buildings that do not have approved radio coverage for emergency responders within the building, based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building, shall be equipped with such coverage according to one of the following:

1. Where an existing wired communication system cannot be repaired or is being replaced, or where not approved in accordance with Section 510.1, Exception 1.

2. Within a time frame established by the adopting authority.

Exception: Where it is determined by the fire code official that the radio coverage system is not needed.

1103.3 Existing elevators.
Existing elevators, escalators and moving walks shall comply with the requirements of Sections 1103.3.1 and 1103.3.2.

1103.3.1 Elevators, escalators and moving walks.
Existing elevators, escalators and moving walks in Group I-2 Condition 2 occupancies shall comply with ASME A17.3.

1103.3.2 Elevator emergency operation.
Existing elevators with a travel distance of 25 feet (7620 mm) or more above or below the main floor or other level of a building and intended to serve the needs of emergency personnel for fire-fighting or rescue purposes shall be provided with emergency operation in accordance with ASME A17.3.

Exceptions:

1. Buildings without occupied floors located more than 55 feet (16 764 mm) above or 25 feet (7620 mm) below the lowest level of fire department vehicle access where protected at the elevator shaft openings with additional fire doors in accordance with Section 716.5 of the *International Building Code* and where all of the following conditions are met:

   1.1. The doors shall be provided with vision panels of approved fire protection-rated glazing so located as to furnish clear vision of the approach to the elevator. Such glazing shall not exceed 100 square inches (0.065 m^2) in area.

   1.2. The doors shall be held open but be automatic-closing by activation of a fire alarm initiating device installed in accordance with the requirements of NFPA 72 as for Phase I Emergency Recall Operation, and shall be located at each floor served by the elevator; in the associated elevator machine room, control space, or control room; and in the elevator hoistway, where sprinklers are located in those hoistways.

   1.3 The doors, when closed, shall have signs visible from the approach area stating: WHEN THESE DOORS ARE CLOSED OR IN FIRE EMERGENCY, DO NOT USE ELEVATOR. USE EXIT STAIRWAYS.

2. Buildings without occupied floors located more than 55 feet (16 764 mm) above or 25 feet (7620 mm) below the lowest level of fire department vehicle access where provided with *automatic sprinkler systems* installed in accordance with Section 903.3.1.1 or 903.3.1.2.

3. Freight elevators in buildings provided with both *automatic sprinkler systems* installed in accordance with Section 903.3.1.1 or 903.3.1.2 and not less than one ASME 17.3-compliant elevator serving the same floors.

Elimination of previously installed Phase I emergency recall or Phase II emergency in-car systems shall not be permitted.

1103.4 Vertical openings.
Interior vertical openings, including but not limited to *stairways*, elevator hoistways, service and

~~utility shafts, that connect two or more stories of a building, shall be enclosed or protected as specified in Sections 1103.4.1 through 1103.4.10.~~

~~1103.4.1 Group I-2 and I-3 occupancies.~~
~~In Group I-2 and I-3 occupancies, interior vertical openings connecting two or more stories shall be protected with 1-hour fire-resistance-rated construction.~~

~~Exceptions:~~

~~1. In Group I-2, unenclosed vertical openings not exceeding two connected stories and not concealed within the building construction shall be permitted as follows:~~

~~1.1. The unenclosed vertical openings shall be separated from other unenclosed vertical openings serving other floors by a smoke barrier.~~

~~1.2. The unenclosed vertical openings shall be separated from corridors by smoke partitions.~~

~~1.3. The unenclosed vertical openings shall be separated from other fire or smoke compartments on the same floors by a smoke barrier.~~

~~1.4. On other than the lowest level, the unenclosed vertical openings shall not serve as a required means of egress.~~

~~2. In Group I-2, atriums connecting three or more stories shall not require 1-hour fire-resistance-rated construction where the building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3, and all of the following conditions are met:~~

~~2.1. For other than existing approved atriums with a smoke control system, where the atrium was constructed and is maintained in accordance with the code in effect at the time the atrium was created, the atrium shall have a smoke control system that is in compliance with Section 909.~~

~~2.2. Glass walls forming a smoke partition or a glass-block wall assembly shall be permitted when in compliance with Condition 2.2.1 or 2.2.2.~~

~~2.2.1. Glass walls forming a smoke partition shall be permitted where all of the following conditions are met:~~

~~2.2.1.1. Automatic sprinklers are provided along both sides of the separation wall and doors, or on the room side only if there is not a walkway or occupied space on the atrium side.~~

~~2.2.1.2. The sprinklers shall be not more than 12 inches (305 mm) away from the face of the glass and at intervals along the glass of not greater than 72 inches (1829 mm).~~

~~2.2.1.3. Windows in the glass wall shall be non-operating type.~~

2.2.1.4. The glass wall and windows shall be installed in a gasketed frame in a manner that the framing system deflects without breaking (loading) the glass before the sprinkler system operates.

2.2.1.5. The sprinkler system shall be designed so that the entire surface of the glass is wet upon activation of the sprinkler system with-out obstruction.

2.2.2. A fire barrier is not required where a glass-block wall assembly complying with Section 2110 of the *International Building Code* and having a $^{3}/_{4}$ -hour fire protection rating is provided.

2.3. Where doors are provided in the glass wall, they shall be either self-closing or automatic-closing and shall be constructed to resist the passage of smoke.

3. In Group I-3 occupancies, exit *stairways* or ramps and *exit access stairways* or *ramps* constructed in accordance with Section 408 in the *International Building Code*.

1103.4.2 Three to five stories.
In other than Group I-2 and I-3 occupancies, interior vertical openings connecting three to five stories shall be protected by either 1-hour fire-resistance-rated construction or an *automatic sprinkler system* shall be installed throughout the building in accordance with Section 903.3.1.1 or 903.3.1.2.

Exceptions:

1. Vertical opening protection is not required for Group R-3 occupancies.

2. Vertical opening protection is not required for open parking garages.

3. Vertical opening protection for escalators shall be in accordance with Section 1103.4.5, 1103.4.6 or 1103.4.7.

4. *Exit access stairways* and *ramps* shall be in accordance with Section 1103.4.8.

1103.4.3 More than five stories.
In other than Group I-2 and I-3 occupancies, interior vertical openings connecting more than five stories shall be protected by 1-hour fire-resistance-rated construction.

Exceptions:

1. Vertical opening protection is not required for Group R-3 occupancies.

2. Vertical opening protection is not required for open parking garages.

3. Vertical opening protection for escalators shall be in accordance with Section 1103.4.5, 1103.4.6 or 1103.4.7.

4. *Exit access stairways* and *ramps* shall be in accordance with Section 1103.4.8.

1103.4.4 Atriums and covered malls.
In other than Group I-2 and I-3 occupancies, interior vertical openings in a covered mall building or a building with an atrium shall be protected by either 1-hour fire-resistance-rated construction or an *automatic sprinkler system* shall be installed throughout the building in accordance with Section 903.3.1.1 or 903.3.1.2.

Exceptions:

1. Vertical opening protection is not required for Group R-3 occupancies.

2. Vertical opening protection is not required for open parking garages.

3. *Exit access stairways* and *ramps* shall be in accordance with Section 1103.4.8.

1103.4.5 Escalators in Group B and M occupancies.
In Group B and M occupancies, escalators creating vertical openings connecting any number of stories shall be protected by either 1-hour fire-resistance-rated construction or an *automatic sprinkler system* in accordance with Section 903.3.1.1 installed throughout the building, with a draft curtain and closely spaced sprinklers around the escalator opening.

1103.4.6 Escalators connecting four or fewer stories.
In other than Group B and M occupancies, escalators creating vertical openings connecting four or fewer stories shall be protected by either 1-hour fire-resistance-rated construction or an *automatic sprinkler system* in accordance with Section 903.3.1.1 or 903.3.1.2 shall be installed throughout the building, and a draft curtain with closely spaced sprinklers shall be installed around the escalator opening.

1103.4.7 Escalators connecting more than four stories.
In other than Group B and M occupancies, escalators creating vertical openings connecting five or more stories shall be protected by 1-hour fire-resistance-rated construction.

1103.4.8 Occupancies other than Group I-2 and I-3.
In other than Group I-2 and I-3 occupancies, floor openings containing *exit access stairways* or *ramps* that do not comply with one of the conditions listed in this section shall be protected by 1-hour fire-resistance-rated construction.

1. *Exit access stairways* and *ramps* that serve, or atmospherically communicate between, only two stories. Such interconnected stories shall not be open to other stories.

2. 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* or *sleeping unit* or live/work unit.

3. *Exit access stairways* and *ramps* in buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1, where the area of the vertical opening between stories does not exceed twice the horizontal projected area of the *stairway* or *ramp*, and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Group B and M occupancies, this provision is limited to openings that do not connect more than four stories.

4. *Exit access stairways* and *ramps* within an atrium complying with the provisions of Section 404 of the *International Building Code*.

5. *Exit access stairways* and *ramps* in open parking garages that serve only the parking garage.

6. *Exit access stairways* and *ramps* serving open-air seating complying with the exit access travel distance requirements of Section 1029.7 of the *International Building Code*.

7. *Exit access stairways* and *ramps* serving the balcony, gallery or press box and the main assembly floor in occupancies such as theaters, places of religious worship, auditoriums and sports facilities.

1103.4.9 Waste and linen chutes.
In Group I-2 occupancies, existing waste and linen chutes shall comply with Sections 1103.4.9.1 through 1103.4.9.5.

1103.4.9.1 Enclosure.
Chutes shall be enclosed with 1-hour fire-resistance-rated construction. Opening protectives shall be in accordance with Section 716 of the *International Building Code* and have a fire protection rating of not less than1 hour.

1103.4.9.2 Chute intakes.
Chute intakes shall comply with Section 1103.4.9.2.1 or 1103.4.9.2.2.

1103.4.9.2.1 Chute intake direct from corridor.
Where intake to chutes is direct from a *corridor*, the intake opening shall be equipped with a chute-intake door in accordance with Section 716 of the *International Building Code* and having a fire protection rating of not less than 1 hour.

1103.4.9.2.2 Chute intake via a chute-intake room.
Where the intake to chutes is accessed through a chute-intake room, the room shall be enclosed with 1-hour fire-resistance-rated construction. Opening protectives for the intake room shall be in accordance with Section 716 of the *International Building Code* and have a fire protection rating of not less than $^{3}/_{4}$ hour. Opening protective for the chute enclosure shall be in accordance with Section 1103.4.9.1.

1103.4.9.3 Automatic sprinkler system.
Chutes shall be equipped with an *approved automatic sprinkler system* in accordance with Section 903.2.11.2.

1103.4.9.4 Chute discharge rooms.
Chutes shall terminate in a dedicated chute discharge room. Such rooms shall be separated from the remainder of the building by not less than 1-hour fire-resistance-rated construction. Opening protectives shall be in accordance with Section 716 of the *International Building Code* and have a fire protection rating of not less than 1 hour.

1103.4.9.5 Chute discharge protection.
Chute discharges shall be equipped with a self-closing or automatic-closing opening protective in accordance with Section 716 of the *International Building Code* and having a fire protection rating of not less than 1 hour.

1103.4.10 Flue-fed incinerators.
Existing flue-fed incinerator rooms and associated flue shafts shall be protected with 1-hour fire-resistance-rated construction and shall not have other vertical openings connected with the space other than the associated flue. Opening protectives shall be in accordance with Section 716 of the *International Building Code* and have a fire protection rating of not less than 1 hour.

1103.5 Sprinkler systems.
An *automatic sprinkler system* shall be provided in existing buildings in accordance with Sections 1103.5.1 through 1103.5.4.

1103.5.1 Group I-2.
In Group I-2, an *automatic sprinkler system* shall be provided in accordance with Section 1105.8.

1103.5.2 Group I-2 Condition 2.
In addition to the requirements of Section 1103.5.1, existing buildings of Group I-2 Condition 2 occupancy shall be equipped throughout with an *approved automatic sprinkler system* in accordance with Section 903.3.1.1. The *automatic sprinkler system* shall be installed as established by the adopting ordinance.

1103.5.3 Pyroxylin plastics.
An *automatic sprinkler system* shall be provided throughout existing buildings where cellulose nitrate film or pyroxylin plastics are manufactured, stored or handled in quantities exceeding 100 pounds (45 kg). Vaults located within buildings for the storage of raw pyroxylin shall be protected with an *approved automatic sprinkler system* capable of discharging 1.66 gallons per minute per square foot (68 L/min/m^2) over the area of the vault.

1103.6 Standpipes.
Existing structures shall be equipped with standpipes installed in accordance with Section 905 where required in Sections 1103.6.1 and 1103.6.2. The *fire code official* is authorized to approve the installation of manual standpipe systems to achieve compliance with this section where the responding fire department is capable of providing the required hose flow at the highest standpipe outlet.

1103.6.1 Existing multiple-story buildings.
Existing buildings with occupied floors located more than 50 feet (15 240 mm) above the

lowest level of fire department access or more than 50 feet (15 240 mm) below the highest level of fire department access shall be equipped with standpipes.

1103.6.2 Existing helistops and heliports.
Existing buildings with a rooftop helistop or heliport located more than 30 feet (9144 mm) above the lowest level of fire department access to the roof level on which the helistop or heliport is located shall be equipped with standpipes in accordance with Section 2007.5.

1103.7 Fire alarm systems.
An *approved* fire alarm system shall be installed in existing buildings and structures in accordance with Sections 1103.7.1 through 1103.7.7 and provide occupant notification in accordance with Section 907.5 unless other requirements are provided by other sections of this code.

Exception: Occupancies with an existing, previously *approved* fire alarm system.

1103.7.1 Group E.
A fire alarm system shall be installed in existing Group E occupancies in accordance with Section 907.2.3.

Exceptions:

1. A manual fire alarm system is not required in a building with a maximum area of 1,000 square feet (93 m^2) that contains a single classroom and is located not closer than 50 feet (15 240 mm) from another building.

2. A manual fire alarm system is not required in Group E occupancies with an *occupant load* less than 50.

1103.7.2 Group I-1.
An automatic fire alarm system shall be installed in existing Group I-1 facilities in accordance with Section 907.2.6.1.

Exception: Where each sleeping room has a *means of egress* door opening directly to an exterior egress balcony that leads directly to the *exits* in accordance with Section 1021, and the building is not more than three stories in height.

1103.7.3 Group I-2.
In Group I-2, an automatic fire alarm system shall be installed in accordance with Section 1105.9.

1103.7.4 Group I-3.
An automatic and manual fire alarm system shall be installed in existing Group I-3 occupancies in accordance with Section 907.2.6.3.

1103.7.5 Group R-1.
A fire alarm system and smoke alarms shall be installed in existing Group R-1 occupancies in accordance with Sections 1103.7.5.1 through 1103.7.5.2.1.

1103.7.5.1 Group R-1 hotel and motel manual fire alarm system.
A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in existing Group R-1 hotels and motels more than three stories or with more than 20 *sleeping units*.

Exceptions:

1. Buildings less than two stories in height where all *sleeping units*, attics and crawl spaces are separated by 1-hour fire-resistance-rated construction and each *sleeping unit* has direct access to a *public way*, *egress court* or yard.

2. Manual fire alarm boxes are not required throughout the building where the following conditions are met:

   2.1. The building is equipped throughout with an *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2.

   2.2. The notification appliances will activate upon sprinkler water flow.

   2.3. Not less than one manual fire alarm box is installed at an *approved* location.

1103.7.5.1.1 Group R-1 hotel and motel automatic smoke detection system.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be installed in existing Group R-1 hotels and motels throughout all interior *corridors* serving sleeping rooms not equipped with an *approved*, supervised sprinkler system installed in accordance with Section 903.

