Houston Amendments to the 2006 International Fire Code

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CHAPTER 1

ADMINISTRATION

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

101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted. Appendices A, B, C, D, E, F, G, H, I, and J are hereby adopted and made part of this code.

101.3 Intent. The purpose of this code is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises and to provide safety to fire fighters and emergency responders during emergency operations. The provisions of this code shall not apply to any activity for which local regulation is preempted by federal or state law.

101.3.1 Landlord/tenant. The terms of this code shall not be construed to alter the terms of any lease or other agreement between landlord and tenant or others relating to property that is the subject of this code; provided that no provision of any lease or other agreement shall be construed to excuse compliance with this code by any person, including the construction, maintenance, occupancy, or use of any property in violation of this code. It is the intent of this code to identify the parties this jurisdiction will hold responsible for compliance with and violations of this code, rather than to determine the rights and liabilities of persons under agreements to which this jurisdiction is not a party.

101.6.Standards. Copies of the Houston Fire Department Standards that are referred to in this code have been placed on file in the City Secretary's Office in connection with the code's adoption and shall constitute a part of this code. The standards may be inspected in the City Secretary's Office or the Office of the Fire Prevention Bureau, and copies may be purchased at the fees prescribed by law.

102.2 Administrative, operational and maintenance provisions. The administrative, operational and maintenance provisions of this code shall apply to:

1. Conditions and operations arising after the adoption of this code.
2. Existing conditions and operations not legally in existence at the time of adoption of this code.
3. Conditions that, in the opinion of the fire code official, constitute a distinct hazard to life or property.

This section shall be construed in a manner that is consistent with Chapter 34 of the *Building Code*, Appendix "L" of the *Building Code* (Life Safety Requirements for Existing Buildings), Sections 102 and 110 of this code and City of Houston Ordinance No.78-2672.

102.2.1 Existing buildings. Buildings or structures in existence at the time of the passage of this code may have their existing use or occupancy continued if the buildings or structures comply with the standards established in Article IX of Chapter 10 of the *City Code*, Section 102.6 and Chapter 34 of the *Building Code* and Appendix "L" of the *Building Code* (Life Safety Requirements for Existing Buildings). Determination of compliance shall be under the primary jurisdiction of the building official. Whenever the fire code official determines, pursuant to inspection of such a building or structure, that there exists therein a fire hazard that causes the building or structure to be dangerous to life, the fire code official shall initiate proceedings under Article VIII of Chapter 10 of the *City Code*, including the placarding of buildings as authorized therein. The fire code official shall notify the Neighborhood Protection official, and if the building official determines that the building or structure constitutes a dangerous building as defined in Article IX of Chapter 10 of the *City Code*, then the building official shall initiate dangerous building abatement proceedings before the hearing official or the Building and Standards Commission under the applicable provisions of Chapter 10 of the *City Code*.

102.6 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 45 and such codes and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference. Where differences occur between the provisions of this code and the referenced standards, the provisions if this code shall apply. Wherever in this code a reference is made to the *International Building Code*, *International Plumbing Code*, *International Mechanical Code*, or *International Residential Code*, the references shall be construed to mean the current *Building*, *Plumbing*, *Mechanical,* or *Residential Code* of the jurisdiction, which may or may not in fact be based upon the International Series of Codes.

102.9 Conflicting provisions. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where in any specific instance, the applicable provisions of the *Construction Code* specify different materials, methods of construction or other requirements than this code, and the building official and the fire code official are unable to mutually reconcile the requirements by issuing a written interpretation, then either of them may refer the matter to the General Appeals Board created under the *Building Code*. The General Appeals Board shall conduct a review of the matter and issue a written code interpretation based upon the apparent intent of the codes involved. Notwithstanding any other provision of this code or the Construction Code, interpretations that are issued by the General Appeals Board shall not be subject to any further appeal.

SECTION 103
~~DEPARTMENT OF~~ LIFE SAFETY AND FIRE PREVENTION BUREAU

103.1 General. The ~~department of~~ Life Safety and Fire Prevention Bureau of the Houston Fire Department is established within the jurisdiction under the direction of the fire code official. The function of ~~the department~~ this bureau shall be the implementation, administration and enforcement of the provisions of this code.

~~**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.~~

~~**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.~~

~~**103.4 Liability.** The fire code official, officer or employee charged with the enforcement of this code, while acting for the jurisdiction, shall not thereby be rendered liable personally, and is hereby relieved from all personal liability for any damage accruing to persons or property as a result of an act required or permitted in the discharge of official duties.~~

~~**103.4.1 Legal defense.** Any suit 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 representative 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.~~

103.2 Liability. Except as otherwise provided by law, the fire code official shall not be personally liable in damages for any act or omission arising out of any official action taken to implement and enforce the provisions of this code. Additionally, except as otherwise provided by law, the fire code official shall not be personally liable in damages for any action or omission taken in the course and scope of his employment. Where and to the extent consistent with the provisions of Article X of Chapter 2 of the *City Code*, the jurisdiction shall provide legal representation and indemnification for any suit brought against the fire code official because of acts or omissions performed in the enforcement of this code. This code shall not be construed to relieve from or lessen the responsibility of any person owning, operating or controlling any building or structure for any damages to persons or property caused by defects, nor shall this jurisdiction be held as assuming any liability by reason of the inspections authorized by this code or any permits or certificates issued under this code. See also Section 105.3.

104.1 General. Consistent with the provisions of this code, ~~T~~the fire code official is hereby authorized to enforce the provisions of this code and shall have the authority to render interpretations of this code, and to adopt policies, procedures, rules and ~~regulations~~ standards in order to clarify the application of its provisions. Such interpretations, policies, procedures, rules and ~~regulations~~ standards shall be in compliance with the intent and purpose of this code and shall not have the effect of waiving requirements specifically provided for in this code. A certified copy of the standards shall be filed with the City Secretary and additional copies shall be kept in the office of the Fire Prevention Bureau for inspection by the public. Copies shall be furnished at the fees provided by law.