Exception: An automatic smoke detection system is not required in buildings that do not have interior *corridors* serving *sleeping units* and where each sleeping unit has a *means of egress* door opening directly to an *exit* or to an exterior *exit access* that leads directly to an *exit*.

1103.7.5.2 Group R-1 boarding and rooming houses manual fire alarm system.
A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in existing Group R-1 boarding and rooming houses.

Exception: Buildings less than two stories in height where all *sleeping units*, attics and crawl spaces are separated by 1-hour fire-resistance-rated construction and each *sleeping unit* has direct access to a *public way*, *egress court* or yard.

1103.7.5.2.1 Group R-1 boarding and rooming houses automatic smoke detection system.
An automatic smoke detection system that activates the occupant notification system in accordance with Section 907.5 shall be installed in existing Group R-1 boarding and rooming houses throughout all interior *corridors* serving *sleeping units* not equipped with an *approved*, supervised sprinkler system installed in accordance with Section 903.

Exception: Buildings equipped with single-station smoke alarms meeting or exceeding the requirements of Section 907.2.11.1 and where the fire alarm system includes not less than one manual fire alarm box per floor arranged to initiate the alarm.

1103.7.6 Group R-2.

A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in existing Group R-2 occupancies more than three stories in height or with more than 16 *dwelling* or *sleeping units.*

Exceptions:

1. Where each living unit is separated from other contiguous living units by *fire barriers* having a *fire-resistance rating* of not less than 3/4 hour, and where each living unit has either its own independent *exit* or its own independent stairway or ramp discharging at grade.

2. A separate fire alarm system is not required in buildings that are equipped throughout with an *approved* supervised *automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2 and having a local alarm to notify all occupants.

3. A fire alarm system is not required in buildings that do not have interior *corridors* serving *dwelling units* and are protected by an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, provided that *dwelling units* either have a *means of egress* door opening directly to an exterior *exit access* that leads directly to the *exits* or are served by open-ended *corridors* designed in accordance with Section 1027.6, Exception 3.

4. A fire alarm system is not required in buildings that do not have interior *corridors* serving *dwelling units*, do not exceed three stories in height and comply with both of the following:

   4.1. Each *dwelling unit* is separated from other contiguous *dwelling units* by *fire barriers* having a *fire-resistance rating* of not less than 3/4 hour.

   4.2. Each *dwelling unit* is provided with hard-wired, interconnected smoke alarms as required for new construction in Section 907.2.11.

1103.7.7 Group R-4.

A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in existing Group R-4 residential care/assisted living facilities in accordance with Section 907.2.10.1.

Exceptions:

1. Where there are interconnected smoke alarms meeting the requirements of Section 907.2.11 and there is not less than one manual fire alarm box per floor arranged to continuously sound the smoke alarms.

2. Other manually activated, continuously sounding alarms *approved* by the *fire code official*.

1103.8 Single- and multiple-station smoke alarms.
Single- and multiple-station smoke alarms shall be installed in existing Group I-1 and R occupancies in accordance with Sections 1103.8.1 through 1103.8.3.

1103.8.1 Where required.
Existing Group I-1 and R occupancies shall be provided with single-station smoke alarms in accordance with Section 907.2.11. Interconnection and power sources shall be in accordance with Sections 1103.8.2 and 1103.8.3, respectively.

Exceptions:

1. Where the code that was in effect at the time of construction required smoke alarms and smoke alarms complying with those requirements are already provided.

2. Where smoke alarms have been installed in occupancies and dwellings that were not required to have them at the time of construction, additional smoke alarms shall not be required provided that the existing smoke alarms comply with requirements that were in effect at the time of installation.

3. Where smoke detectors connected to a fire alarm system have been installed as a substitute for smoke alarms.

1103.8.2 Interconnection.
Where more than one smoke alarm is required to be installed within an individual *dwelling* or *sleeping unit*, the smoke alarms shall be interconnected in such a manner that the activation of one alarm will activate all of the alarms in the individual unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

Exceptions:

1. Interconnection is not required in buildings that are not undergoing *alterations*, repairs or construction of any kind.

2. Smoke alarms in existing areas are not required to be interconnected where *alterations* or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or *basement* available that could provide access for interconnection without the removal of interior finishes.

1103.8.3 Power source.
Single-station smoke alarms shall receive their primary power from the building wiring provided that such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery backup shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.

Exceptions:

1. Smoke alarms are permitted to be solely battery operated in existing buildings where construction is not taking place.

2. Smoke alarms are permitted to be solely battery operated in buildings that are not served from a commercial power source.

3. Smoke alarms are permitted to be solely battery operated in existing areas of buildings undergoing *alterations* or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure, unless there is an attic, crawl space or *basement* available that could provide access for building wiring without the removal of interior finishes.

1103.9 Carbon monoxide alarms.
Existing Group I-1, I-2, I-4 and R occupancies shall be equipped with carbon monoxide alarms in accordance with Section 915, except that the carbon monoxide alarms shall be allowed to be solely battery operated.

1103.10 Medical gases.
Medical gases stored and transferred in health-care-related facilities shall be in accordance with Chapter 53.

SECTION 1104
MEANS OF EGRESS FOR EXISTING BUILDINGS

1104.1 General.
Means of egress in existing buildings shall comply with the minimum egress requirements where specified in Table 1103.1 as further enumerated in Sections 1104.2 through 1104.25, and the building code that applied at the time of construction. Where the provisions of this chapter conflict with the building code that applied at the time of construction, the most restrictive provision shall apply. Existing buildings that were not required to comply with a building code at the time of construction shall comply with the minimum egress requirements where specified in Table 1103.1 as further enumerated in Sections 1104.2 through 1104.25.

1104.2 Elevators, escalators and moving walks.
Elevators, escalators and moving walks shall not be used as a component of a required *means of egress.*

Exceptions:

1. Elevators used as an *accessible means of egress* where allowed by Section 1009.4.

2. Previously *approved* elevators, escalators and moving walks in existing buildings.

1104.3 Exit sign illumination.
Exit signs shall be internally or externally illuminated. The face of an exit sign illuminated from an external source shall have an intensity of not less than 5 footcandles (54 lux). Internally illuminated signs shall provide equivalent luminance and be *listed* for the purpose.

Exception: *Approved* self-luminous signs that provide evenly illuminated letters shall have a minimum luminance of 0.06 foot-lamberts (0.21 cd/m^2).

1104.4 Power source.
Where emergency illumination is required in Section 1104.5, exit signs shall be visible under emergency illumination conditions.

Exception: *Approved* signs that provide continuous illumination independent of external power sources are not required to be connected to an emergency electrical system.

1104.5 Illumination emergency power.
Where *means of egress* illumination is provided, the power supply for *means of egress* illumination shall normally be provided by the premises' electrical supply. In the event of power supply failure, illumination shall be automatically provided from an emergency system for the following occupancies where such occupancies require two or more *means of egress*:

1. Group A having 50 or more occupants.

   Exception: Assembly occupancies used exclusively as a place of worship and having an *occupant load* of less than 300.

2. Group B buildings three or more stories in height, buildings with 100 or more occupants above or below a *level of exit discharge* serving the occupants or buildings with 1,000 or more total occupants.

3. Group E in interior *exit access* and *exit stairways* and *ramps*, *corridors*, windowless areas with student occupancy, shops and laboratories.

4. Group F having more than 100 occupants.

   Exception: Buildings used only during daylight hours and that are provided with windows for natural light in accordance with the *International Building Code*.

5. Group I.

6. Group M.

   Exception: Buildings less than 3,000 square feet (279 m^2) in gross sales area on one story only, excluding mezzanines.

7. Group R-1.

Exception: Where each *sleeping unit* has direct access to the outside of the building at grade.

8. Group R-2.

Exception: Where each *dwelling unit* or *sleeping unit* has direct access to the outside of the building at grade.

9. Group R-4.

Exception: Where each *sleeping unit* has direct access to the outside of the building at ground level.

1104.5.1 Emergency power duration and installation.
Emergency power for *means of egress* illumination shall be provided in accordance with Section 604. In other than Group I-2, emergency power shall be provided for not less than 60 minutes for systems requiring emergency power. In Group I-2, essential electrical systems shall comply with Sections 1105.5.1 and 1105.5.2.

1104.6 Guards.
Guards complying with this section shall be provided at the open sides of *means of egress* that are more than 30 inches (762 mm) above the floor or grade below.

1104.6.1 Height of guards.
Guards shall form a protective barrier not less than 42 inches (1067 mm) high.

Exceptions:

1. Existing guards on the open side of exit access and exit *stairways* and *ramps* shall be not less than 30 inches (760 mm) high.

2. Existing *guards* within *dwelling units* shall be not less than 36 inches (910 mm) high.

3. Existing *guards* in assembly seating areas.

1104.6.2 Opening limitations.
Open *guards* shall have balusters or ornamental patterns such that a 6-inch-diameter (152 mm) sphere cannot pass through any opening up to a height of 34 inches (864 mm).

Exceptions:

1. At elevated walking surfaces for access to, and use of, electrical, mechanical or plumbing systems or equipment, guards shall have balusters or be of solid materials such that a sphere with a diameter of 21 inches (533 mm) cannot pass through any opening.

2. In occupancies in Group I-3, F, H or S, the clear distance between intermediate rails measured at right angles to the rails shall not exceed 21 inches (533 mm).

3. *Approved* existing open guards.

1104.7 Size of doors.

The minimum width of each door opening shall be sufficient for the *occupant load* thereof and shall provide a clear width of not less than 28 inches (711 mm). Where this section requires a minimum clear width of 28 inches (711 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 28 inches (711 mm). In ambulatory care facilities, doors serving as *means of egress* from patient treatment rooms or patient sleeping rooms shall provide a clear width of not less than 32 inches (813 mm). In Group I-2, *means of egress* doors where used for the movement of beds shall provide a clear width not less than 41 1/2 inches (1054 mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. The height of door openings shall be not less than 80 inches (2032 mm).

Exceptions:

1. The minimum and maximum width shall not apply to door openings that are not part of the required *means of egress* in occupancies in Groups R-2 and R-3.

2. Door openings to storage closets less than 10 square feet (0.93 m^2) in area shall not be limited by the minimum width.

3. Width of door leafs in revolving doors that comply with Section 1010.1.1 shall not be limited.

4. Door openings within a *dwelling unit* shall be not less than 78 inches (1981 mm) in height.

5. Exterior door openings in *dwelling units*, other than the required *exit* door, shall be not less than 76 inches (1930 mm) in height.

6. *Exit access* doors serving a room not larger than 70 square feet (6.5 m^2) shall be not less than 24 inches (610 mm) in door width.

7. Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the floor.

1104.8 Opening force for doors.

The opening force for interior side-swinging doors without closers shall not exceed a 5-pound (22 N) force. The opening forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position. For other side-swinging, sliding and folding doors, the door latch shall release when subjected to a force of not more than 15 pounds (66 N). The door shall be set in motion when subjected to a force not exceeding 30 pounds (133 N). The door shall swing to a full-open position when subjected to a force of not more than 50 pounds (222 N). Forces shall be applied to the latch side.

1104.9 Revolving doors.

Revolving doors shall comply with the following:

1. A revolving door shall not be located within 10 feet (3048 mm) of the foot or top of *stairways* or escalators. A dispersal area shall be provided between the *stairways* or escalators and the revolving doors.

2. The revolutions per minute for a revolving door shall not exceed those shown in Table 1104.9.

3. Each revolving door shall have a conforming side-hinged swinging door in the same wall as the revolving door and within 10 feet (3048 mm).

Exceptions:

1. A revolving door is permitted to be used without an adjacent swinging door for street-floor elevator lobbies provided a stairway, escalator or door from other parts of the building does not discharge through the lobby and the lobby does not have any occupancy or use other than as a means of travel between elevators and a street.

2. Existing revolving doors where the number of revolving doors does not exceed the number of swinging doors within 20 feet (6096 mm).

TABLE 1104.9
REVOLVING DOOR SPEEDS

INSIDE DIAMETER (feet-inches)	POWER-DRIVEN-TYPE SPEED CONTROL (rpm)	MANUAL-TYPE SPEED CONTROL (rpm)
6-6	11	12
7-0	10	11
7-6	9	11
8-0	9	10
8-6	8	9
9-0	8	9
9-6	7	8
10-0	7	8

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

1104.9.1 Egress component.

A revolving door used as a component of a *means of egress* shall comply with Section 1104.9 and all of the following conditions:

1. Revolving doors shall not be given credit for more than 50 percent of the required egress capacity.

2. Each revolving door shall be credited with not more than a 50-person capacity.

3. Revolving doors shall be capable of being collapsed when a force of not more than 130 pounds (578 N) is applied within 3 inches (76 mm) of the outer edge of a wing.

1104.10 Stair dimensions for existing stairways.

Existing *stairways* in buildings shall be permitted to remain if the rise does not exceed 8 1/4 inches (210 mm) and the run is not less than 9 inches (229 mm). Existing *stairways* can be rebuilt.

Exception: Other *stairways approved* by the *fire code official*.

1104.10.1 Dimensions for replacement stairways.

The replacement of an existing *stairway* in a structure shall not be required to comply with the new *stairway* requirements of Section 1009 where the existing space and construction will not allow a reduction in pitch or slope.

1104.11 Winders.

Existing winders shall be allowed to remain in use if they have a minimum tread depth of 6 inches (152 mm) and a minimum tread depth of 9 inches (229 mm) at a point 12 inches (305 mm) from the narrowest edge.

1104.12 Curved stairways.

Existing curved *stairways* shall be allowed to continue in use, provided the minimum depth of tread is 10 inches (254 mm) and the smallest radius shall be not less than twice the width of the *stairway*.

1104.13 Stairway handrails.

Stairways shall have handrails on at least one side. Handrails shall be located so that all portions of the *stairway* width required for egress capacity are within 44 inches (1118 mm) of a handrail.

Exception: *Aisle stairs* provided with a center handrail are not required to have additional *handrails*.

1104.13.1 Height.

Handrail height, measured above *stair* tread nosings, shall be uniform, not less than 30 inches (762 mm) and not more than 42 inches (1067 mm).

1104.14 Slope of ramps.

Ramp runs utilized as part of a *means of egress* shall have a running slope not steeper than one unit vertical in 10 units horizontal (10-percent slope). The slope of other *ramps* shall not be steeper than one unit vertical in eight units horizontal (12.5-percent slope).

1104.15 Width of ramps.

Existing *ramps* are permitted to have a minimum width of 30 inches (762 mm) but not less than the width required for the number of occupants served as determined by Section 1005.1. In Group I-2, *ramps* serving as a means of egress and used for the movement of patients in beds shall comply with Section 1105.5.4.

1104.16 Fire escape stairways.

Fire escape *stairways* shall comply with Sections 1104.16.1 through 1104.16.7.

1104.16.1 Existing means of egress.
Fire escape *stairways* shall be permitted in existing buildings but shall not constitute more than 50 percent of the required *exit* capacity.

1104.16.2 Protection of openings.
Openings within 10 feet (3048 mm) of fire escape *stairways* shall be protected by opening protectives having a minimum $^{3}/_{4}$ -hour *fire protection rating*.

> **Exception:** In buildings equipped throughout with an *approved automatic sprinkler system*, opening protection is not required.

1104.16.3 Dimensions.
Fire escape *stairways* shall meet the minimum width, capacity, riser height and tread depth as specified in Section 1104.10.