The fire code official is authorized to enforce all ordinances of the jurisdiction and laws of the state pertaining to:

1. The prevention of fires;
2. The suppression or extinguishing of dangerous or hazardous fires;
3. The storage, use and handling of hazardous materials;

4. The installation and maintenance of automatic, manual and other private fire alarm systems and fire extinguishing equipment;

5. The maintenance and regulation of fire escapes;

6. The maintenance of fire protection and the elimination of fire hazards on land and in buildings, structures and other property including those under construction;

7. The means, adequacy and maintenance of egress;

8. The investigation of the cause, origin and circumstances of fire and unauthorized releases of hazardous materials;

9. The posting of certificates of occupancy and life safety certificates where required by the *Building Code*; and

10. The conducting of fire safety campaigns.

104.1.1 Standards. Throughout this code, the fire code official is authorized to grant approvals or permissions, promulgate standards, impose requirements, or exercise similar discretionary authorization over materials, personnel, activities or procedures; however, no specific standards or decision making criteria are stated. It is intended that discretionary authorization be administered in a uniform manner, that authorizations not be unreasonably withheld, and that rules and standards be based upon the preservation of the public health, safety and welfare. The fire code official shall be guided by accepted principles of fire safety and shall look to this code and any standards that are adopted herein by reference for guidance. If an individual authorization is denied, the person requesting the authorization shall be advised of the reasons in writing and shall be entitled to a review of the decision by appeal to the Board of Appeals.

104.10.1 Assistance from other agencies. Police and other enforcement agencies shall have authority to render necessary assistance in the investigation of fires and in enforcing the provisions of this code when requested to do so by the fire code official.

105.1.1 Permits required. Permits required by this code shall be obtained from the Fire Permit Office ~~fire code official~~. A permit shall be obtained prior to engaging in any activities, operations, practices, or functions regulated by this code and requiring a permit as listed in Section 105.6. Permit fees, ~~if any~~ as required, shall be paid prior to issuance of the permit. Issued permits shall be kept on the premises designated therein at all times and shall be readily available for inspection by the fire code official. It shall be unlawful for any person to engage in any activities, operations, practices or functions listed in Section 105.6 for any reason without holding a current and valid permit for the activity, operation, practice or function as issued by the fire permit office.

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

1. Operational permit, issued by the Fire Department. 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.

2. Construction permit, issued by the building official in accordance with the *Building Code*. A construction permit allows the applicant to install or modify systems and equipment for which a permit is required by and in accordance with the *Building Code* ~~Section 105.7~~.

105.2.2 Inspection authorized. Before a new operational permit is approved, the fire code official is authorized, but not required, to inspect the receptacles, vehicles, buildings, devices, premises, storage spaces or areas to be used to determine compliance with this code or any operational constraints required. In instances where laws or regulations are enforceable by departments of the jurisdiction other than the fire department, joint approval shall be obtained from all departments concerned.

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 no changes have been made or will 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.

105.3.3 Occupancy prohibited before approval. The building or structure shall not be occupied prior to the ~~fire code~~ building official issuing a ~~permit that indicates that applicable provisions of this code have been met.~~ certificate of occupancy in accordance with the Building Code.

Exceptions:

1. The building official is authorized to issue a temporary certificate of occupancy in accordance with the *Building Code.*
2. The fire code official, with the joint approval of the building official, is authorized to permit the temporary occupancy of a building, or portion thereof, when standby personnel are provided in accordance with Section 112.

105.5 Revocation. ~~The fire code official is authorized to revoke a permit issued under the provisions of this code when it is found by inspection or otherwise~~ A permit issued under the provisions of this code may be revoked as provided herein after a hearing conducted by the hearing official, if the hearing official finds from a preponderance of evidence adduced at such hearing 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, or a violation of the terms and conditions as set forth in this code, including, but not limited to, 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 for the permit, as set forth in ~~the permit~~ this code, 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.

105.5.1 Notice of hearing. Not later than 14 days prior to the date set for the revocation hearing by the hearing official, the permit holder shall be given a written notice by the fire code official which shall set forth:

1. The grounds upon which the fire code official will seek revocation of the permit;
2. That a hearing has been scheduled thereon before the hearing official and the time, date and place of the hearing; and
3. That the permit holder may appear, may be represented by counsel, may present evidence and may cross examine witnesses presented by the fire code official.

105.5.2 Hearing. All hearings under this code shall be conducted by the fire chief or a representative, hereinafter called "hearing official." The fire chief shall not designate any person to be a hearing official under this code who has taken any part in the investigation of the matter that is the subject of the hearing or any person who directly supervised the investigation. The hearing official shall consider only the evidence presented at the hearing in rendering a decision. The decision of the hearing official shall be set forth in writing and shall be served upon each party in the same matter as the notice of a right to a hearing.

105.5.3 Emergencies. Where an emergency exists, the fire code official shall not be required to give a written notice or hearing prior to revoking the permit.

105.6.2 ~~Amusement buildings.~~ ~~An operational permit is required to operate a special amusement building.~~ **Apparatus access, road access-control gates.** An operational permit is required to install or maintain an access-control gate on a fire apparatus access road.

105.6.4 Carnivals, festivals, trade show exhibitions and fairs. An operational permit is required to conduct a carnival, festival, trade show exhibition or fair. A site or floor plan showing the dimensions and locations of the aisles, cooking booths, LP-gas storage, etc. shall be submitted with the permit application.

105.6.11 Cutting and welding. ~~An operational permit is required to conduct cutting and welding operations within the jurisdiction~~. See Section 105.6.23.

105.6.13 Exhibits and trade shows. ~~An operational permit is required to operate exhibits and trade shows.~~ See Section 105.6.4.

105.6.14 Explosives, fireworks, and pyrotechnics. 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 33.

Exception: 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 3306.

105.6.15 ~~Fire hydrants and valves.~~ ~~An operational permit is required to use or operate fire hydrants or valves intended for fire suppression purposes which 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.~~

Fire depository, key boxes. An operational permit is required to install a key box or fire depository box. See Houston Fire Department LSB Standard No. 05, "Key Boxes" and LSB Standard 06 "Fire Depository Boxes."

105.6.21 Reserved. ~~**HPM facilities.** An operational permit is required to store, handle or use hazardous production materials.~~

105.6.22 High-piled storage. An operational permit is required to use a building or portion thereof as a high-piled storage area, as defined in Chapter 23, exceeding ~~500~~ 2500 square feet (~~46~~ 232 m^2). A floor plan showing the dimensions and locations of the stock piles and aisles shall be submitted with the permit application in accordance with Chapter 23.

105.6.23 Hot work operations. 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, or for cutting or welding in or on a building or 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 hazardous fire area.
5. Application of roof coverings with the use of an open-flame device.

6. When 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 26. These permits shall be issued only to their employees or hot work operations under their supervision.

105.6.27 LP-gas. An operational permit is required for:

1. Storage and use of LP-gas. to install or maintain any LP-gas container of 125 gallons (473 L) aggregate water capacity or more or operate any tank vehicle that is used for the transportation of LP-gas.

An operational permit is required for the storage, handling or use of any amount of LP-gas in, on or in connection with demonstrations, public exhibitions, or temporary commercial cooking or on mobile food units.