1104.16.4 Access.
Access to a fire escape *stairway* from a *corridor* shall not be through an intervening room. Access to a fire escape *stairway* shall be from a door or window meeting the criteria of Section 1005.1. Access to a fire escape *stairway* shall be directly to a balcony, landing or platform. These shall not be higher than the floor or window sill level and not lower than 8 inches (203 mm) below the floor level or 18 inches (457 mm) below the window sill.

1104.16.5 Materials and strength.
Components of fire escape *stairways* shall be constructed of noncombustible materials. Fire escape *stairways* and balconies shall support the dead load plus a live load of not less than 100 pounds per square foot (4.78 kN/m^2). Fire escape *stairways* and balconies shall be provided with a top and intermediate *handrail* on each side.

> **1104.16.5.1 Examination.**
> Fire escape *stairways* and balconies shall be examined for structural adequacy and safety in accordance with Section 1104.16.5 by a registered design professional or others acceptable to the *fire code official* every 5 years, or as required by the *fire code official*. An inspection report shall be submitted to the *fire code official* after such examination.

1104.16.6 Termination.
The lowest balcony shall not be more than 18 feet (5486 mm) from the ground. Fire escape *stairways* shall extend to the ground or be provided with counterbalanced *stairs* reaching the ground.

> **Exception:** For fire escape *stairways* serving 10 or fewer occupants, an *approved* fire escape ladder is allowed to serve as the termination.

1104.16.7 Maintenance.
Fire escape *stairways* shall be kept clear and unobstructed at all times and shall be maintained in good working order.

1104.17 Corridor construction.

Corridors serving an occupant load greater than 30 and the openings therein shall provide an effective barrier to resist the movement of smoke. Transoms, louvers, doors and other openings shall be kept closed or be self-closing. In Group I-2, corridors in areas housing patient sleeping or care rooms shall comply with Section 1105.4.

Exceptions:

1. *Corridors* in occupancies other than in Group H, that are equipped throughout with an *approved automatic sprinkler system*.

2. *Corridors* in occupancies in Group E where each room utilized for instruction or assembly has not less than one-half of the required *means of egress* doors opening directly to the exterior of the building at ground level.

3. *Corridors* that are in accordance with the *International Building Code*.

1104.17.1 Corridor openings.

Openings in *corridor* walls shall comply with the requirements of the *International Building Code*.

Exceptions:

1. Where 20-minute fire door assemblies are required, solid wood doors not less than 1.75 inches (44 mm) thick or insulated steel doors are allowed.

2. Openings protected with fixed wire glass set in steel frames.

3. Openings covered with 0.5-inch (12.7 mm) gypsum wallboard or 0.75-inch (19.1 mm) plywood on the room side.

4. Opening protection is not required where the building is equipped throughout with an *approved automatic sprinkler system*.

1104.18 Dead end corridors.

Where more than one exit or exit access doorway is required, the *exit access* shall be arranged such that dead ends do not exceed the limits specified in Table 1104.18. In Group I-2, in smoke compartments containing patient sleeping rooms and treatment rooms, dead end *corridors* shall be in accordance with Section 1105.5.6.

Exception: A dead-end passageway or *corridor* shall not be limited in length where the length of the dead-end passageway or *corridor* is less than 2.5 times the least width of the dead-end passageway or *corridor*.

TABLE 1104.18
COMMON PATH, DEAD-END AND TRAVEL DISTANCE LIMITS (by occupancy)

OCCUPANCY	COMMON PATH LIMIT		DEAD-END LIMIT		TRAVEL DISTANCE LIMIT	
	Unsprinklered (feet)	Sprinklered (feet)	Unsprinklered (feet)	Sprinklered (feet)	Unsprinklered (feet)	Sprinklered (feet)

Group A	20/75[a]	20/75[a]	20[b]	20[b]	200	250
Group B[h]	75	100	50	50	200	300
Group E	75	75	20	50	200	250
Group F-1, S-1[d, h]	75	100	50	50	200	250
Group F-2, S-2[d, h]	75	100	50	50	300	400
Group H-1	25	25	0	0	75	75
Group H-2	50	100	0	0	75	100
Group H-3	50	100	20	20	100	150
Group H-4	75	75	20	20	150	175
Group H-5	75	75	20	50	150	200
Group I-1	75	75	20	50	200	250
Group I-2	Notes e, g	Notes e, g	Note f	Note f	150	200[e]
Group I-3	100	100	NR	NR	150[e]	200[e]
Group I-4 (Day care centers)	NR	NR	20	20	200	250
Group M (Covered or open mall)	75	100	50	50	200	400
Group M (Mercantile)	75	100	50	50	200	250
Group R-1 (Hotels)	75	75	50	50	200	250
Group R-2 (Apartments)	75	125	50	50	200	250
Group R-3 (One- and two-family)	NR	NR	NR	NR	NR	NR
Group R-4 (Residential care/assisted living)	NR	NR	NR	NR	NR	NR
Group U[h]	75	100	20	50	300	400

NR = No requirements.

For SI: 1 foot = 304.8 mm, 1 square foot = 0.0929 m^2.

a. 20 feet for common path serving 50 or more persons; 75 feet for common path serving less than 50 persons.

b. See Section 1029.9.5 for dead-end aisles in Group A occupancies.

c. This dimension is for the total travel distance, assuming incremental portions have fully utilized their allowable maximums. For travel distance within the room, and from the room exit access door to the exit, see the appropriate occupancy chapter.

d. See the *International Building Code* for special requirements on spacing of doors in aircraft hangars.

e. In Group I-2, separation of exit access doors within a care recipient sleeping room, or any suite that includes care recipient sleeping rooms, shall comply with Section 1105.5.7.

f. In Group I-2, in smoke compartments containing care recipient sleeping rooms and treatment rooms, dead-end corridors shall comply with Section 1105.5.6.

g. In Group I-2 Condition 2, care recipient sleeping rooms, or any suite that includes care recipient sleeping rooms, shall comply with Section 1105.6.

h. Where a tenant space in Group B, S and U occupancies has an occupant load of not more than 30, the length of a common path of egress travel shall not be more than 100 feet.

1104.19 Exit access travel distance.
Exits shall be located so that the maximum length of exit access travel, measured from the most remote point to an *approved exit* along the natural and unobstructed path of egress travel, does not exceed the distances given in Table 1104.18.

1104.20 Common path of egress travel.
The *common path of egress travel* shall not exceed the distances given in Table 1104.18.

1104.21 Stairway discharge identification.
An interior *exit stairway* or *ramp* that continues below its *level of exit discharge* shall be arranged and marked to make the direction of egress to a *public way* readily identifiable.

Exception: *Stairways* that continue one-half story beyond their *levels of exit discharge* need not be provided with barriers where the *exit discharge* is obvious.

1104.22 Exterior stairway protection.
Exterior exit stairways shall be separated from the interior of the building as required in Section 1027.6. Openings shall be limited to those necessary for egress from normally occupied spaces.

Exceptions:

1. Separation from the interior of the building is not required for buildings that are two stories or less above grade where the *level of exit discharge* serving such occupancies is the first story above grade.

2. Separation from the interior of the building is not required where the exterior *stairway* is served by an exterior balcony that connects two remote exterior *stairways* or other *approved exits*, with a perimeter that is not less than 50 percent open. To be considered open, the opening shall be not less than 50 percent of the height of the enclosing wall, with the top of the opening not less than 7 feet (2134 mm) above the top of the balcony.

3. Separation from the interior of the building is not required for an exterior *stairway* located in a building or structure that is permitted to have unenclosed interior *stairways* in accordance with Section 1023.

4. Separation from the open-ended corridors of the building is not required for exterior *stairways* provided that:

   4.1. The open-ended *corridors* comply with Section 1020.

   4.2. The open-ended *corridors* are connected on each end to an *exterior exit stairway* complying with Section 1027.

   4.3. At any location in an open-ended *corridor* where a change of direction exceeding 45 degrees (0.79 rad) occurs, a clear opening of not less than 35 square feet (3 m^2) or an exterior *stairway* shall be provided. Where clear

openings are provided, they shall be located so as to minimize the accumulation of smoke or toxic gases.

1104.23 Minimum aisle width.
The minimum clear width of *aisles* shall be:

1. Forty-two inches (1067 mm) for aisle stairs having seating on each side.

   Exception: Thirty-six inches (914 mm) where the *aisle* serves less than 50 seats.

2. Thirty-six inches (914 mm) for stepped *aisles* having seating on only one side.

   Exceptions:

   1. Thirty inches (760 mm) for catchment areas serving not more than 60 seats.

   2. Twenty-three inches (584 mm) between a stepped aisle *handrail* and seating where an *aisle* does not serve more than five rows on one side.

3. Twenty inches (508 mm) between a stepped *aisle handrail* or *guard* and seating where the *aisle* is subdivided by the *handrail*.

4. Forty-two inches (1067 mm) for level or ramped *aisles* having seating on both sides.

   Exception: Thirty-six inches (914 mm) where the *aisle* serves less than 50 seats.

5. Thirty-six inches (914 mm) for level or ramped *aisles* having seating on only one side.

   Exception: Thirty inches (760 mm) for catchment areas serving not more than 60 seats.

6. In Group I-2, where *aisles* are used for movement of patients in beds, *aisles* shall comply with Section 1105.5.8.

1104.24 Stairway floor number signs.
Existing *stairways* shall be marked in accordance with Section 1023.9.

1104.25 Egress path markings.
Existing high-rise buildings of Group A, B, E, I, M and R-1 occupancies shall be provided with luminous *egress* path markings in accordance with Section 1025.

Exception: Open, unenclosed stairwells in historic buildings designated as historic under a state or local historic preservation program.

SECTION 1105
CONSTRUCTION REQUIREMENTS FOR EXISTING GROUP I-2

1105.1 General.
Existing Group I-2 shall meet all of the following requirements:

1. The minimum fire safety requirements in Section 1103.

2. The minimum mean of egress requirements in Section 1104.

3. The additional egress and construction requirements in Section 1105.

Where the provisions of this chapter conflict with the construction requirements that applied at the time of construction, the most restrictive provision shall apply.

1105.2 Construction.
Group I-2 Condition 2 shall not be located on a floor level higher than the floor level limitation in Table 1105.2 based on the type of construction.

TABLE 1105.2
FLOOR LEVEL LIMITATIONS FOR GROUP I-2 CONDITION 2

CONSTRUCTION TYPE	AUTOMATIC SPRINKLER SYSTEM	ALLOWABLE FLOOR LEVEL[a]			
		1	2	3	4 or more
IA	Note b	P	P	P	P
	Note c	P	P	P	P
IB	Note b	P	P	P	P
	Note c	P	P	P	P
IIA	Note b	P	P	P	NP
	Note c	P	NP	NP	NP
IIB	Note b	P	P	NP	NP
	Note c	NP	NP	NP	NP
IIIA	Note b	P	P	NP	NP
	Note c	P	NP	NP	NP
IIIB	Note b	P	NP	NP	NP
	Note c	NP	NP	NP	NP
IV	Note b	P	P	NP	NP
	Note c	NP	NP	NP	NP
VA	Note b	P	P	NP	NP
	Note c	NP	NP	NP	NP
VB	Note b	P	NP	NP	NP
	Note c	NP	NP	NP	NP

P = Permitted; NP = Not permitted.
a. Floor level shall be counted based on the number of stories above grade.
b. The building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.
c. The building is equipped with an automatic sprinkler system in accordance with Section 1105.8.

1105.3 Incidental uses in existing Group I-2.
Incidental uses associated with and located within existing single-occupancy or mixed-occupancy Group I-2 buildings and that generally pose a greater level of risk to such occupancies shall comply with the provisions of Sections 1105.3.1 through 1105.3.3.2.1. Incidental uses in Group I-2 occupancies are limited to those listed in Table 1105.3.

TABLE 1105.3

INCIDENTAL USES IN EXISTING GROUP I-2 OCCUPANCIES

ROOM OR AREA	SEPARATION AND/OR PROTECTION
Furnace room where any piece of equipment is over 400,000 Btu per hour input	1 hour or provide automatic sprinkler system
Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower	1 hour or provide automatic sprinkler system
Refrigerant machinery room	1 hour or provide automatic sprinkler system
Hydrogen fuel gas rooms, not classified as Group H	2 hours
Incinerator rooms	2 hours and provide automatic sprinkler system
Paint shops not classified as Group H	2 hours; or 1 hour and provide automatic sprinkler system
Laboratories and vocational shops, not classified as Group H	1 hour or provide automatic sprinkler system
Laundry rooms over 100 square feet	1 hour or provide automatic sprinkler system
Patient rooms equipped with padded surfaces	1 hour or provide automatic sprinkler system
Physical plant maintenance shops	1 hour or provide automatic sprinkler system
Waste and linen collection rooms with containers with total volume of 10 cubic feet or greater	1 hour or provide automatic sprinkler system
Storage rooms greater than 100 square feet	1 hour or provide automatic sprinkler system
Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons for flooded lead-acid, nickel cadmium or VRLA, or more than 1,000 pounds for lithium-ion and lithium metal polymer used for facility standby power, emergency power or uninterruptable power supplies	2 hours

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

1105.3.1 Occupancy classification.
Incidental uses shall not be individually classified in accordance with Section 302.1 of the *International Building Code*. Incidental uses shall be included in the building occupancies within which they are located.

1105.3.2 Area limitations.
Incidental uses shall not occupy more than 10 percent of the building area of the story in which they are located.

1105.3.3 Separation and protection.
The incidental uses listed in Table 1105.3 shall be separated from the remainder of the building or equipped with an *automatic sprinkler system*, or both, in accordance with the provisions of that table.

1105.3.3.1 Separation.
Where Table 1105.3 specifies a fire-resistance-rated separation, the incidental uses

shall be separated from the remainder of the building in accordance with Section 509.4.1 of the *International Building Code*.

1105.3.3.2 Protection.
Where Table 1105.3 permits an *automatic sprinkler system* without a fire-resistance-rated separation, the incidental uses shall be separated from the remainder of the building by construction capable of resisting the passage of smoke in accordance with Section 509.4.2 of the *International Building Code*.

1105.3.3.2.1 Protection limitation.
Except as otherwise specified in Table 1105.2 for certain incidental uses, where an *automatic sprinkler system* is provided in accordance with Table 1105.3, only the space occupied by the incidental use need be equipped with such a system.

1105.4 Corridor construction.
In Group I-2, in areas housing patient sleeping or care rooms, *corridor* walls and the opening protectives therein shall provide a barrier designed to resist the passage of smoke in accordance with Sections 1105.4.1 through 1105.4.7.

1105.4.1 Materials.
The walls shall be of materials permitted by the building type of construction.

1105.4.2 Fire-resistance rating.
Unless required elsewhere in this code, corridor walls are not required to have a fire-resistance rating.

1105.4.3 Corridor wall continuity.
Corridor walls shall extend from the top of the foundation or floor below to one of the following:

1. The underside of the floor or roof sheathing, deck or slab above.
2. The underside of a ceiling above where the ceiling membrane is constructed to limit the passage of smoke.
3. The underside of a lay-in ceiling system where the ceiling system is constructed to limit the passage of smoke and where the ceiling tiles weigh not less than 1 pound per square foot (4.88 kg/m^2)of tile.

1105.4.4 Openings in corridor walls.
Openings in *corridor* walls shall provide protection in accordance with 1105.4.4.1 through 1105.4.4.3.

1105.4.4.1 Windows.
Windows in *corridor* walls shall be sealed to limit the passage of smoke, or the window shall be automatic-closing upon detection of smoke, or the window opening shall be protected by an automatic closing device that closes upon detection of smoke.

Exception: In smoke compartments not containing patient sleeping rooms, pass-through windows or similar openings shall be permitted in accordance with Section 1105.4.4.3.

1105.4.4.2 Doors.
Doors in *corridor* walls shall comply with Sections 1105.4.4.2.1 through 1105.4.4.2.3.

1105.4.4.2.1 Louvers.
Doors in *corridor* walls shall not include louvers, transfer grills or similar openings.

Exception: Doors shall be permitted to have louvers, transfer grills or similar openings at toilet rooms or bathrooms; storage rooms that do not contain storage of flammable or combustible material; and storage rooms that are not required to be separated as incidental uses.

1105.4.4.2.2 Corridor doors.
Doors in *corridor* walls shall limit the transfer of smoke by complying with the following:

1. Doors shall be constructed of not less than 1 3/4 inch-thick (44 mm) solid bonded-core wood or capable of resisting fire not less than 1/3 hour.

   Exception: Corridor doors in buildings equipped throughout with an automatic sprinkler system.

2. Frames for side-hinged swinging doors shall have stops on the sides and top to limit transfer of smoke.

3. Where provided, vision panels in doors shall be a fixed glass window assembly installed to limit the passage of smoke. Existing wired glass panels with steel frames shall be permitted to remain in place.

4. Door undercuts shall not exceed 1 inch (25 mm).

5. Doors shall be positive latching with devices that resist not less than 5 pounds (22.2 N). Roller latches are prohibited.

6. Mail slots or similar openings shall be permitted in accordance with Section 1105.4.4.3.

1105.4.4.2.3 Dutch doors.
Where provided, dutch doors shall comply with Section 1105.4.4.2.2. In addition, dutch doors shall be equipped with latching devices on either the top or bottom leaf to allow leaves to latch together. The space between the leaves shall be protected with devices such as astragals to limit the passage of smoke.

1105.4.4.2.4 Self- or automatic-closing doors.
Where self- or automatic-closing doors are required, closers shall be maintained in operational condition.

1105.4.4.3 Openings in corridor walls and doors.
In other than smoke compartments containing patient sleeping rooms, mail slots, pass-through windows or similar openings shall not be required to be protected where the aggregate area of the openings between the *corridor* and a room are not greater than 80 square inches (51 613 mm^2) and are located with the top edge of any opening not higher than 48 inches above the floor.

1105.4.5 Penetrations.
The space around penetrating items shall be filled with an *approved* material to limit the passage of smoke.

1105.4.6 Joints.
Joints shall be filled with an *approved* material to limit the passage of smoke.

1105.4.7 Ducts and air transfer openings.
The space around a duct penetrating a smoke partition shall be filled with an *approved* material to limit the passage of smoke. Air transfer openings in smoke partitions shall be provided with a smoke damper complying with Section 717.3.2.2 of the *International Building Code*.

Exception: Where the installation of a smoke damper will interfere with the operation of a required smoke control system in accordance with Section 909, approved alternative protection shall be utilized.

1105.5 Means of egress.
In addition to the *means of egress* requirements in Section 1104, Group I-2 facilities shall meet the means of *egress* requirements in Section 1105.5.1 through 1105.5.8.

1105.5.1 Exit signs and emergency illumination.
The power system for exit signs and emergency illumination for the *means of egress* shall provide power for not less than 90 minutes and consist of storage batteries, unit equipment or an on-site generator.

1105.5.2 Emergency power for operational needs.
The essential electrical system shall be capable of supplying services in accordance with NFPA 99.

1105.5.3 Size of door.
Means of egress doors used for the movement of patients in beds shall provide a minimum clear width of 41 1/2 inches (1054 mm). The height of the door opening shall be not less than 80 inches (2032 mm).

Exceptions:

1. Door closers and door stops shall be permitted to be 78 inches (1981 mm) minimum above the floor.

2. In Group I-2 Condition 1, existing means of egress doors used for the movement of patients in beds that provide a minimum clear width of 32 inches (813 mm) shall be permitted to remain.

1105.5.4 Ramps.
In areas where *ramps* are used for movement of patients in beds, the clear width of the *ramp* shall be not less than 48 inches (1219 mm).

1105.5.5 Corridor width.
In areas where *corridors* are used for movement of patients in beds, the clear width of the *corridor* shall be not less than 48 inches (1219 mm).

1105.5.6 Dead-end corridors.
In smoke compartments containing patient sleeping rooms and treatment rooms, dead-end *corridors* shall not exceed 30 feet (9144 mm) unless approved by the *fire code official*.

1105.5.7 Separation of exit access doors.
Patient sleeping rooms, or any suite that includes patient sleeping rooms, of more than 1,000 square feet (92.9 m^2) shall have not less than two exit access doors placed a distance apart equal to not less than one-third of the length of the maximum overall diagonal dimension of the patient sleeping room or suite to be served, measured in a straight line between exit access doors.

1105.5.8 Aisles.
In areas where *aisles* are used for movement of patients in beds, the clear width of the *aisle* shall be not less than 48 inches (1219 mm).

1105.6 Smoke compartments.
Smoke compartments shall be provided in existing Group I-2 Condition 2, in accordance with Sections 1105.6.1 through 1105.6.6.

1105.6.1 Design.
Smoke barriers shall be provided to subdivide each story used for patients sleeping with an occupant load of more than 30 patients into not fewer than two smoke compartments.

1105.6.1.1 Refuge areas.
Refuge areas shall be provided within each smoke compartment. The size of the refuge area shall accommodate the occupants and care recipients from the adjoining smoke compartment. Where a smoke compartment is adjoined by two or more smoke compartments, the minimum area of the refuge area shall accommodate the largest occupant load of the adjoining compartments.

The size of the refuge area shall provide the following:

1. Not less than 30 net square feet (2.8 m^2) for each care recipient confined to a bed or stretcher.

2. Not less than 15 square feet (1.4 m^2) for each resident in a Group I-2 using mobility assistance devices.

3. Not less than 6 square feet (0.56 m^2) for each occupant not addressed in Items 1 and 2.

Areas of spaces permitted to be included in the calculation of the refuge area are *corridors*, sleeping areas, treatment rooms, lounge or dining areas and other low-hazard areas.

1105.6.2 Smoke barriers.
Smoke barriers shall be constructed in accordance with Section 709 of the *International Building Code*.

Exceptions:

1. Existing smoke barriers are permitted to remain where the existing smoke barrier has a minimum fire-resistance rating of 1/2 hour.

2. Smoke barriers shall be permitted to terminate at an atrium enclosure in accordance with Section 404.6 of the *International Building Code*.

1105.6.3 Opening protectives.
Openings in smoke barriers shall be protected in accordance with Section 716 of the *International Building Code*. Opening protectives shall have a minimum fire-protection-rating of 1/3 hour.

Exception: Existing wired glass vision panels in doors shall be permitted to remain.

1105.6.4 Penetrations.
Penetrations of smoke barriers shall comply with the *International Building Code*.

Exception: Approved existing materials and methods of construction.

1105.6.5 Joints.
Joints made in or between smoke barriers shall comply with the *International Building Code*.

Exception: Approved existing materials and methods of construction.

1105.6.6 Duct and air transfer openings.
Penetrations in a smoke barrier by duct and air transfer openings shall comply with Section 717 of the *International Building Code*.

Exception: Where existing duct and air transfer openings in smoke barriers exist without smoke dampers, they shall be permitted to remain. Any changes to existing smoke dampers shall be submitted for review and approved in accordance with Section 717 of the *International Building Code*.

1105.7 Group I-2 care suites.
Care suites in existing Group I-2 Condition 2 occupancies shall comply with Sections 407.4.4 through 407.4.4.6.2 of the *International Building Code*.

1105.8 Group I-2 automatic sprinkler system.
An *automatic sprinkler system* installed in accordance with Section 903.3.1.1 shall be provided throughout existing Group I-2 fire areas. The sprinkler system shall be provided throughout the floor where the Group I-2 occupancy is located, and in all floors between the Group I-2 occupancy and the *level of exit discharge*.

1105.9 Group I-2 automatic fire alarm system.
An automatic fire alarm system shall be installed in existing Group I-2 occupancies in accordance with Section 907.2.6.2.

> **Exception:** Manual fire alarm boxes in patient sleeping areas shall not be required at *exits* if located at all nurses' control stations or other constantly attended staff locations, provided such stations are visible and continuously accessible and that travel distances required in Section 907.4.2.1 are not exceeded.

1105.10 Essential electrical systems.
Essential electrical systems in Group I-2 Condition 2 occupancies shall be in accordance with Sections 1105.10.1 and 1105.10.2.

1105.10.1 Where required.
In Group I-2 Condition 2 occupancies where life support is being provided, an essential electrical system shall be provided in accordance with NFPA 99.

1105.10.2 Installation and duration.
In Group I-2 Condition 2 occupancies, the installation and duration of operation of existing essential electrical systems shall be based on a hazard vulnerability analysis conducted in accordance with NFPA 99.

SECTION 1106
REQUIREMENTS FOR OUTDOOR OPERATIONS

1106.1 Tire storage yards.
Existing tire storage yards shall be provided with fire apparatus access roads in accordance with Sections 1106.1.1 and 1106.1.2.

1106.1.1 Access to piles.
Access roadways shall be within 150 feet (45 720 mm) of any point in the storage yard where storage piles are located not less than 20 feet (6096 mm) from any storage pile.

1106.1.2 Location within piles.
Fire apparatus access roads shall be located within all pile clearances identified in Section 3405.4 and within all fire breaks required in Section 3405.5.

CHAPTER 20 CHANGES

2003.8 Posted Information.
Information required to be posted by Sections 2003.8.1 and 2003.8.2 of the shall be posted on an approved sign.

2003.8.1 Allowable wing height.
Where unit heaters are provided in accordance with exception 1 of Section 412.4.4 of the *International Building Code t*he maximum wing height shall be posted.

2003.8.2 Allowable fuel capacity.
The maximum allowable fuel quantity for a hangar shall be posted. Where multiple hangars are located within a fire area the maximum allowable fuel quantity for the fire area will be posted in each hanger.

2003.8.3 Location.
Information required to be posted by Sections 2003.8..1 and 2003.8..2 shall be located on the interior side and adjacent to the door provided for the aircraft entrance.

CHAPTER 21 NO CHANGES

CHAPTER 22 NO CHANGES

CHAPTER 23 CHANGES

2306.2.3 Above-ground tanks located outside, above grade.
Above-ground tanks shall not be used for the storage of Class I, II or III liquid motor fuels, except as provided by this section.

1. Above-ground tanks used for outside, above-grade storage of Class I liquids shall be *listed* and *labeled* as protected above-ground tanks in accordance with UL 2085 and shall be in accordance with Chapter 57. Such tanks shall be located in accordance with Table 2306.2.3.

2. Above-ground tanks used for outside, above-grade storage of Class II or IIIA liquids shall be *listed* and *labeled* as protected above-ground tanks in accordance with UL 2085 and shall be installed in accordance with Chapter 57. Tank locations shall be in accordance with Table 2306.2.3.

   Exception: Other above-ground tanks that comply with Chapter 57 where *approved* by the *fire code official*.

3. Tanks containing fuels shall not exceed 12,000 gallons (45 420 L) in individual capacity or 48,000 gallons (181 680 L) in aggregate capacity. Installations with the maximum allowable aggregate capacity shall be separated from other such installations by not less than 100 feet (30 480 mm).

4. Tanks located at farms, construction projects, or rural areas shall comply with Section 5706.2.

5. Above-ground tanks used for outside above-grade storage of Class IIIB liquid motor fuel shall be *listed* and *labeled* in accordance with UL 142 or *listed* and *labeled* as protected above-ground tanks in accordance with UL 2085 and shall be installed in accordance with Chapter 57. Tank locations shall be in accordance with Table 2306.2.3.

6. Fleet service stations. Listed UL 142 above ground storage tanks with spill control, 1,100 gallons (4164L) or less in capacity, shall be permitted to be used to store Class I liquids at fleet service stations.

2306.2.3.1 Kerosene storage. The provisions of Section 2306.1 shall not prohibit above-ground tanks and dispensers for K-1 kerosene when the following conditions are met:

1. The maximum individual and aggregate tank capacity shall be 660 gallons (2498L).

   Exception: Individual and aggregate tank capacities up to a maximum of 1000 gallons (3785L) where tanks are installed in vaults that comply with 3404.2.8.

2. Only listed UL 142 tanks with spill control in accordance with NFPA 30 shall be used.

   Exception: Listed secondary containment-type tanks provided that:

   (a) An internal emergency shear valve is installed whenever piping connections are made below the liquid level of the tank; and

   (b) Where the interstitial space is enclosed, emergency venting is installed in accordance with NFPA 30.

3. Normal tank venting shall be provided in accordance with Chapter 34.

4. Tanks shall be equipped with emergency venting that will not permit pressures to exceed 2.5 psig (17.2kPa).

5. Pumps and dispenser shall be listed.

6. Electrical equipment shall comply with Section 3403.1

7. Vehicle impact protection shall be provided in accordance with Section 2306.4.

8. Dispensing devices shall be located at 20 feet (6096 mm) from any dispenser of vehicle fuels, LPG, LNG, or CNG.

9. Tanks and dispensers shall be located at least 5 feet (1524 mm) from buildings on the same lot.

10. Tanks and dispensers shall be located at least 20 feet (6096 mm) from the nearest side of a public way, and at least 20 feet (6096 mm) from any lot line including the opposite side of a public way.

11. Dispensing devices shall be located such that when the hose is fully extended, the nozzle shall not reach within 5 feet (1524 mm) of any building opening.

12. Dispensers shall be visible from the attendant's station. Mirrors or video cameras utilized to achieve compliance with this item shall be approved by the code official.

13. Only approved containers shall be filled from these tanks and dispensers. Vehicles shall not be fueled from them.

14. Portable fire extinguishers shall be provided in accordance with Section 2305.5.

2307.1 General.
Motor fuel-dispensing facilities for liquefied petroleum gas (LP-gas) fuel shall be in accordance with ~~this section and~~ Chapter 61. The license required by the North Carolina Department of Agriculture and shall be readily available upon request.

~~**2307.2 Approvals.**~~
~~Storage vessels and equipment used for the storage or dispensing of LP-gas shall be *approved* or *listed* in accordance with Sections 2307.2.1 and 2307.2.2.~~

~~**2307.2.1 Approved equipment.**~~
~~Containers, pressure relief devices (including pressure relief valves), pressure regulators and piping for LP-gas shall be *approved*.~~

~~**2307.2.2 Listed equipment.**~~
~~Hoses, hose connections, vehicle fuel connections, dispensers, LP-gas pumps and electrical equipment used for LP-gas shall be *listed*.~~

~~**2307.3 Attendants.**~~
~~Motor fuel-dispensing operations for LP-gas shall be conducted by qualified attendants or in accordance with Section 2307.6 by persons trained in the proper handling of LP-gas.~~

~~**2307.4 Location of dispensing operations and equipment.**~~
~~The point of transfer for LP-gas dispensing operations shall be separated from buildings and other exposures in accordance with the following:~~

~~1. Not less than 25 feet (7620 mm) from buildings where the *exterior wall* is not part of a fire-resistance-rated assembly having a rating of 1 hour or greater.~~

~~2. Not less than 25 feet (7620 mm) from combustible overhangs on buildings, measured from a vertical line dropped from the face of the overhang at a point nearest the point of transfer.~~

~~3. Not less than 25 feet (7620 mm) from the lot line of property that can be built upon.~~

4. Not less than 25 feet (7620 mm) from the centerline of the nearest mainline railroad track.

5. Not less than 10 feet (3048 mm) from public streets, highways, thoroughfares, sidewalks and driveways.

6. Not less than 10 feet (3048 mm) from buildings where the *exterior wall* is part of a fire-resistance-rated assembly having a rating of 1 hour or greater.