For a single container with a capacity of 500-gallon (1893 L) water capacity or for one or more containers with an aggregate capacity of 2,000 gallons (7572 L) water capacity or more, the installer shall submit construction documents for the permit.

For operational permit requirements for LP-gas storage, handling, or use, see Chapter 38 of this code.

Exception: A permit is not required for individual containers with a 500-gallon (1893 L) water capacity or less serving occupancies in Group R-3.

2. Operation of cargo tankers that transport LP-gas.

105.6.29 Miscellaneous combustible storage. 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. An operational permit is required to store more than 50 cubic feet (1.4 m^3) of uncompacted rubbish or combustible waste.

105.6.30 Open burning. 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. See Section 307. Instructions and stipulations of the permit shall be adhered to.

Exception: Recreational fires.

105.6.31 Reserved. Open flames and torches. An operational permit is required to remove paint with a torch; or to use a torch or open-flame device in a hazardous fire area.

105.6.35 Reserved. Private fire hydrants. 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.

105.6.36 Pyrotechnic special effects material. ~~An operational permit is required for use and handling of pyrotechnic special effects material.~~ See Section 105.6.14.

105.6.38 Reserved. ~~**Refrigeration equipment.** An operational permit is required to operate a mechanical refrigeration unit or system regulated by Chapter 6.~~

105.6.39 ~~Repair garages and~~ Motor fuel-dispensing facilities. An operational permit is required to dispense flammable or combustible liquids, liquefied petroleum gas, liquefied natural gas or compressed natural gas, in accordance with Chapter 22. ~~for operation of repair garages and automotive, marine and fleet motor fuel-dispensing facilities.~~

105.6.43 Temporary membrane structures, tents and canopies. An operational permit is required to operate an air-supported temporary membrane structure, ~~or a~~ tent, or canopy having an area ~~in excess of 200 square feet (19 m^2), or a canopy in excess of 400 square feet (37 m^2)~~ of 1200 square feet (112 m^2) or more, or an aggregate area of 1200 (112 m^2) square feet or more.

Exception:

1. Tents used exclusively for recreational camping purposes.

~~2. Fabric canopies open on all sides which comply with all of the following:~~

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

~~2.2. The aggregate area of multiple canopies placed side by side without a fire break clearance of not less than 12 feet (3658 mm) shall not exceeding 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.~~

105.6.47 Asphalt kettles and roof torching operations. A permit is required in accordance with Sections 303 and Chapters 14 and 26.

105.6.48 Battery systems. An operational permit is required for stationary lead acid battery systems having a liquid capacity of more than 50 gallons (189 L).

105.7 Reserved. ~~**Required construction permits.** The fire code official is authorized to issue construction permits for work as set forth in Sections 105.7.1 through 105.7.13.~~

~~**105.7.1 Automatic fire-extinguishing systems.** A construction permit is required for installation of or modification to an automatic fire-extinguishing system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.~~

~~**105.7.2 Battery systems.** A permit is required to install stationary storage battery systems having a liquid capacity of more than 50 gallons (189 L).~~

~~**105.7.3 Compressed gases.** When the compressed gases in use or storage exceed the amounts listed in Table 105.6.8, 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.

The permit applicant shall apply for approval to close storage, use or handling facilities at least 30 days prior to the termination of the storage, use or handling of compressed or liquefied gases. Such application shall include any change or alteration of the facility closure plan filed pursuant to Section 2701.6.3. The 30-day period is not applicable when approved based on special circumstances requiring such waiver.

105.7.4 Fire alarm and detection systems and related equipment. A construction permit is required for installation of or modification to fire alarm and detection systems and related equipment. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

105.7.5 Fire pumps and related equipment. A construction permit is required for installation of or modification to fire pumps and related fuel tanks, jockey pumps, controllers, and generators. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

105.7.6 Flammable and combustible liquids. A construction permit is required:

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

105.7.7 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 27 when the hazardous materials in use or storage exceed the amounts listed in Table 105.6.20.

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.

105.7.8 Industrial ovens. A construction permit is required for installation of industrial ovens covered by Chapter 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.

~~**105.7.9 LP-gas.** A construction permit is required for installation of or modification to an LP-gas system.~~

~~**105.7.10 Private fire hydrants.** A construction permit is required for the installation or modification of private fire hydrants.~~

~~**105.7.11 Spraying or dipping.** A construction permit is required to install or modify a spray room, dip tank or booth.~~

~~**105.7.12 Standpipe systems.** A construction permit is required for the installation, modification, or removal from service of a standpipe system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.~~

~~**105.7.13 Temporary membrane structures, tents and canopies.** A construction permit is required to erect an air-supported temporary membrane structure or a tent having an area in excess of 200 square feet (19 m^2), or a canopy in excess of 400 square feet (37 m^2).~~

~~**Exceptions:**~~

~~1. Tents used exclusively for recreational camping purposes.~~

~~2. Funeral tents and curtains or extensions attached thereto, when used for funeral services.~~

~~3. Fabric canopies and awnings open on all sides which comply with all of the following:~~

~~3.1. Individual canopies shall have a maximum size of 700 square feet (65 m^2).~~

~~3.2. The aggregate area of multiple canopies 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.~~

~~3.3. A minimum clearance of 12 feet (3658 mm) to structures and other tents shall be maintained.~~

105.8 Permit and inspection fees. Fees shall be assessed and shall be payable to the jurisdiction for the permits and inspections as provided in Sections 105.8.1 through 105.8.3.3 and Table 105.8. The fee for a permit includes an initial inspection and one follow-up inspection, if the latter is deemed necessary in the judgment of the inspector.

105.8.1 General. All fees are annual unless otherwise provided in this code or by regulation of the fire code official. See Table 105.8 for the fee schedule for fire permits.

Note: See Sections 105.9 and 105.10 for additional provisions regarding administrative processing fees, receipt fees, correction fees, replacement fees, and refunds.

105.8.2 Re-inspection fee. Whenever it becomes necessary to make a reinspection (after the initial inspection and one follow-up inspection under Section 105.8 of this code) because of faulty material, faulty workmanship, or incomplete work or for any other reason, the permit holder shall pay for each reinspection a fee of $300, unless a greater fee is specifically required by this code. This fee shall be in addition to all other fees required by this code.

105.8.3 Requested inspections (fire marshal approval). Whenever a person requests that an inspector conduct an inspection, or perform other duties not specified in this code and not in connection with a permit required under this code, the jurisdiction shall provide the service, if the service would not interfere with the regular duties of the inspector, upon the payment of a fee based on the size of the site, as follows:

Up to 50,000 sq. ft $200

More than 50,000 sq. ft., but not more than 100,000 sq. ft. $300

More than 100,000 sq. ft., but not more than 500,000 sq. ft $600

More than 500,000 sq. ft $800

A deposit in the full amount of the anticipated fee shall be required prior to the commencement of the inspection. Examples of the types of inspections covered by this section include, but are not limited to, inspections requested by persons who are applying for state or federal permits that have provisions for a fire inspection and compliance inspections requested in connection with real estate transactions. This fee shall be in addition to all other fees required by this code.