Exception: The point of transfer for LP-gas dispensing operations need not be separated from canopies that are constructed in accordance with the *International Building Code* and that provide weather protection for the dispensing equipment.

LP-gas containers shall be located in accordance with Chapter 61. LP-gas storage and dispensing equipment shall be located outdoors.

2307.5 Additional requirements for LP-gas dispensers and equipment.
LP-gas dispensers and related equipment shall comply with the following provisions.

1. Pumps shall be fixed in place and shall be designed to allow control of the flow and to prevent leakage and accidental discharge.

2. Dispensing devices installed within 10 feet (3048 mm) of where vehicle traffic occurs shall be protected against physical damage by mounting on a concrete island 6 inches (152 mm) or more in height, or shall be protected in accordance with Section 312.

3. Dispensing devices shall be securely fastened to their mounting surface in accordance with the dispenser manufacturer's instructions.

2307.6 Installation of LP-gas dispensing devices and equipment.
The installation and operation of LP-gas dispensing systems shall be in accordance with Sections 2307.6.1 through 2307.6.4 and Chapter 61. LP-gas dispensers and dispensing stations shall be installed in accordance with the manufacturer's specifications and their listing.

2307.6.1 Product control valves.
The dispenser system piping shall be protected from uncontrolled discharge in accordance with the following:

1. Where mounted on a concrete base, a means shall be provided and installed within $1/2$ inch (12.7 mm) of the top of the concrete base that will prevent flow from the supply piping in the event that the dispenser is displaced from its mounting.

2. A manual shutoff valve and an excess flow-control check valve shall be located in the liquid line between the pump and the dispenser inlet where the dispensing device is installed at a remote location and is not part of a complete storage and dispensing unit mounted on a common base.

3. An excess flow control check valve or an emergency shutoff valve shall be installed in or on the dispenser at the point at which the dispenser hose is connected to the liquid piping.

4. A *listed* automatic-closing type hose nozzle valve with or without a latch-open device shall be provided on island-type dispensers.

2307.6.2 Hoses.
Hoses and piping for the dispensing of LP-gas shall be provided with hydrostatic relief valves. The hose length shall not exceed 18 feet (5486 mm). An *approved* method shall be provided to protect the hose against mechanical damage.

2307.6.3 Emergency breakaway devices.
Dispenser hoses shall be equipped with a *listed* emergency breakaway device designed to retain liquid on both sides of the breakaway point. Where hoses are attached to hose-retrieving mechanisms, the emergency breakaway device shall be located such that the breakaway device activates to protect the dispenser from being displaced.

2307.6.4 Vehicle impact protection.
Where installed within 10 feet of vehicle traffic, LP-gas storage containers, pumps and dispensers shall be protected in accordance with Section 2307.5, Item 2.

2307.7 Public fueling of on road motor vehicles.
Self-service LP-gas dispensing systems, including key, code and card lock dispensing systems, shall be limited to the filling of permanently mounted containers providing fuel to the LP-gas powered vehicle.

The requirements for self-service LP-gas dispensing systems shall be in accordance with the following:

1. The arrangement and operation of the transfer of product into a vehicle shall be in accordance with this section and Chapter 61.

2. The system shall be provided with an emergency shutoff switch located within 100 feet (30 480 mm) of, but not less than 20 feet (6096 mm) from, dispensers.

3. The *owner* of the LP-gas motor fuel-dispensing facility or the owner's designee shall provide for the safe operation of the system and the training of users.

4. The dispenser and hose-end valve shall release not more than $\frac{1}{8}$ fluid ounce (4 cc) of liquid to the atmosphere upon breaking the connection with the fill valve on the vehicle.

5. Portable fire extinguishers shall be provided in accordance with Section 2305.5.

6. Warning signs shall be provided in accordance with Section 2305.6.

7. The area around the dispenser shall be maintained in accordance with Section 2305.7.

~~**2307.8 Overfilling.**~~

~~LP-gas containers shall not be filled with LP-gas in excess of the volume determined using the fixed maximum liquid level gauge installed on the container, the volume determined by the overfilling prevention device installed on the container or the weight determined by the required percentage of the water capacity marked on the container.~~

CHAPTER 24 NO CHANGES

CHAPTER 25 NO CHANGES

CHAPTER 26 NO CHANGES

CHAPTER 27 NO CHANGES

CHAPTER 28 CHANGES

2804.4 Automatic sprinkler systems.

Automatic sprinkler systems, where required, shall be installed in accordance with Section 903.3.1.1.

CHAPTER 29 NO CHANGES

CHAPTER 30 NO CHANGES

CHAPTER 31 CHANGES

3103.2 Approval required.

Tents and membrane structures having an area in excess of 400 square feet (37 m^2) shall not be erected, operated or maintained for any purpose without first obtaining a permit and approval from the *fire code official*.

Exceptions:

1. Tents used exclusively for recreational camping purposes.

2. Tents open on all sides that comply with all of the following:

    2.1. Individual tents having a maximum size of 700 square feet (65 m^2).

    2.2. The aggregate area of multiple tents placed side by side without a fire break clearance of 12 feet (3658 mm), not exceeding 700 square feet (65 m^2) total.

2.3. A minimum clearance of 12 feet (3658 mm) to all structures and other tents.

3. Funeral tents and curtains or extensions attached thereto, when used for funeral services.

3103.8.5 Connecting corridors.
Tents or membrane structures are allowed to be joined together by means of corridors. *Exit* doors shall be provided at each end of such corridor. On each side of such corridor and approximately opposite each other, there shall be provided openings not less than ~~12~~ 10 feet (~~3658~~ 3048 mm) wide.

TABLE 3103.12.2
MINIMUM NUMBER OF MEANS OF EGRESS AND MEANS OF EGRESS WIDTHS FROM TEMPORARY MEMBRANE STRUCTURES AND TENTS

OCCUPANT LOAD	MINIMUM NUMBER OF MEANS OF EGRESS	MINIMUM WIDTH OF EACH MEANS OF EGRESS (inches)	MINIMUM WIDTH OF EACH MEANS OF EGRESS (inches)
		Tent	Membrane Structure
10 to 199	2	72	36
200 to 499	3	72	72
500 to 999	4	96	72
1,000 to 1,999	5	120	96
	7	96	
2,000 to 2,999	6	120	96
	8	96	
Over 3,000[a]	7	120	96
	9	96	

For SI: 1 inch = 25.4 mm.

a. When the occupant load exceeds 3,000, the total width of means of egress (in inches) shall be not less than the total occupant load multiplied by 0.2 inches per person.

3103.12.6.1 Exit sign illumination.
Exit signs shall be either *listed* and *labeled* in accordance with UL 924 as the internally illuminated type and used in accordance with the listing or shall be externally illuminated by luminaires supplied in either of the following manners:

1. Two separate circuits, one of which shall be separate from all other circuits, for *occupant loads* of 300 or less.

2. Two separate sources of power, one of which shall be an *approved* emergency system, shall be provided where the *occupant load* exceeds 300. Emergency systems shall be supplied from storage batteries or from the on-site generator set, and the system shall be installed in accordance with NFPA 70. The emergency system provided shall have a minimum duration of 90 minutes when operated at full design demand.

Exception: Exit signs are not required to be illuminated on tents open on all sides used exclusively during daylight hours.

3103.12.7 Means of egress illumination.
Means of egress shall be illuminated with light having an intensity of not less than 1 foot candle (11 lux) at floor level while the structure is occupied. Fixtures required for *means of egress* illumination shall be supplied from a separate circuit or source of power.

Exception: Means of egress illumination is not required in tents open on all sides used exclusively during daylight hours.

3104.21 Combustible vegetation.
~~Combustible~~ Readily ignitable vegetation that could create a fire hazard shall be removed from the area occupied by a tent or membrane structure, and from areas within 30 feet (9144 mm) of such structures.

CHAPTER 32 NO CHANGES

CHAPTER 33 NO CHANGES

CHAPTER 34 CHANGES

New tire storage yards shall be provided with fire apparatus access roads in accordance with Section 503 and Section 3406.2. ~~Existing tire storage yards shall be provided with fire apparatus access roads where required in Chapter 11.~~

CHAPTER 35 NO CHANGES

CHAPTER 36 CHANGES

3602.1 Definitions.
The following terms are defined in Chapter 2:

FLOAT.

MARINA.

PIER.

PRIVATE WATERFRONT STRUCTURE.

PUBLIC WATERFRONT STRUCTURE.

VESSEL.

WHARF.

3604.1 General.
Piers, marinas and wharves with facilities for mooring or servicing five or more vessels, and marine motor fuel-dispensing facilities shall be equipped with fire protection equipment in accordance with Sections 3604.2 through 3604.6.

Exception: Private Waterfront Structures

CHAPTER 37 NO CHANGES

CHAPTER 50 CHANGES

5001.5 Permits.
Permits shall be required as set forth in Sections 105.6 and 105.7.

~~When required by the *fire code official*,~~ ~~permittees~~ Permittees shall apply for approval to permanently close a storage, use or handling facility. Such application shall be submitted not less than 30 days prior to the termination of the storage, use or handling of hazardous materials. The *fire code official* is authorized to require that the application be accompanied by an *approved* facility closure plan in accordance with Section 5001.6.3.

5001.5.1 Hazardous Materials Management Plan.
~~Where required by the *fire code official*,~~ ~~an~~ An application for a permit shall include a Hazardous Materials Management Plan (HMMP), in accordance with Appendix H. The HMMP shall include a facility site plan designating the following:

1. Access to each storage and use area.
2. Location of emergency equipment.
3. Location where liaison will meet emergency responders.
4. Facility evacuation meeting point locations.
5. The general purpose of other areas within the building.
6. Location of all above-ground and underground tanks and their appurtenances including, but not limited to, sumps, vaults, below-grade treatment systems and piping.
7. The hazard classes in each area.
8. Locations of all control areas and Group H occupancies.
9. Emergency *exits*.

5001.5.2 Hazardous Materials Inventory Statement (HMIS).
~~Where required by the *fire code official*, an~~ An application for a permit shall include an HMIS, such as Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III,

Tier II Report or other *approved* statement in accordance with Appendix H. The HMIS shall include the following information:

1. Product name.
2. Component.
3. Chemical Abstract Service (CAS) number.
4. Location where stored or used.
5. Container size.
6. Hazard classification.
7. Amount in storage.
8. Amount in use-*closed systems*.
9. Amount in use-*open systems*.

CHAPTER 51 NO CHANGES

CHAPTER 53 CHANGES

5301.1 Scope.
Storage, use and handling of *compressed gases* in *compressed gas* containers, cylinders, tanks and systems shall comply with this chapter and NFPA 55, including those gases regulated elsewhere in this code. Partially full *compressed gas* containers, cylinders or tanks containing residual gases shall be considered as full for the purposes of the controls required.

Liquefied natural gas for use as a vehicular fuel shall also comply with NFPA 52 and NFPA 59A.

Compressed gases classified as hazardous materials shall also comply with Chapter 50 for general requirements and chapters addressing specific hazards, including Chapters 58 (Flammable Gases), 60 (Highly Toxic and Toxic Materials), 63 (Oxidizers, Oxidizing Gases and Oxidizing Cryogenic Fluids) and 64 (Pyrophoric Materials).

Compressed hydrogen (CH_2) for use as a vehicular fuel shall also comply with Chapters 23 and 58 of this code, the *International Fuel Gas Code* and NFPA 2.

Cutting and welding gases shall also comply with Chapter 35.

LP-gas shall ~~also~~ comply with Chapter 61 ~~and the~~, *International Fuel Gas Code*~~.~~ and Chapter 119, Article 5 of the General Statutes and the North Carolina Administrative Code, Title 2, Chapter 38, Section .0700.

CHAPTER 54 NO CHANGES

CHAPTER 55 NO CHANGES

CHAPTER 56 CHANGES

5601.1 Scope.
The provisions of this chapter shall govern the possession, manufacture, storage, handling, sale and use of *explosives*, *explosive materials*, fireworks and small arms ammunition.

Exceptions:

1. The Armed Forces of the United States, Coast Guard or National Guard.
2. *Explosives* in forms prescribed by the official United States Pharmacopoeia.
3. The possession, storage and use of small arms ammunition where packaged in accordance with DOTn packaging requirements.
4. The possession, storage and use of not more than 1 pound (0.454 kg) of commercially manufactured sporting black powder, 20 pounds (9 kg) of smokeless powder and 10,000 small arms primers for hand loading of small arms ammunition for personal consumption.
5. The use of *explosive materials* by federal, state and local regulatory, law enforcement and fire agencies acting in their official capacities.
6. Special industrial *explosive* devices that in the aggregate contain less than 50 pounds (23 kg) of *explosive materials*.
7. The possession, storage and use of blank industrial-power load cartridges where packaged in accordance with DOTn packaging regulations.
8. Transportation in accordance with DOTn 49 CFR Parts 100–185.
9. Items preempted by federal regulations.
10. The possession, storage, transportation and use of explosive materials by companies permitted under the provisions of North Carolina General Statute, Chapter 74, Article 7

5601.2.4.2 Fireworks display.
The permit holder shall furnish a ~~bond or~~ certificate of insurance in an amount ~~deemed adequate by the *fire code official*~~ specified by NC G.S. 14-413 (d) for the payment of all potential damages to a person or persons or to property by reason of the permitted display, and arising from any acts of the permit holder, the agent, employees or subcontractors.

5602.1 Definitions.
The following terms are defined in Chapter 2:

AMMONIUM NITRATE.

BARRICADE.

Artificial barricade.

Natural barricade.

BARRICADED.

BLAST AREA.

BLAST SITE.

BLASTER.

BLASTING AGENT.

BULLET RESISTANT.

DETONATING CORD.

DETONATION.

DETONATOR.

DISCHARGE SITE.

DISPLAY OPERATOR.

DISPLAY OPERATOR'S LICENSE.

DISPLAY SITE.

EXPLOSIVE.

High explosive.

Low explosive.

Mass-detonating explosives.

UN/DOTn Class 1 explosives.

Division 1.1.

Division 1.2.

Division 1.3.

Division 1.4.

Division 1.5.

Division 1.6.

EXPLOSIVE MATERIAL.

FALLOUT AREA.

FIREWORKS.

Fireworks, 1.4G.

Fireworks, 1.3G.

FIREWORKS DISPLAY.

HIGHWAY.

INHABITED BUILDING.

MAGAZINE.

Indoor.

Type 1.

Type 2.

Type 3.

Type 4.

Type 5.

MORTAR.

NET EXPLOSIVE WEIGHT (net weight).

OPERATING BUILDING.

OPERATING LINE.

PLOSOPHORIC MATERIAL.

PROXIMATE AUDIENCE.

PUBLIC TRAFFIC ROUTE (PTR).

PYROTECHNIC ARTICLE.

PYROTECHNIC COMPOSITION.

PYROTECHNIC SPECIAL EFFECT.

PYROTECHNIC SPECIAL-EFFECT MATERIAL.

PYROTECHNICS.

QUANTITY-DISTANCE (Q-D).

Inhabited building distance (IBD).

Intermagazine distance (IMD).

Intraline distance (ILD) or Intraplant distance (IPD).

Minimum separation distance (D_o).

RAILWAY.

READY BOX.

SMALL ARMS AMMUNITION.

SMALL ARMS PRIMERS.

SMOKELESS PROPELLANTS.

SPECIAL INDUSTRIAL EXPLOSIVE DEVICE.

THEFT RESISTANT.

5608.2 Permit application.
Prior to issuing permits for a fireworks display, plans for the fireworks display, inspections of the display site and demonstrations of the display operations shall be *approved*. A plan establishing procedures to follow and actions to be taken in the event that a shell fails to ignite in, or discharge from, a mortar or fails to function over the fallout area or other malfunctions shall be provided to the *fire code official*. Prior to issuing any fireworks permits regulated by this code, the fire code official shall verify that permission has been granted to conduct a fireworks display in accordance with NC G.S. 14-410.

5608.3 Approved fireworks displays.
Approved fireworks displays shall include only the *approved* fireworks 1.1G, fireworks, 1.3G, fireworks 1.4G, fireworks 1.4S and pyrotechnic articles, 1.4G, which shall be handled by an *approved*, competent operator. The *approved* fireworks shall be arranged, located, discharged

and fired in a manner that will not pose a hazard to property or endanger any person. Approved Division 1.1G, 1.3G and 1.4G displays shall be handled by a display operator possessing a Display Operator's License issued by the Office of State Fire Marshal. Prior to granting approval to any fireworks display the fire code official shall verify that the display operator and the display operator's assistants are properly licensed in accordance with the NC Fireworks Display Operator's rules, NC G.S. 58 Article 82A and 11 NCAC 5D.

SECTION 5610
RETAIL SALES OF CONSUMER FIREWORKS

5610.1 Fireworks allowed by NC General Statute 14-414 shall be permitted to be sold or possessed without a permit. A minimum of one pressurized water fire extinguisher complying with Section 906 shall be located not more than 15 feet (4572 mm) and not less than 10 feet (3048 mm) from the hazard. "No Smoking" signs complying with Section 310 shall be posted in areas where fireworks are stored or displayed for retail sale. No sale of fireworks shall be made to persons less than 16 years of age per NC G.S 14-410.

CHAPTER 57 CHANGES

5704.2.7.3.2 Vent-line flame arresters and pressure-vacuum vents.
Listed or *approved* flame arresters or pressure-vacuum (PV) vents that remain closed unless venting under pressure or vacuum conditions shall be installed in normal vents of tanks containing Class IB and IC liquids.

~~**Exception:** Where determined by the *fire code official* that the use of such devices can result in damage to the tank.~~

Vent-line flame arresters shall be installed in accordance with their listing or API 2000 and maintained in accordance with Section 21.8.6 of NFPA 30 or API 2000. In-line flame arresters in piping systems shall be installed and maintained in accordance with their listing or API 2028. Pressure-vacuum vents shall be installed in accordance with Section 21.4.3 of NFPA 30 or API 2000 and maintained in accordance with Section 21.8.6 of NFPA 30 or API 2000.

5704.2.9.5.2 Fill pipe connections.
Fill pipe connections for tanks storing Class I, II and III~~A liquids and Class IIIB~~ liquids connected to fuel-burning equipment shall be in accordance with Section 5704.2.9.7.6.

5704.2.13.1.3 Out of service for one year.
Underground tanks that have been out of service for a period of one year shall be removed from the ground in accordance with Section 5704.2.14 or abandoned in place in accordance with Section 5704.2.13.1.4.

Exception. Underground tanks and connected piping that comply with NC Underground Storage Tank operating permit requirements for new or upgraded systems may remain out of service indefinitely so long as they remain in compliance with the operation, maintenance and release detection requirements and are safeguarded in accordance with Section 5704.2.13.1.2.

CHAPTER 58 CHANGES

5803.1.1 Special limitations for indoor storage and use.
Flammable gases shall not be stored or used in Group A, E, I or R occupancies or in offices in Group B occupancies.

Exceptions:

1. Cylinders of nonliquefied *compressed gases* not exceeding a capacity of 250 cubic feet (7.08 m^3) or liquefied gases not exceeding a capacity of 40 pounds (18 kg) each at *normal temperature and pressure (NTP)* used for maintenance purposes, patient care or operation of equipment.

~~2. Food service operations in accordance with Section 6103.2.1.7.~~

~~3~~2. Hydrogen gas systems located in a hydrogen fuel gas room constructed in accordance with Section 421 of the *International Building Code*.

CHAPTER 59 NO CHANGES

CHAPTER 60 NO CHANGES

CHAPTER 61 CHANGES

6101.1 Scope.
~~Storage, handling and transportation of liquefied petroleum gas (LP-gas) and the installation of LP-gas equipment pertinent to systems for such uses shall comply with this chapter and NFPA 58. Properties of LP-gases shall be determined in accordance with Appendix B of NFPA 58.~~
The storage, handling and transportation of liquefied petroleum gas and the installation of all equipment pertinent to systems for such uses upstream of the outlet of the first stage regulator shall be governed by Chapter 119, Article 5 of the General Statutes of North Carolina and by the North Carolina Administrative Code, Title 2, Chapter 38.

6101.2 Permits.
~~Permits shall be required as set forth in Sections 105.6 and 105.7~~. For permits see Chapter 1.

Distributors shall not fill an LP-gas container for which a permit is required unless a permit for installation has been issued for that location by the *fire code official*.

6101.3 ~~Construction documents.~~
~~Where a single LP-gas container is more than 2,000 gallons (7570 L) in water capacity or the aggregate water capacity of LP-gas containers is more than 4,000 gallons (15 140 L), the installer shall submit *construction documents* for such installation.~~
DELETED.

6101.4. Inspection. It shall be the duty of the North Carolina Department of Agriculture and Consumer Services to inspect liquefied petroleum gas installations to determine if the provisions of this chapter are being complied with.

6101.5. Installation. All liquefied petroleum gas equipment including such equipment installed at utility gas plants shall be installed in accordance with the provisions of NFPA 58 and NFPA 59, except as otherwise provided in this chapter or in other statutes or regulations.

SECTION 6102
DEFINITIONS

6102.1 Definitions.
The following terms are defined in Chapter 2:

LIQUEFIED PETROLEUM GAS (LP-gas).

LP-GAS CONTAINER.

SECTION 6103
INSTALLATION **OF EQUIPMENT**
DELETED.

~~**6103.1** General.~~
~~LP-gas equipment shall be installed in accordance with the *International Fuel Gas Code* and NFPA 58, except as otherwise provided in this chapter.~~

~~**6103.2** Use of LP-gas containers in buildings.~~
~~The use of LP-gas containers in buildings shall be in accordance with Sections 6103.2.1 and 6103.2.2.~~

~~**6103.2.1** Portable containers.~~
~~Portable LP-gas containers, as defined in NFPA 58, shall not be used in buildings except as specified in NFPA 58 and Sections 6103.2.1.1 through 6103.2.1.7.~~

~~**6103.2.1.1** Use in basement, pit or similar location.~~
~~LP-gas containers shall not be used in a basement, pit or similar location where heavier-than-air gas might collect. LP-gas containers shall not be used in an above-grade underfloor space or basement unless such location is provided with an *approved* means of ventilation.~~

Exception: Use with self-contained torch assemblies in accordance with Section 6103.2.1.6.

6103.2.1.2 Construction and temporary heating.
Portable LP-gas containers are allowed to be used in buildings or areas of buildings undergoing construction or for temporary heating as set forth in Sections 6.19.4, 6.19.5 and 6.19.8 of NFPA 58.

6103.2.1.3 Group F occupancies.
In Group F occupancies, portable LP-gas containers are allowed to be used to supply quantities necessary for processing, research or experimentation. Where manifolded, the aggregate water capacity of such containers shall not exceed 735 pounds (334 kg) per manifold. Where multiple manifolds of such containers are present in the same room, each manifold shall be separated from other manifolds by a distance of not less than 20 feet (6096 mm).

6103.2.1.4 Group E and I occupancies.
In Group E and I occupancies, portable LP-gas containers are allowed to be used for research and experimentation. Such containers shall not be used in classrooms. Such containers shall not exceed a 50-pound (23 kg) water capacity in occupancies used for educational purposes and shall not exceed a 12-pound (5 kg) water capacity in occupancies used for institutional purposes. Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20 feet (6096 mm).

6103.2.1.5 Demonstration uses.
Portable LP-gas containers are allowed to be used temporarily for demonstrations and public exhibitions. Such containers shall not exceed a water capacity of 12 pounds (5 kg). Where more than one such container is present in the same room, each container shall be separated from other containers by a distance of not less than 20 feet (6096 mm).

6103.2.1.6 Use with self-contained torch assemblies.
Portable LP-gas containers are allowed to be used to supply *approved* self-contained torch assemblies or similar appliances. Such containers shall not exceed a water capacity of $2\frac{1}{2}$ pounds (1 kg).

6103.2.1.7 Use for food preparation.
Where *approved*, *listed* LP-gas commercial food service appliances are allowed to be used for food preparation within restaurants and in attended commercial food-catering operations in accordance with the *International Fuel Gas Code*, the *International Mechanical Code* and NFPA 58.

6103.2.2 Industrial vehicles and floor maintenance machines.
LP-gas containers on industrial vehicles and floor maintenance machines shall comply with Sections 11.13 and 11.14 of NFPA 58.

6103.3 Location of equipment and piping.
Equipment and piping shall not be installed in locations where such equipment and piping is prohibited by the *International Fuel Gas Code*.

SECTION 6104
LOCATION **OF LP-GAS CONTAINERS**
DELETED.

6104.1 General.
The storage and handling of LP-gas and the installation and maintenance of related equipment shall comply with NFPA 58 and be subject to the approval of the *fire code official*, except as provided in this chapter.

6104.2 Maximum capacity within established limits.
Within the limits established by law restricting the storage of liquefied petroleum gas for the protection of heavily populated or congested areas, the aggregate capacity of any one installation shall not exceed a water capacity of 2,000 gallons (7570 L) (see Section 3 of the Sample Legislation for Adoption of the *International Fire Code* on page xxi).

Exception: In particular installations, this capacity limit shall be determined by the *fire code official*, after consideration of special features such as topographical conditions, nature of occupancy, and proximity to buildings, capacity of proposed LP-gas containers, degree of fire protection to be provided and capabilities of the local fire department.

6104.3 Container location.
LP-gas containers shall be located with respect to buildings, *public ways* and *lot lines* of adjoining property that can be built upon, in accordance with Table 6104.3.

TABLE 6104.3
LOCATION OF LP-GAS CONTAINERS

LP-GAS CONTAINER CAPACITY (water gallons)	MINIMUM SEPARATION BETWEEN LP-GAS CONTAINERS AND BUILDINGS, PUBLIC WAYS OR LOT LINES OF ADJOINING PROPERTY THAT CAN BE BUILT UPON		MINIMUM SEPARATION BETWEEN LP-GAS CONTAINERS[b, c] (feet)
	Mounded or underground LP-gas containers[a] (feet)	Above-ground LP-gas containers[b] (feet)	
Less than 125[c, d]	10	5[e]	None
125 to 250	10	10	None
251 to 500	10	10	3
501 to 2,000	10	25[e, f]	3
2,001 to 30,000	50	50	5
30,001 to 70,000	50	75	(0.25 of sum of diameters of adjacent LP-gas containers)
70,001 to 90,000	50	100	
90,001 to 120,000	50	125	

For SI: 1 foot = 304.8 mm, 1 gallon = 3.785 L.
a. Minimum distance for underground LP-gas containers shall be measured from the pressure relief device and the filling or liquid level gauge vent connection at the container, except that all parts of an underground LP-gas container shall be not less than 10 feet from a building or lot line of adjoining property that can be built upon.

b. For other than installations in which the overhanging structure is 50 feet or more above the relief-valve discharge outlet. In applying the distance between buildings and ASME LP-gas containers with a water capacity of 125 gallons or more, not less than 50 percent of this horizontal distance shall also apply to all portions of the building that project more than 5 feet from the building wall and that are higher than the relief valve discharge outlet. This horizontal distance shall be measured from a point determined by projecting the outside edge of such overhanging structure vertically downward to grade or other level upon which the LP-gas container is installed. Distances to the building wall shall be not less than those prescribed in this table.

c. Where underground multicontainer installations are composed of individual LP-gas containers having a water capacity of 125 gallons or more, such containers shall be installed so as to provide access at their ends or sides to facilitate working with cranes or hoists.

d. At a consumer site, if the aggregate water capacity of a multicontainer installation, comprised of individual LP-gas containers having a water capacity of less than 125 gallons, is 500 gallons or more, the minimum distance shall comply with the appropriate portion of Table 6104.3, applying the aggregate capacity rather than the capacity per LP-gas container. If more than one such installation is made, each installation shall be separated from other installations by not less than 25 feet. Minimum distances between LP-gas containers need not be applied.

e. The following shall apply to above-ground containers installed alongside buildings:

1. LP-gas containers of less than a 125-gallon water capacity are allowed next to the building they serve where in compliance with Items 2, 3 and 4.
2. Department of Transportation (DOTn) specification LP-gas containers shall be located and installed so that the discharge from the container pressure relief device is not less than 3 feet horizontally from building openings below the level of such discharge and shall not be beneath buildings unless the space is well ventilated to the outside and is not enclosed for more than 50 percent of its perimeter. The discharge from LP-gas container pressure relief devices shall be located not less than 5 feet from exterior sources of ignition, openings into direct vent (sealed combustion system) appliances or mechanical ventilation air intakes.
3. ASME LP-gas containers of less than a 125-gallon water capacity shall be located and installed such that the discharge from pressure relief devices shall not terminate in or beneath buildings and shall be located not less than 5 feet horizontally from building openings below the level of such discharge and not less than 5 feet from exterior sources of ignition, openings into direct vent (sealed combustion system) appliances, or mechanical ventilation air intakes.
4. The filling connection and the vent from liquid-level gauges on either DOTn or ASME LP-gas containers filled at the point of installation shall be not less than 10 feet from exterior sources of ignition, openings into direct vent (sealed combustion system) appliances or mechanical ventilation air intakes.

f. This distance is allowed to be reduced to not less than 10 feet for a single LP-gas container of 1,200-gallon water capacity or less, provided such container is not less than 25 feet from other LP-gas containers of more than 125-gallon water capacity.

6104.3.1 Installation on roof prohibited.
LP-gas containers used in stationary installations shall not be located on the roofs of buildings.

6104.3.2 Special hazards.
LP-gas containers shall be located with respect to special hazards including, but not limited to, above-ground flammable or *combustible liquid* tanks, oxygen or gaseous hydrogen containers, flooding or electric power lines as specified in Section 6.4.4 of NFPA 58.

6104.4 Multiple LP-gas container installations.
Multiple LP-gas container installations with a total water storage capacity of more than 180,000 gallons (681 300 L) [150,000-gallon (567 750 L) LP-gas capacity] shall be subdivided into groups containing not more than 180,000 gallons (681 300 L) in each group. Such groups shall be separated by a distance of not less than 50 feet (15 240 mm), unless the containers are protected in accordance with one of the following:

1. Mounded in an *approved* manner.

2. Protected with *approved* insulation on areas that are subject to impingement of ignited gas from pipelines or other leakage.

3. Protected by fire walls of *approved* construction.

4. Protected by an *approved* system for application of water as specified in Table 6.4.2 of NFPA 58.

5. Protected by other *approved* means.

Where one of these forms of protection is provided, the separation shall be not less than 25 feet (7620 mm) between LP-gas container groups.

SECTION 6105
PROHIBITED **USE OF LP-GAS**
DELETED.

6105.1 Nonapproved equipment.
LP-gas shall not be used for the purpose of operating devices or equipment unless such device or equipment is *approved* for use with LP-gas.

6105.2 Release to the atmosphere.
LP-gas shall not be released to the atmosphere, except in accordance with Section 7.3 of NFPA 58.

SECTION 6106
DISPENSING **AND OVERFILLING**
DELETED.