105.8.3.1 Priority inspection. Whenever a person requests an inspector to perform an inspection, or other duties specified in this code, at a specific time, rather than at the convenience of the jurisdiction, the jurisdiction shall provide the service, if the priority service would not interfere with the regular duties of the inspector, upon the payment of a fee determined as follows:

Up to 4 hours $300

Each additional hour or portion of an hour ..... $ 62.50

This fee shall be in addition to all other fees required by this code. Also see Section 105.8.3.

105.8.3.2 Requested inspection (outside of regular working hours). Whenever a person requests that an inspector, or other classified firefighter authorized by the fire chief, conduct an inspection or perform other fire protection duties specified in this code at times other than during regular working hours, or on a holiday observed by the jurisdiction or weekend, the jurisdiction shall provide the service, if the service would not interfere with the regular duties of the personnel or cause an undue burden on the personnel, upon payment of a fee determined as follows:

Up to 4 hours ..... $ 280.00

Each additional hour or portion of an hour ..... $ 62.50

This fee shall be in addition to all other fees required by this code.

105.8.3.3 Exemption from permits and fees. To the extent that the state and the federal governments are exempt as a matter of law from compliance with this code, neither the state nor the federal government shall be required to obtain a permit for work undertaken for, by or on the premises of either of them. However, the fees set forth in this code shall be applicable to the extent that the state or the federal government elects to obtain a permit for exempt work.

Except for work undertaken for, by or on the premises of the state or the federal government, permits shall be required for work undertaken for, by or on the premises of any political subdivision or unit of government (including, but not limited to, the jurisdiction) in the same manner and to the same extent as for work performed by or for other persons. The fees prescribed in this code shall be applicable to all permits issued to or for governmental agencies except counties and the jurisdiction. The jurisdiction and counties are exempted from the payment of fees. The exemption for the jurisdiction and for counties shall extend only to work to be undertaken for, by or on the premises of the jurisdiction or a county itself as a body corporate and politic.

Furthermore, the exemption for a county shall not extend to work undertaken for, by or on the premises of units of government that, although affiliated with a county, have separate governmental existence from the county, including but not limited to, hospital districts and flood control districts.

105.8.4 Annual fee increase. Notwithstanding any maximum fee established by this section or Section 105.9, the fees set out in this section and Section 105.9, including Table 105.8, as adjusted according to this provision, shall be automatically increased on the first day of each subsequent fiscal year by a percentage equal to the percentage increase to the Producers Price Index, if any, over the previous year (lithe PPI Adjustment"). If there is a decrease or if there is no increase in any given year, the fees for that year shall remain the same as in the previous year.

TABLE 105.8
FEE SCHEDULE FOR FIRE PERMITS

SECTION REFERENCE NUMBER	PERMIT DESCRIPTION		FEE FOR ORIGINAL PERMIT AND EACH RENEWAL THEREOF
105.6.1	Aerosol products	Tier 1: Level 2 Aerosols > 500 and ≤ 2,500 lbs Level 3 Aerosols > 500 and ≤ 1,000 lbs Combined Level 2 and 3 > 500 and ≤ 2,500 lbs Tier 2: Amounts greater than for Tier 1	$200 $600
105.6.2	Apparatus access, road access-control gates	One Two or more	$125 $200
105.6.3	Aviation facilities	Aircraft refueling vehicles: First one Each additional Maximum Aircraft service or repair occupancy	 $200 $80 $400 $400
105.6.4	Carnivals, festivals, trade show exhibitions and fairs		$400
105.6.5	Cellulose nitrate film		$200
105.6.6	Combustible dust-producing operations		$200
105.6.7	Combustible fibers	Tier 1: Loose fiber storage > 100 and ≤ 500 cu. ft. Baled fiber storage > 100 and ≤ 1,000 cu. ft. Tier 2: Amounts greater than for Tier 1	$200 $600

SECTION REFERENCE NUMBER	PERMIT DESCRIPTION		FEE FOR ORIGINAL PERMIT AND EACH RENEWAL THEREOF
105.6.8	Compressed gases	Tier 1: Corrosive: > 200 cu. ft. and ≤1620 cu. ft. at NTP Flammable (excluding cryogenic and LPG): >200 cu. ft. and ≤ 2000 cu. ft. at NTP Highly toxic: up to 40 cu. ft. at NTP Inert & simple asphyxiant : > 6000 cu. ft. at NTP (no limit, always Tier 1) Oxidizing (including oxygen): > 504 cu. ft. and ≤ 3000 cu.ft. at NTP Pyrophoric > 100 cu. ft. at NTP Toxic: up to 1620 cu. ft. at NTP Tier 2: Amounts greater than for Tier 1	$300 $600
105.6.9	Covered mall buildings	Includes partial cost of Life Safety Inspection	$600
105.6.10	Cryogenic fluids	Tier 1: Flammable: > 1 gal. and ≤ 90 gal. (inside bldg) > 60 gal. and ≤ 90 gal. (outside bldg.) Inert: > 60 gal. (inside bldg,) no limit, always Tier 1 > 500 gal. (outside bldg.) no limit, always Tier 1 Oxidizing (includes oxygen): > 10 gal. and ≤ 90 gal. (inside bldg.) > 50 gal. and ≤90 gal. (outside bldg.) Physical or health hazard not included above: no limit, always Tier 1 Tier 2: Amounts greater than for Tier 1	$300 $600
105.6.12	Dry cleaning plants		$200
105.6.14	Explosives, fireworks, and pyrotechnics		$400
105.6.15	Fire depository, key boxes	One Two or more	$125 $200