6106.1 Attendants.
Dispensing of LP-gas shall be performed by a qualified attendant.

6106.2 Overfilling.
LP-gas containers shall not be filled or maintained with LP-gas in excess of either the volume determined using the fixed liquid-level gauge installed in accordance with the manufacturer's specifications and in accordance with Section 5.7.5 of NFPA 58 or the weight determined by the required percentage of the water capacity marked on the container. Portable LP-gas containers shall not be refilled unless equipped with an overfilling prevention device (OPD) where required by Section 5.7.3 of NFPA 58.

6106.3 Dispensing locations.
The point of transfer of LP-gas from one LP-gas container to another shall be separated from exposures as specified in NFPA 58.

SECTION 6107
SAFETY **PRECAUTIONS AND DEVICES**
DELETED.

6107.1 Safety devices.
Safety devices on LP-gas containers, equipment and systems shall not be tampered with or made ineffective.

6107.2 Smoking and other sources of ignition.
"No Smoking" signs complying with Section 310 shall be posted where required by the *fire code official*. Smoking within 25 feet (7620 mm) of a point of transfer, while filling operations are in progress at LP-gas containers or vehicles, shall be prohibited.

Control of other sources of ignition shall comply with Chapter 3 of this code and Section 6.22 of NFPA 58.

6107.3 Clearance to combustibles.
Weeds, grass, brush, trash and other combustible materials shall be kept not less than 10 feet (3048 mm) from LP-gas tanks or containers.

6107.4 Protecting containers from vehicles.
Where exposed to vehicular damage due to proximity to alleys, driveways or parking areas, LP-gas containers, regulators and piping shall be protected in accordance with NFPA 58.

SECTION 6108
FIRE **PROTECTION**
DELETED.

6108.1 General.
Fire protection shall be provided for installations having LP-gas storage containers with a water capacity of more than 4,000 gallons (15 140 L), as required by Section 6.25 of NFPA 58.

6108.2 Portable fire extinguishers.
Portable fire extinguishers complying with Section 906 shall be provided as specified in NFPA 58.

SECTION 6109
STORAGE **OF PORTABLE LP-GAS CONTAINERS AWAITING USE OR RESALE**
DELETED.

6109.1 General.
Storage of portable LP-gas containers of 1,000 pounds (454 kg) or less, whether filled, partially filled or empty, at consumer sites or distribution points, and for resale by dealers or resellers shall comply with Sections 6109.2 through 6109.15.1.

Exceptions:

1. LP-gas containers that have not previously been in LP-gas service.

2. LP-gas containers at distribution plants.

3. LP-gas containers at consumer sites or distribution points, which are connected for use.

6109.2 Exposure hazards.
LP-gas containers in storage shall be located in a manner that minimizes exposure to excessive temperature rise, physical damage or tampering.

6109.3 Position.
LP-gas containers in storage having individual water capacity greater than 2 1/2 pounds (1 kg) [nominal 1-pound (0.454 kg) LP-gas capacity] shall be positioned with the pressure relief valve in direct communication with the vapor space of the container.

6109.4 Separation from means of egress.
LP-gas containers stored in buildings in accordance with Sections 6109.9 and 6109.11 shall not be located near *exit access* doors, *exits, stairways* or in areas normally used, or intended to be used, as a *means of egress*.

6109.5 Quantity.
Empty LP-gas containers that have been in LP-gas service shall be considered as full containers for the purpose of determining the maximum quantities of LP-gas allowed in Sections 6109.9 and 6109.11.

6109.6 Storage on roofs.
LP-gas containers that are not connected for use shall not be stored on roofs.

6109.7 Storage in basement, pit or similar location.
LP-gas containers shall not be stored in a basement, pit or similar location where heavier-than-air gas might collect. LP-gas containers shall not be stored in above-grade underfloor spaces or basements unless such location is provided with an *approved* means of ventilation.

Exception: Department of Transportation (DOTn) specification cylinders with a maximum water capacity of 2 1/2 pounds (1 kg) for use in completely self-contained hand torches and similar applications. The quantity of LP-gas shall not exceed 20 pounds (9 kg).

6109.8 Protection of valves on LP-gas containers in storage.
LP-gas container valves shall be protected by screw-on-type caps or collars that shall be securely in place on all containers stored regardless of whether they are full, partially full or empty. Container outlet valves shall be closed or plugged.

6109.9 Storage within buildings accessible to the public.
Department of Transportation (DOTn) specification cylinders with maximum water capacity of 2 1/2 pounds (1 kg) used in completely self-contained hand torches and similar applications are allowed to be stored or displayed in a building accessible to the public. The quantity of LP-gas shall not exceed 200 pounds (91 kg) except as provided in Section 6109.11.

6109.10 Storage within buildings not accessible to the public.
The maximum quantity allowed in one storage location in buildings not accessible to the public, such as industrial buildings, shall not exceed a water capacity of 735 pounds (334 kg) [nominal

300 pounds (136 kg) of LP-gas]. Where additional storage locations are required on the same floor within the same building, they shall be separated by not less than 300 feet (91 440 mm). Storage beyond these limitations shall comply with Section 6109.11.

6109.10.1 Quantities on equipment and vehicles.
LP-gas containers carried as part of service equipment on highway mobile vehicles need not be considered in the total storage capacity in Section 6109.10, provided such vehicles are stored in private garages and do not carry more than three LP-gas containers with a total aggregate LP-gas capacity not exceeding 100 pounds (45.4 kg) per vehicle. LP-gas container valves shall be closed.

6109.11 Storage within rooms used for gas manufacturing.
Storage within buildings or rooms used for gas manufacturing, gas storage, gas-air mixing and vaporization, and compressors not associated with liquid transfer shall comply with Sections 6109.11.1 and 6109.11.2.

6109.11.1 Quantity limits.
The maximum quantity of LP-gas shall be 10,000 pounds (4540 kg).

6109.11.2 Construction.
The construction of such buildings and rooms shall comply with requirements for Group H occupancies in the *International Building Code*, Chapter 10 of NFPA 58 and both of the following:

1. Adequate vents shall be provided to the outside at both top and bottom, located not less than 5 feet (1524 mm) from building openings.

2. The entire area shall be classified for the purposes of ignition source control in accordance with Section 6.22 of NFPA 58.

6109.12 Location of storage outside of buildings.
Storage outside of buildings of LP-gas containers awaiting use, resale or part of a cylinder exchange program shall be located in accordance with Table 6109.12.

TABLE 6109.12
SEPARATION FROM EXPOSURES OF LP-GASCONTAINERS AWAITING USE, RESALE OR EXCHANGE STORED OUTSIDE OF BUILDINGS

	MINIMUM SEPARATION DISTANCE FROM STORED LP-GAS CYLINDERS TO (feet):

QUANTITY OF LP-GAS STORED (pounds)	Nearest important building or group of buildings or line of adjoining property that may be built upon	Line of adjoining property occupied by schools, places of religious worship, hospitals, athletic fields or other points of public gathering; busy thoroughfares; or sidewalks	LP-gas dispensing station	Doorway or opening to a building with two or more means of egress	Doorway or opening to a building with one means of egress	Combustible materials	Motor vehicle fuel dispenser
720 or less	0	0	5	5	10	10	20
721 – 2,500	0	10	10	5	10	10	20
2,501 – 6,000	10	10	10	10	10	10	20
6,001 – 10,000	20	20	20	20	20	10	20
Over 10,000	25	25	25	25	25	10	20

For SI: 1 foot = 304.8 mm, 1 pound = 0.454 kg.

6109.13 Protection of containers.
LP-gas containers shall be stored within a suitable enclosure or otherwise protected against tampering. Vehicle impact protection shall be provided as required by Section 6107.4.

Exception: Vehicle impact protection shall not be required for protection of LP-gas containers where the containers are kept in lockable, ventilated cabinets of metal construction.

6109.14 Alternative location and protection of storage.
Where the provisions of Sections 6109.12 and 6109.13 are impractical at construction sites, or at buildings or structures undergoing major renovation or repairs, the storage of containers shall be as required by the *fire code official*.

6109.15 LP-gas cylinder exchange for resale.
In addition to other applicable requirements of this chapter, facilities operating LP-gas cylinder exchange stations that are accessible to the public shall comply with the following requirements.

1. Cylinders shall be secured in a lockable, ventilated metal cabinet or other *approved* enclosure.

2. Cylinders shall be accessible only by authorized personnel or by use of an automated exchange system in accordance with Section 6109.15.1.

3. A sign shall be posted on the entry door of the business operating the cylinder exchange stating "DO NOT BRING LP-GAS CYLINDERS INTO THE BUILDING" or similar *approved* wording.

4. An emergency contact information sign shall be posted within 10 feet (3048 mm) of the cylinder storage cabinet. The content, lettering, size, color and location of the required sign shall be as required by the *fire code official*.

6109.15.1 Automated cylinder exchange stations.
Cylinder exchange stations that include an automated vending system for exchanging cylinders shall comply with the following additional requirements:

1. The vending system shall only permit access to a single cylinder per individual transaction.

2. Cabinets storing cylinders shall be designed such that cylinders can only be placed inside when they are oriented in the upright position.

3. Devices operating door releases for access to stored cylinders shall be permitted to be pneumatic, mechanical or electrically powered.

4. Electrical equipment inside of or within 5 feet (1524 mm) of a cabinet storing cylinders, including but not limited to electronics associated with vending operations, shall comply with the requirements for Class I, Division 2 equipment in accordance with NFPA 70.

5. A manual override control shall be permitted for use by authorized personnel. On newly installed cylinder exchange stations, the vending system shall not be capable of returning to automatic operation after a manual override until the system has been inspected and reset by authorized personnel.

6. Inspections shall be conducted by authorized personnel to verify that all cylinders are secured, access doors are closed and the station has no visible damage or obvious defects that necessitate placing the station out of service. The frequency of inspections shall be as specified by the *fire code official*.

SECTION 6110
LP-GAS **CONTAINERS NOT IN SERVICE**
DELETED.

6110.1 Temporarily out of service.
LP-gas containers whose use has been temporarily discontinued shall comply with all of the following:

1. Be disconnected from appliance piping.

2. Have LP-gas container outlets, except relief valves, closed or plugged.

3. Be positioned with the relief valve in direct communication with the LP-gas container vapor space.

6110.2 Permanently out of service.
LP-gas containers to be placed permanently out of service shall be removed from the site.

SECTION 6111
PARKING **AND GARAGING OF LP-GAS TANK VEHICLES**
DELETED.

6111.1 General.
Parking of LP-gas tank vehicles shall comply with Sections 6111.2 and 6111.3.

Exception: In cases of accident, breakdown or other emergencies, LP-gas tank vehicles are allowed to be parked and left unattended at any location while the operator is obtaining assistance.

6111.2 Unattended parking.
The unattended parking of LP-gas tank vehicle shall be in accordance with Sections 6111.2.1 and 6111.2.2.

6111.2.1 Near residential, educational and institutional occupancies and other high-risk areas.
LP-gas tank vehicles shall not be left unattended at any time on residential streets or within 500 feet (152 m) of a residential area, apartment or hotel complex, educational facility, hospital or care facility. Tank vehicles shall not be left unattended at any other place that would, in the opinion of the *fire code official*, pose an extreme life hazard.

6111.2.2 Durations exceeding 1 hour.
LP-gas tank vehicles parked at any one point for longer than 1 hour shall be located as follows:

1. Off public streets, highways, public avenues or public alleys.

2. Inside of a bulk plant.

3. At other *approved* locations not less than 50 feet (15 240 mm) from buildings other than those *approved* for the storage or servicing of such vehicles.

6111.3 Garaging.
Garaging of LP-gas tank vehicles shall be as specified in NFPA 58. Vehicles with LP-gas fuel systems are allowed to be stored or serviced in garages as specified in Section 11.16 of NFPA 58.

CHAPTER 62 NO CHANGES

CHAPTER 63 NO CHANGES

CHAPTER 64 NO CHANGES

CHAPTER 65 NO CHANGES

CHAPTER 66 NO CHANGES

CHAPTER 67 NO CHANGES

CHAPTER 80 CHANGES

ISO

International Organization for Standardization (ISO)
ISO Central Secretariat
1 ch, de la Voie-Creuse, Case postale 56
CH-1211 Geneva 20, Switzerland

Standard reference number	Title	Referenced in code section number
ISO 8115—86	Cotton Bales—Dimensions and Density	Table 2704.2.2.1, Table 5003.1.1(1)
ISO FRS -12	Fire Ratings Schedule – 2012	507.3

APPENDIX A CHANGES

APPENDIX A

BOARD OF APPEALS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

DELETED.

~~SECTION A101~~
~~GENERAL~~

~~**A101.1 Scope.**~~
~~A board of appeals shall be established within the jurisdiction for the purpose of hearing applications for modification of the requirements of the *International Fire Code* pursuant to the provisions of Section 108 of the *International Fire Code*. The board shall be established and~~

operated in accordance with this section, and shall be authorized to hear evidence from appellants and the *fire code official* pertaining to the application and intent of this code for the purpose of issuing orders pursuant to these provisions.

A101.2 Membership.
The membership of the board shall consist of five voting members having the qualifications established by this section. Members shall be nominated by the *fire code official* or the chief administrative officer of the jurisdiction, subject to confirmation by a majority vote of the governing body. Members shall serve without remuneration or compensation, and shall be removed from office prior to the end of their appointed terms only for cause.

A101.2.1 Design professional.
One member shall be a practicing design professional registered in the practice of engineering or architecture in the state in which the board is established.

A101.2.2 Fire protection engineering professional.
One member shall be a qualified engineer, technologist, technician or safety professional trained in fire protection engineering, fire science or fire technology. Qualified representatives in this category shall include fire protection contractors and certified technicians engaged in *fire protection system* design.

A101.2.3 Industrial safety professional.
One member shall be a registered industrial or chemical engineer, certified hygienist, certified safety professional, certified hazardous materials manager or comparably qualified specialist experienced in chemical process safety or industrial safety.

A101.2.4 General contractor.
One member shall be a contractor regularly engaged in the construction, *alteration*, maintenance, repair or remodeling of buildings or building services and systems regulated by the code.

A101.2.5 General industry or business representative.
One member shall be a representative of business or industry not represented by a member from one of the other categories of board members described above.

A101.3 Terms of office.
Members shall be appointed for terms of 4 years. No member shall be reappointed to serve more than two consecutive full terms.

A101.3.1 Initial appointments.
Of the members first appointed, two shall be appointed for a term of 1 year, two for a term of 2 years, one for a term of 3 years.

A101.3.2 Vacancies.
Vacancies shall be filled for an unexpired term in the manner in which original appointments are required to be made. Members appointed to fill a vacancy in an unexpired term shall be eligible for reappointment to two full terms.

A101.3.3 Removal from office.
Members shall be removed from office prior to the end of their terms only for cause. Continued absence of any member from regular meetings of the board shall, at the

discretion of the applicable governing body, render any such member liable to immediate removal from office.

A101.4 Quorum.
Three members of the board shall constitute a quorum. In varying the application of any provisions of this code or in modifying an order of the *fire code official*, affirmative votes of the majority present, but not less than three, shall be required.

A101.5 Secretary of board.
The *fire code official* shall act as secretary of the board and shall keep a detailed record of all its proceedings, which shall set forth the reasons for its decisions, the vote of each member, the absence of a member and any failure of a member to vote.

A101.6 Legal counsel.
The jurisdiction shall furnish legal counsel to the board to provide members with general legal advice concerning matters before them for consideration. Members shall be represented by legal counsel at the jurisdiction's expense in all matters arising from service within the scope of their duties.

A101.7 Meetings.
The board shall meet at regular intervals, to be determined by the chairman. In any event, the board shall meet within 10 days after notice of appeal has been received.

A101.8 Conflict of interest.
Members with a material or financial interest in a matter before the board shall declare such interest and refrain from participating in discussions, deliberations and voting on such matters.

A101.9 Decisions.
Every decision shall be promptly filed in writing in the office of the *fire code official* and shall be open to public inspection. A certified copy shall be sent by mail or otherwise to the appellant, and a copy shall be kept publicly posted in the office of the *fire code official* for 2 weeks after filing.

A101.10 Procedures.
The board shall be operated in accordance with the Administrative Procedures Act of the state in which it is established or shall establish rules and regulations for its own procedure not inconsistent with the provisions of this code and applicable state law.

APPENDIX B NO CHANGES

APPENDIX C NO CHANGES

APPENDIX D NO CHANGES

APPENDIX F NO CHANGES

APPENDIX G NO CHANGES

APPENDIX H CHANGES

APPENDIX H
HAZARDOUS MATERIALS MANAGEMENT PLAN (HMMP)
AND HAZARDOUS MATERIALS INVENTORY STATEMENT (HMIS)
INSTRUCTIONS

~~*The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance*~~.

The provisions contained in this appendix are adopted as part of this code.

APPENDIX I CHANGES

APPENDIX I
FIRE PROTECTION SYSTEMS—NONCOMPLIANT CONDITIONS

Deleted

~~*The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.*~~

SECTION I101
NONCOMPLIANT CONDITIONS

I101.1 General.
This appendix is intended to identify conditions that can occur where fire protection systems are not properly maintained or components have been damaged. This appendix is not intended to provide comprehensive inspection, testing and maintenance requirements, which are found in NFPA 10, 25 and 72. Rather, its intent is to identify problems that are readily observable during fire inspections.

I101.2 Noncompliant conditions requiring component replacement.
The following conditions shall be deemed noncompliant and shall cause the related component(s) to be replaced to comply with the provisions of this code:

1. Sprinkler heads having any of the following conditions:

1.1. Signs of leakage.

1.2. Paint or other ornamentation that is not factory applied.

1.3. Evidence of corrosion including, but not limited to, discoloration or rust.

1.4. Deformation or damage of any part.

1.5. Improper orientation of sprinkler head.

1.6. Empty glass bulb.

1.7. Sprinkler heads manufactured prior to 1920.

1.8. Replacement sprinkler heads that do not match existing sprinkler heads in orifice size, K-factor temperature rating, coating or deflector type.

1.9. Sprinkler heads for the protection of cooking equipment that have not been replaced within one year.

2. Water pressure and air pressure gauges that have been installed for more than 5 years and have not been tested to within 3 percent accuracy.

[101.3 Noncompliant conditions requiring component repair or replacement.
The following shall be deemed noncompliant conditions and shall cause the related component(s) to be repaired or replaced to comply with the provisions of this code:

1. Sprinkler and standpipe system piping and fittings having any of the following conditions:

1.1. Signs of leakage.

1.2. Evidence of corrosion.

1.3. Misalignment.

1.4. Mechanical damage.

2. Sprinkler piping support having any of the following conditions:

2.1. Materials resting on or hung from sprinkler piping.

2.2. Damaged or loose hangers or braces.

3. Class II and Class III standpipe systems having any of the following conditions:

3.1. No hose or nozzle, where required.

3.2. Hose threads incompatible with fire department hose threads.

3.3. Hose connection cap missing.

3.4. Mildew, cuts, abrasions and deterioration evident.

3.5. Coupling damaged.

3.6. Gaskets missing or deteriorated.

3.7. Nozzle missing or obstructed.

4. Hose racks and cabinets having any of the following conditions:

4.1. Difficult to operate or damaged.

4.2. Hose improperly racked or rolled.

4.3. Inability of rack to swing 90 degrees (1.57 rad) out of the cabinet.

4.4. Cabinet locked, except as permitted by this code.

4.5. Cabinet door will not fully open.

4.6. Door glazing cracked or broken.

5. Portable fire extinguishers having any of the following conditions:

5.1. Broken seal or tamper indicator.

5.2. Expired maintenance tag.

5.3. Pressure gauge indicator in “red.”

5.4. Signs of leakage or corrosion.

5.5. Mechanical damage, denting or abrasion of tank.

5.6. Presence of repairs such as welding, soldering or brazing.

5.7. Damaged threads.

5.8. Damaged hose assembly, couplings or swivel joints.

6. Fire alarm and detection control equipment, initiating devices and notification appliances having any of the following conditions:

6.1. Corroded or leaking batteries or terminals.

6.2. Smoke detectors having paint or other ornamentation that is not factory-applied.

6.3. Mechanical damage to heat or smoke detectors.

6.4. Tripped fuses.

7. Fire department connections having any of the following conditions:

7.1. Fire department connections are not visible or accessible from the fire apparatus access road.

7.2. Couplings or swivels are damaged.

7.3. Plugs and caps are missing or damaged.

7.4. Gaskets are deteriorated.

7.5. Check valve is leaking.

7.6. Identification signs are missing.

8. Fire pumps having any of the following conditions:

8.1. Pump room temperature is less than 40°F (4.4°C).

8.2. Ventilating louvers are not freely operable.

8.3. Corroded or leaking system piping.

8.4. Diesel fuel tank is less than two-thirds full.

8.5. Battery readings, lubrication oil or cooling water levels are abnormal.

SECTION I102
REFERENCED STANDARDS

NFPA 10—13	Portable Fire Extinguishers	I101.1
NFPA 25—13	Inspection, Testing and Maintenance of Water-based Fire Protection Systems	I101.1
NFPA 72—13	National Fire Alarm Code	I101.1

APPENDIX K CHANGES

APPENDIX K
CONSTRUCTION REQUIREMENTS FOR EXISTING AMBULATORY CARE FACILITIES

Deleted

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

SECTION K101
GENERAL

K101.1 Scope.
The provisions of this chapter shall apply to existing buildings containing ambulatory care facilities in addition to the requirements of Chapter 11 of the *International Fire Code*. Where the provisions of this chapter conflict with either the construction requirements in Chapter 11 of the *International Fire Code* or the construction requirements that applied at the time of construction, the most restrictive provision shall apply.

K101.2 Intent.
The intent of this appendix is to provide a minimum degree of fire and life safety to persons occupying and existing buildings containing ambulatory care facilities where such buildings do not comply with the minimum requirements of the *International Building Code*.

SECTION K102
FIRE SAFETY REQUIREMENTS FOR
EXISTING AMBULATORY CARE FACILITIES

K102.1 Separation.
Ambulatory care facilities where the potential exists for four or more care recipients to be incapable of self-preservation at any time, whether rendered incapable by staff or staff has accepted responsibility for a care recipient already incapable, shall be separated from adjacent spaces, corridors or tenants with a fire partition installed in accordance with Section 708 of the *International Building Code*.

K102.2 Smoke compartments.
Where the aggregate area of one or more ambulatory care facilities is greater than 10,000 square feet (929 m^2) on one story, the story shall be provided with a *smoke barrier* to subdivide the *story* into no fewer than two *smoke compartments*. The area of any one such *smoke compartment* shall be not greater than 22,500 square feet (2092 m^2). The travel distance from any point in a *smoke compartment* to a *smoke barrier* door shall be not greater than 200 feet (60 960 mm). The *smoke barrier* shall be installed in accordance with Section 709 of the *International Building Code* with the exception that *smoke barriers* shall be continuous from an outside wall to an outside wall, a floor to a floor, or from a *smoke barrier* to a *smoke barrier* or a combination thereof.

K102.2.1 Refuge area.
Not less than 30 net square feet (2.8 m^2) for each nonambulatory care recipient shall be provided within the aggregate area of *corridors*, care recipient rooms, treatment rooms, lounge or dining areas and other low-hazard areas within each *smoke compartment*. Each occupant of an ambulatory care facility shall be provided with access to a refuge area without passing through or utilizing adjacent tenant spaces.

K102.2.2 Independent egress.
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.

K102.3 Automatic sprinkler systems.
An *automatic sprinkler system* shall be provided throughout the entire floor containing an ambulatory care facility in Type IIB, IIIB and VB construction where either of the following conditions exist at any time:

1. Four or more care recipients are incapable of self-preservation, whether rendered incapable by staff or staff has accepted responsibility for care recipients already incapable.

2. One or more care recipients that are incapable of self-preservation are located at other than the *level of exit discharge* serving such a facility.

In buildings where ambulatory care is provided on levels other than the *level of exit discharge*, an *automatic sprinkler system* shall be installed throughout the entire floor where such care is provided and all floors below, and all floors between the level of ambulatory care and the nearest *level of exit discharge*, including the *level of exit discharge*.

K102.4 Automatic fire alarm system.

Fire areas containing ambulatory care facilities shall be provided with an electronically supervised automatic smoke detection system installed within the ambulatory care facility and in public use areas outside of tenant spaces, including *public corridors* and elevator lobbies.

Exception: Buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 of the *International Fire Code*, provided the occupant notification appliances will activate throughout the notification zones upon sprinkler waterflow.

SECTION K103
INCIDENTAL USES IN EXISTING AMBULATORY CARE FACILITIES

K103.1 General.

Incidental uses associated with and located within existing ambulatory care facilities required to be separated by Section 422 in the *International Building Code*, and that generally pose a greater level of risk to such occupancies, shall comply with the provisions of Sections K103.2 through K103.4.2.1. Incidental uses in ambulatory care facilities required to be separated by Section 422 of the *International Building Code* are limited to those listed in Table K103.1.

TABLE K103.1
INCIDENTAL USES IN EXISTING AMBULATORY CARE FACILITIES

ROOM OR AREA	SEPARATION AND/OR PROTECTION
Furnace room where any piece of equipment is over 400,000 Btu per hour input	1 hour or provide automatic sprinkler system
Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower	1 hour or provide automatic sprinkler system
Refrigerant machinery room	1 hour or provide automatic sprinkler system
Hydrogen fuel gas rooms, not classified as Group H	1 hour in ambulatory care facilities
Incinerator rooms	2 hours and provide automatic sprinkler system
Laboratories not classified as Group H	1 hour or provide automatic sprinkler system
Laundry rooms over 100 square feet	1 hour or provide automatic sprinkler system
Waste and linen collection rooms with containers with total volume of 10 cubic feet or greater	1 hour or provide automatic sprinkler system
Storage rooms greater than 100 square feet	1 hour or provide automatic sprinkler system
Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons for flooded lead-acid, nickel cadmium or VRLA, or more than 1,000 pounds for lithium-ion and lithium metal polymer used for facility standby power, emergency power or uninterruptible power supplies	1 hour in ambulatory care facilities

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

K103.2 Occupancy classification.
Incidental uses shall not be individually classified in accordance with Section 302.1 of the *International Building Code*. Incidental uses shall be included in the building occupancies in which they are located.

K103.3 Area limitations.
Incidental uses shall not occupy more than 10 percent of the building area of the story in which they are located.

K103.4 Separation and protection.
The incidental uses listed in Table K103.1 shall be separated from the remainder of the building or equipped with an *automatic sprinkler system*, or both, in accordance with the provisions of that table.

K103.4.1 Separation.
Where Table K103.1 specifies a fire-resistance-rated separation, the incidental uses shall be separated from the remainder of the building in accordance with Section 509.4.1 of the *International Building Code*.

K103.4.2 Protection.
Where Table K103.1 permits an *automatic sprinkler system* without a fire-resistance-rated separation, the incidental uses shall be separated from the remainder of the building by construction capable of resisting the passage of smoke in accordance with Section 509.4.2 of the *International Building Code*.

K103.4.2.1 Protection limitation.
Except as otherwise specified in Table K103.1 for certain incidental uses, where an *automatic sprinkler system* is provided in accordance with Table K103.1, only the space occupied by the incidental use need be equipped with such a system.

SECTION K104
MEANS OF EGRESS REQUIREMENTS FOR EXISTING AMBULATORY CARE FACILITIES

K104.1 Size of doors.
The minimum width of each door opening shall be sufficient for the *occupant load* thereof and shall provide a clear width of not less than 28 inches (711 mm). Where this section requires a minimum clear width of 28 inches (711 mm) and a door opening includes two door leaves without a mullion, one leaf shall provide a clear opening width of 28 inches (711 mm). In ambulatory care facilities, doors serving as *means of egress* from patient treatment rooms shall provide a clear width of not less than 32 inches (813 mm). The maximum width of a swinging door leaf shall be 48 inches (1219 mm) nominal. The height of doors openings shall be not less than 80 inches (2032 mm).

Exceptions:

1. Door openings to storage closets less than 10 square feet (0.93 m^2) in area shall not be limited by the minimum width.

2. Width of door leaves in revolving doors that comply with Section 1010.1.4.1 shall not be limited.

3. *Exit access* doors serving a room not larger than 70 square feet (6.5 m^2) shall be not less than 24 inches (610 mm) in door width.

4. Door closers and door stops shall be permitted to be 78 inches (1980 mm) minimum above the floor.

K104.2 Corridor and aisle width.
Corridor width shall be as determined in Section 1005.1 of the *International Fire Code* and this section. The minimum width of *corridors* and aisles that serve gurney traffic in areas where patients receive care that causes them to be incapable of self-preservation shall be not less than 72 inches (1829 mm).

K104.3 Existing elevators.
Existing elevators, escalators, dumbwaiters and moving walks shall comply with the requirements of Sections K104. 3.1 and K104.3.2.

K104.3.1 Elevators, escalators, dumbwaiters and moving walks.
Existing elevators, escalators, dumbwaiters and moving walks in ambulatory care facilities required to be separated by Section 422 of the *International Building Code* shall comply with ASME A17.3.

K104.3.2 Elevator emergency operation.
Existing elevators with a travel distance of 25 feet (7620 mm) or more above or below the main floor or other level of a building and intended to serve the needs of emergency personnel for fire-fighting or rescue purposes shall be provided with emergency operation in accordance with ASME A17.3.

SECTION K105
REFERENCED STANDARDS

ICC	IBC—15	International Building Code	K101.2, K102.1, K102.2, K103.1, K103.2, K103.4.1, K103.4.2, K104.3.1,
ICC	IFC—15	International Fire Code	K101.1, K102.4, K104.2
ASME	A17.3-08		K104.3.1, K104.3.2

APPENDIX L NO CHANGES

APPENDIX M CHANGES

APPENDIX M

HIGH-RISE BUILDINGS—RETROACTIVE AUTOMATIC SPRINKLER REQUIREMENT

Deleted

~~***The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.***~~

~~SECTION M101~~
~~SCOPE~~

~~**M101.1 Scope.**~~
~~An *automatic sprinkler system* shall be installed in all existing high-rise buildings in accordance with the requirements and compliance schedule of this appendix.~~

~~SECTION M102~~
~~WHERE REQUIRED~~

~~**M102.1 High-rise buildings.**~~
~~An *automatic sprinkler system* installed in accordance with Section 903.3.1.1 of the *International Fire Code* shall be provided throughout existing high-rise buildings.~~

~~**Exceptions:**~~

~~1. Airport traffic control towers.~~

~~2. Open parking structures.~~

~~3. Group U occupancies.~~

~~4. Occupancies in Group F-2.~~

~~SECTION M103~~
~~COMPLIANCE~~

~~**M103.1 Compliance schedule.**~~
~~Building owners shall file a compliance schedule with the *fire code official* not later than 365 days after the first effective date of this code. The compliance schedule shall not exceed 12 years for an *automatic sprinkler system* retrofit.~~

~~SECTION M104~~
~~REFERENCED STANDARDS~~

~~ICC~~	~~IFC—15~~	~~International Fire Code~~	~~M102.1~~