SECTION REFERENCE NUMBER	PERMIT DESCRIPTION		FEE FOR ORIGINAL PERMIT AND EACH RENEWAL THEREOF
105.6.16	Flammable and combustible liquids	Parts 1-5, 7, 8: Tier 1 Class IA: > 5 gal. and ≤ 60 gal. (inside bldg.) > 10 gal. and ≤ 60 gal. (outside bldg.) Class IB: > 5 gal. and ≤ 120 gal. (inside bldg.) > 10 gal. and ≤ 120 gal. (outside bldg.) Class IC: > 5 gal. and ≤ 180 gal. (inside bldg.) > 10 gal. and ≤ 180 gal. (outside bldg.) Class IA, IB, or IC combined amounts: > 5 gal. and ≤ 240 gal. (inside bldg.) > 10 gal. and ≤ 240 gal. (outside bldg.) Class II: > 25 gal. and ≤ 240 gal. (inside bldg.) > 60 gal. and ≤ 240 gal. (outside bldg.) Class IIIA: 25 gal. and ≤ 660 gal. (inside bldg.) 60 gal. and ≤ 660 gal. (outside bldg.) Class IIIB: > 60 gal. no limit; always tier 1 (in a tank or vessel) Parts 1-5, 7, 8 Tier 2 Amounts greater than for Tier 1 Part 6: Tank removal, installation, disposal or abandonment One Two Three or more	$300 $600 $200 $250 $350
105.6.17	Floor finishing		$200
105.6.18	Fruit and crop ripening		$200
105.6.19	Fumigation and thermal insecticidal fogging		$300

SECTION REFERENCE NUMBER	PERMIT DESCRIPTION		FEE FOR ORIGINAL PERMIT AND EACH RENEWAL THEREOF
105.6.20	Hazardous materials	Tier 1: Corrosive liquid > 55 gal. and ≤ 1,000 gal. Corrosive solid > 1000 lbs. and ≤ 10,000 lbs. Flammable solids > 100 lbs. and ≤ 250 lbs. Highly toxic liquids or solids up to 20 lbs. Oxidizing material ~~liquid or solid~~, Class 1: Liquids > 55 gal. and ≤ 8,000 lbs. Solids > 500 lbs. and ≤ 8,000 lbs. Oxidizing material Class 2: Liquids > 10 gal. and ≤ 500 lbs. Solids > 100 lbs. and ≤ 500lbs. Oxidizing material ~~liquid or solid~~, Class 3: Liquids > 1 gal. and ≤ 20 lbs. Solids > 10 lbs. and ≤ 20 lbs. Oxidizing material, liquid or solid, Class 4: up to 2 lbs. Organic peroxides, liquid or solid, Class 1: up to 10 lbs. Organic peroxides, liquid or solid, Class 2: up to 100 lbs. Organic peroxides, ~~liquid or solid,~~ Class 3~~: up to 20 lbs.~~ Liquid □ 1 gal. and ≤ 250 lbs. Solid □ 10 lbs. and ≤ 250 lbs. Organic peroxides Class 4: 2 gal. or 20 lbs. or more (no limit, always Tier 1) Pyrophoric gases: up to 100 cu. ft. Pyrophoric liquid or solid: up to 8 lbs. Toxic liquid > 10 gal. and ≤ 1,000 lbs. Toxic solid: >100 lbs. and ≤ 1,000 lbs. Unstable reactive, gas, Class 1: no limit (no limit, always Tier 1) Unstable reactive, gas, Class 2: up to 500 cu. ft. Unstable reactive, gas, Class 3: up to 100 cu. ft. Unstable reactive, gas, Class 4: up to 20 cu. ft. Unstable reactive, liquid & solid, Class 1:> 10 gal. or 100 lbs. (no limit, always Tier 1) Unstable reactive, Class 2: Liquid > 5 gal. and ≤100 lbs. Solid > 50 lbs. and ≤ 100 lbs. Unstable reactive, liquid & solid, Class 3: up to 10 lbs. Unstable reactive, liquid & solid, Class 4: up to 2 lbs. Water reactive, liquid & solid, Class 1: > 55 gal. or 500 lbs. (no limit, always Tier 1) Water reactive, Class 2: ~~up to~~ Liquid > 5 gal. and ≤ 100 lbs. Solid > 50 lbs. and ≤ 100 lbs. Water reactive, liquid & solid, Class 3: up to 10 lbs. Tier 2 Amounts greater than for Tier 1 Organic peroxides, liquid or solid, unclassified detonable	$300 $600

SECTION REFERENCE NUMBER	PERMIT DESCRIPTION		FEE FOR ORIGINAL PERMIT AND EACH RENEWAL THEREOF
105.6.22	High-piled storage	Level 1: 2,500 - 20,000 sq. ft. Level 2: > 20,000 sq. ft.	$400 $600
105.6.23	Hot work operations		$200
105.6.24	Industrial ovens		$200
105.6.25	Lumber yards and woodworking plants		$200
105.6.26	Liquid- or gas-fueled vehicles or equipment in assembly buildings	One unit Two units Three or more units	$125 $200 $300
105.6.27	LP-gas	Uses other than for mobile food units For use on a mobile food unit	$300 $150
105.6.28	Magnesium	Tier 1: Storage, >10 lbs. and ≤ 250 lbs. Open use, >10 lbs. and ≤ 25 lbs. Tier 2: Amount greater than for Tier 1	$300 $600
105.6.29	Miscellaneous combustible storage	One unit Two or more units	$125 $200
105.6.30	Open burning		$300
105.6.32	Open flames and candles		$125
105.6.33	Organic coatings	Tier 2 (no Tier 1): For operations producing > 1 gal. in one day	$600
105.6.34	Places of assembly	50-100 occupants (includes partial cost of Life Safety Inspection) 101-299 occupants (includes partial cost of Life Safety Inspection) 300+ occupants (includes partial cost of Life Safety Inspection)	$200 $300 $400
105.6.37	Pyroxylin plastics	Tier 2 (no Tier 1): To store or handle > 25 lbs. of pyroxylin	$600
105.6.39	Motor vehicle fuel-dispensing stations		$300
105.6.40	Rooftop heliports		$200
105.6.41	Spraying or dipping		$200
105.6.42	Storage of scrap tires and tire byproducts		$200
105.6.43	Temporary membrane structures, tents and canopies		$200

SECTION REFERENCE NUMBER	PERMIT DESCRIPTION		FEE FOR ORIGINAL PERMIT AND EACH RENEWAL THEREOF
105.6.44	Tire-rebuilding plants		$200
105.6.45	Waste handling		$200
105.6.46	Wood products		$200
105.6.47	Asphalt kettles and roof torching operations Asphalt kettles Ignited torches - (annual repair permit) Site specific permit	Asphalt kettles First one Each additional Maximum Ignited torches First one Each additional Maximum	 $200 $75 $400 $200 $100 $600
105.6.48	Battery systems		$200
105.8.2	Re-inspection	Each	$300
105.8.3	Requested inspections (fire marshal approval)	Up to 50,000 sq. ft. >50,000 and ≤ 100,000 sq. ft. >100,000 and ≤ 500,000 sq. ft. > 500,000 sq. ft.	$200 $300 $600 $800
105.8.3.1	Priority inspection	For the first four hours For each additional hour or portion thereof	$300 $62.50
105.8.3.2	Inspection or perform other duties outside of regular hours	For the first four hours For each additional hour or portion thereof	$280 $62.50

105.9 Administrative fees.

105.9.1 Permit or license. An administrative fee of $10.00 shall be charged upon the preparation of each permit or license issued by the fire department. This fee shall apply regardless of whether the permit or license is issued pursuant to this code or the *City Code*, and it shall be payable in addition to all other applicable fees for the permit or license. The foregoing administrative fee shall not be applicable if no other fee is provided by law for the permit or license.

105.9.2 Receipt. An administrative fee of $10.00 shall be charged upon the preparation of each fee or deposit receipt issued by the fire permit office. This fee shall apply regardless of whether the fee or deposit is payable pursuant to this code or the *City Code*. This fee shall be in addition to all other applicable fees or deposits. When paid for a deposit or fee receipt, this fee shall neither constitute nor be refundable as a part of the deposit. This fee shall not apply when a permit or license is issued and the fee specified in Section 105.9.1 above is imposed.

105.9.3 Correction fee. A correction fee of $10.00 shall be charged for correction of any license or permit in those instances where the license or permit is initially issued with an error caused by incorrect information having been furnished by the applicant. A re-inspection fee shall also be imposed as provided in Section 105.8.2 when the error causes a re-inspection to be required.

105.9.4 Replacement fee. A fee of $25.00 shall be charged for replacement of any permit that is lost or requires replacement for other reasons, such as a change of the permit holder's name.

105.10 Refunds. The fire marshal or building official, as applicable, may authorize refunding of any fee paid hereunder that was erroneously paid or collected due to an error by one or more employees of the jurisdiction. This provision shall not be applicable if the error occurred because of incorrect information provided by the applicant.

The fire marshal or building official, as applicable, may authorize the refunding of not more than 90 percent of the amount in excess of $25.00 of the permit fee paid when no inspection has been performed under a permit issued in accordance with this code. If an inspection has been performed under the permit, no refund may be authorized.

The fire marshal or building official, as applicable, shall not authorize refunding of any fee paid except on written application filed by the original permittee not later than 180 days after the date of fee payment.

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 Mayor, subject to confirmation by the City Council ~~governing body and shall hold office at its pleasure~~. The fire code official shall be an ex officio member of said board ~~but shall have no 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. See Appendix 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 have no authority to waive requirements of this code. The fire code official shall take action in accordance with the decision of the board.

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

109.2.3 Prosecution of violations. If the notice of violation is not complied with promptly or if persons operating or maintaining an occupancy, premises, or vehicle subject to this code allow a hazard to exist or fail to take immediate action to abate a hazard on the occupancy, premises, or vehicle when ordered to do so by the fire code official, the fire code official is authorized to request the legal counsel of the jurisdiction to institute the appropriate legal proceedings at law or in equity to restrain, correct or abate such violation or to require removal or termination of the unlawful occupancy of the structure in violation of the provisions of this code or of the order or direction made pursuant hereto.

109.3 ~~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.~~ **General Penalty; continuing violations.** When in this code an act is prohibited or is made or declared to be unlawful or an offense or misdemeanor, or wherever in this code the doing of any act is required or the failure to do any act is declared to be unlawful and no specific penalty is provided therefor, the violation of any such provision of code shall be punished by a fine of not less than $500.00, nor more than $2,000.00; provided, however, that no penalty shall be greater or lesser than the penalty provided for the same offense under the laws of the state. Each day any violation of this code shall continue shall constitute a separate offense. In prosecutions under this code, the various provisions hereof that are designated as exceptions shall not be treated as exceptions within the meaning of Section 2.02 of the Texas Penal Code, and instead, they shall constitute defenses to prosecution within the meaning of Section 2.03 of the Texas Penal Code.

109.3.1 ~~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.~~ **License suspension/revocation.** The suspension, revocation, cancellation or denial of any license, permit or certificate by the jurisdiction shall not prohibit the imposition of any civil or criminal penalty. The imposition of a civil or criminal penalty by the jurisdiction shall not prohibit the suspension, revocation, cancellation or denial of any license, permit or certificate.

109.3.2 Enforced removal or abatement. The application of the foregoing penalty shall not be held to prevent the enforced removal or abatement of any prohibited condition.

109.3.3 Administrative adjudication. The provisions of Article IV of Chapter 16 of the *City Code* shall be applicable to the adjudication of any offense arising under this code that involves the parking or stopping of a vehicle. The fines for parking or stopping of a vehicle shall be as otherwise provided in this section or other provisions of this code, as applicable, but the citation shall be issued and adjudicated in all respects as provided in Article IV of Chapter 16 of the *City Code*.

109.3.4 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.

110.1 General. If during the inspection of a premises, a building or structure or any building system, in whole or in part, constitutes a clear and inimical threat to human life, safety or health, the fire code official shall issue such notice or orders to remove or remedy the conditions as shall be deemed necessary in accordance with this section and shall refer the building to the building department for any repairs, alterations, remodeling, removing or demolition required in accordance with the *Construction Code* and the procedures set forth in Articles VIII and IX of Chapter 10 of the *City Code* and this section.

111.2.1 Hearing. Hearing shall be provided notice and conducted in accordance with Sections105.5.1 and 105.5.2.

111.4 Failure to comply. It shall be unlawful to fail to comply with any stop work order. ~~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 112
STANDBY PERSONNEL

112.1 General. The fire code official is authorized to require that standby inspectors be provided when deemed necessary to ensure public safety due to the number of persons present, or the nature of a performance, exhibition, display, contest, or activity. The fire code official is also authorized to require standby personnel as a condition for:

1. The approval of any permit required in Section 105 of this code.
2. The issuance of a temporary certificate of occupancy by the building official.
3. The maintenance of exits and keeping watch for fires and other safety hazards.
4. The use of a building where required fire protection or life safety systems are impaired or out of service, in accordance with Section 901.7.
5. The use of a temporary membrane structure, tent or canopy, as provided for in Section 2404.20.

CHAPTER 2

DEFINITIONS

BUILDING OFFICIAL. The jurisdiction's Director of Public Works and Engineering , or a duly authorized representative or representatives.

CITY CODE. *The Code of Ordinances, Houston, Texas*.

CONGREGATE LIVING FACILITIES. A building or part thereof that contains facilities for living, sleeping and sanitation, as required by this code, and may include facilities for eating and cooking, for occupancy by other than a family. A congregate living facility may be a shelter, convent, monastery, dormitory, fraternity, or sorority house, but does not include jails, hospitals, nursing homes, hotels or boarding houses.

CONSTRUCTION CODE. The *Building Code*, *Electrical Code*, *Mechanical Code*, *Plumbing Code, Residential Code, the Commercial Energy Conservation Code,* and *Residential Energy Conservation Code* of the jurisdiction.

FAMILY. An individual or two or more persons related by blood or marriage or a group of not more than 10 persons (excluding servants) who need not be related by blood or marriage living together in a dwelling unit.

FIRE CODE OFFICIAL. The ~~fire chief~~ fire Marshal or a duly authorized representative~~, or other designated authority~~ charged with the administration and enforcement of the code, ~~or a duly authorized representative~~."

JURISDICTION. The City of Houston.

OCCUPANCY CLASSIFICATION. For the purposes of this code, certain occupancies are defined as follows:

[*EDITORIAL NOTE: ONLY CLASSIFICATIONS THAT ARE CHANGED SHOWN, ALL OTHERS TO REMAIN AS SET FORTH IN THE 2006 IFC]

[B] 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
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
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 within a school ~~or academic program~~

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 quantities allowed in control areas constructed and located as required in Section 2703.8.3. Hazardous uses 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*.

Exceptions: The following shall not be classified in Group H, but shall be classified in the occupancy that they most nearly resemble:

1. Buildings and structures that contain not more than the maximum allowable quantities per control area of hazardous materials as shown in Tables 2703.1.1(1) and 2703.1.1(2), provided that such buildings are maintained in accordance with this code.
2. Buildings utilizing control areas in accordance with Section 2703.8.3 that contain not more than the maximum allowable quantities per control area of hazardous materials as shown in Tables 2703.1.1(1) and 2703.1.1(2).
3. Buildings and structures occupied for the application of flammable finishes, provided that such buildings or areas conform to the requirements of Section 416 of the ~~*International*~~ *Building Code* and Chapter 15 of this code.
4. Wholesale and retail sales and storage of flammable and combustible liquids in mercantile occupancies conforming to Chapter 34.
5. Closed piping systems containing flammable or combustible liquids or gases utilized for the operation of machinery or equipment.
6. 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 706 of the ~~*International*~~ *Building Code* or 1-hour horizontal assemblies constructed in accordance with Section 711 of the ~~*International*~~ *Building Code*, or both.

7. Cleaning establishments that utilize a liquid solvent having a flash point at or above 200°F (93°C).
8. Liquor stores and distributors without bulk storage.
9. Refrigeration systems.
10. The storage or utilization of materials for agricultural purposes on the premises.
11. Stationary batteries utilized for facility emergency power, uninterrupted 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*.
12. Corrosives shall not include personal or household products in their original packaging used in retail display or commonly used building materials.
13. Buildings and structures occupied for aerosol storage shall be classified as Group S-1 provided that such buildings conform to the requirements of Chapter 28.
14. 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 2703.8.3.5.
15. 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.
16. Any building owned by the jurisdiction, located on any city airport, that is leased and used by a certificated air carrier for the in-transit storage of hazardous materials for a period of time that does not exceed 72 hours from the time such hazardous material is placed in the building until it is permanently removed.

    NOTES:

    1. *Certificated air carrier* is defined as: a U.S. or foreign airline operating scheduled or non-scheduled commercial services pursuant to certificates or exemptions issued by the United States Department of Transportation pursuant to 49 USC Sections 40109, 41102, 41103, or 41302, and certificates or exemptions issued by the United States Federal Aviation Administration pursuant to 14 CFR Parts 121, 125, 129 or 135.
    2. *City airport* is defined in Chapter 9 of the City Code.
    3. *In-transit storage* is defined as: the storage of materials which will be on-loaded onto or off-loaded from an aircraft owned, leased or operated by a *certificated air carrier*.

[B] Group I-2. This occupancy shall include buildings and structures used for medical, surgical, psychiatric, nursing or custodial care on a 24-hour basis of more than five

persons who are not capable of self-preservation. This group shall include, but not be limited to, the following:

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

~~A facility such as the above with five or fewer persons shall be classified as Group R-3 or shall comply with the *International Residential Code* in accordance with Section 101.2 of the *International Building Code*.~~

Group I-4, day care facilities. This group shall include buildings and structures occupied by persons of any age who receive custodial care for less than 24 hours by individuals other than parents or guardians, relatives by blood, marriage, or adoption, and in a place other than the home of the person cared for. A facility such as the above with five or fewer persons shall be classified as Group R-3 or shall comply with the ~~*International*~~ *Residential Code* in accordance with Section 101.2 of the ~~*International*~~ *Building Code*. Places of worship during religious functions are not included.

Adult care facility. A facility that provides accommodations for less than 24 hours for more than five unrelated adults and provides supervision and personal care services shall be classified as Group I-4.

Exception: Where the occupants are capable of responding to an emergency situation without physical assistance from the staff the facility shall be classified as Group A-3.

Child care facility. A facility that provides supervision and personal care on less than a 24-hour basis for more than five children 21/2 years of age or less shall be classified as Group I-4.

Exception: A child day care facility which provides care for more than five but no more than 100 children 2 ½ years <u>of age</u> or less ~~of age~~, when the rooms where such children are cared for are located on the level of exit discharge and each of these child care rooms has an exit door directly to the exterior <u>or the fire area is sprinklered</u>, shall be classified as Group E.

[B] Mercantile Group M. Mercantile Group M occupancy includes, among others, buildings and structures 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
<u>Oil change facilities</u>
Retail or wholesale stores
Sales rooms

[B] 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 Section101.2 of the ~~*International Building Code*~~. Residential occupancies shall include the following:

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

Boarding houses (transient)
Hotels (transient)
Motels (transient)

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

Apartment houses
Boarding houses (not transient)
Congregate living facilities with more than 16 persons
~~Convents~~
~~Dormitories~~
~~Fraternities and sororities~~
Hotels (nontransient)
~~Monasteries~~
Motels (nontransient)
Vacation timeshare properties

Congregate living facilities with 16 or fewer occupants are permitted to comply with the construction requirements for Group R-3.

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

Buildings that do not contain more than two dwelling units
Adult care facilities that provide accommodations for five or fewer persons of any age for less than 24 hours
Child care facilities that provide accommodations for five or fewer persons of any age for less than 24 hours
Congregate living facilities with 16 or fewer persons.

Adult and child care facilities that are within a single-family home are permitted to comply with the ~~*International Residential Code.*~~

R-4 Residential occupancies shall include buildings arranged for occupancy as residential care/assisted living facilities including more than five but not more than 16 occupants, excluding staff.

Group R-4 occupancies shall meet the requirements for construction as defined in the ~~*International Building Code*~~ for Group R-3, except as otherwise provided for in that code, or shall comply with the ~~*International Residential Code*~~.

OVERCROWDING. A condition that exists when either there are more people in a building, structure or portion thereof than have been authorized or posted by the fire code or building official, or when the fire code official determines that a threat exists to the safety of the occupants due to persons sitting and/or standing in locations that may obstruct or impede the use of aisles, passages, corridors, stairways, exits or other components of the means of egress.

STANDBY INSPECTOR. A state-certified fire inspector assigned by the Fire Code Official as deemed necessary to ensure public safety and compliance with this code in accordance with Section 112.

TRADE SHOW. A temporary commercial exhibition or show for the purpose of display of manufactured products to prospective customers. See Section 105.6.4.

TRANSIT SHED. A covered structure erected on a wharf or quay for the temporary storage of goods in transit between ship and land carrier or warehouse.

[*EDITORIAL NOTE: New definitions shall be placed in appropriate alphabetical order positions. All other portions of Section 202 remain as set forth in the International Fire Code.]

SECTION 203
DISTRICTS OF LIMITATIONS

203.1 General. The districts referred to in this code in which the storage of explosives and blasting agents, flammable and combustible liquids, compressed and liquefied natural gases, cryogenic fluids and LP-gases may be prohibited or restricted, are hereby established.

203.1.1 District of Limitations No. 1. Beginning at the intersection of US Highway 59 with Pierce Street; thence, northerly along US Highway 59 to the centerline of Buffalo Bayou; thence, westerly following the meanders of the centerline of Buffalo Bayou to Franklin Street; thence, westerly along Franklin Street to Interstate Highway 45; thence, southerly along interstate Highway 45 to Pierce Street; thence, easterly along Pierce Street to U. S. Highway 59, the place of beginning.

203.1.2 District of Limitations No. 2. Beginning at the intersection of Main Street with Cambridge Street; thence, southerly along Main Street to Holcombe Boulevard; thence easterly along Holcombe Boulevard to Braeswood Boulevard; thence northerly along Braeswood Boulevard to North MacGregor Drive; thence northerly along North MacGregor Drive to Cambridge Street; thence westerly along Cambridge Street to Main Street, the place of beginning.

CHAPTER 3

GENERAL PRECAUTIONS AGAINST FIRE

301.2 Permits. Permits shall be required as set forth in Section 105.6 for the activities or uses regulated by Sections 303, 304, 306, 307, 308, ~~308.3, 308.4, 308.5~~ and 315.

303.1 Transporting. Asphalt (tar) kettles shall not be transported over any highway, road or street when the heat source for the kettle is operating. Kettle lids shall be closed and latched while in transit. Kettle contents shall be allowed to cool to a viscosity such that they cannot spill should the kettle overturn while in transit.

Exception: Asphalt (tar) kettles in the process of patching road surfaces.

303.2 Location. Asphalt (tar) kettles shall not be located within 20 feet (6096 mm) of any combustible material, combustible building surface or any building opening and within a controlled area identified by the use of traffic cones, barriers or other approved means. Asphalt (tar) kettles and pots shall not be utilized inside ~~or on the roof of~~ a building or structure. Asphalt (tar) kettles shall not be used on the roof of a building or structure except in accordance with Houston Fire Department LSB Standard No. 11, "Roofing Operations." Roofing kettles and operating asphalt (tar) kettles shall not block means of egress, gates, roadways or entrances.

303.3 Location of fuel containers. Fuel containers shall be located at least 10 feet (3048 mm) from the burner. All portable fuel containers shall be adequately secured to prevent containers from falling or being knocked over.

Exceptions:

1. Containers properly insulated from heat or flame are allowed to be within 2 feet (610 mm) of the burner.
2. LP-gas containers connected for use shall be kept a minimum of 15 feet (4572 mm) from burners. LP-gas container not connected for use shall be kept a minimum of 25 feet (7620 mm) from burners.

304.3.3 Capacity exceeding 1.5 cubic yards. Dumpsters and containers with an individual capacity ~~of~~ between 1.5 cubic yards [40.5 cubic feet (1.15 m^3)] and 15 cubic yards (405 cubic feet) (12 m^3) ~~or more~~ shall not be stored in buildings or placed within 5 feet (1524 mm) of combustible walls, metal walls, building openings or ~~combustible~~ roof eave lines. Dumpsters and containers 15 cubic yards (405 cubic feet) (12 m^3) capacity, or more, shall be a minimum of 10 feet (3 m) from combustible walls, metal walls, building openings, or roof eave lines. Dumpsters and containers shall not be placed on public sidewalks, streets, or other public property. No rubbish or combustible waste shall be placed, stored, or allowed to accumulate outside of dumpsters or containers. Lids of dumpsters shall be kept closed at all times.

Exceptions:

1. Dumpsters or containers in areas protected by an approved automatic sprinkler system installed throughout in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3.

2. Storage in a structure shall not be prohibited where the structure is of Type I or IIA construction, located not less than 10 feet (3048 mm) from other buildings and used exclusively for dumpster or container storage.

3. Dumpsters placed in the street right of way by governmental authorities on a temporary basis for neighborhood clean up campaigns, provided neither the roadway, nor fire apparatus access nor fire hydrants are obstructed and no other location is practicably available.

4. Dumpsters placed on a temporary basis for demolition or construction work under a valid building permit, provided neither the roadway, nor fire apparatus access, nor fire hydrants are obstructed and no other location is practicably available.

5. Approved containers placed for collection on street rights-of-way as authorized by Chapter 39 of the *City Code*.

304.4 Dumpster information required. The name of the dumpster company or responsible party and a contact telephone number shall be placed on dumpsters and other bulk containers as provided by Section 39-97 of the *City Code*.

305.1 Clearance from ignition sources. Clearance between ignition sources, such as luminaires, heaters, flame-producing devices, and combustible materials, shall be maintained in an approved manner. The clearance between combustible materials and unit heaters, radiant heaters, duct furnaces, flues and other heat producing devices shall be in accordance with the clearances shown on the product listing, but in no case shall be less than 3 feet (914.4 mm) in all directions, except as provided for in the *Building Code*.

305.4 Deliberate or negligent burning. It shall be unlawful to deliberately or through negligence set fire to or cause the burning of combustible material in such a manner as to attract attention, create a disturbance or fire hazard, or endanger the safety of persons or property.

307.1 General. Open burning and recreational fires are prohibited. A person shall not kindle or maintain or authorize to be kindled or maintained any open burning or recreational fire ~~unless conducted and approved in accordance with this section~~.

Exception: When approved by the fire code official, and where consistent with state, federal and local environmental laws and regulations, open burning shall be conducted in accordance with Houston Fire Department LSB Standard No. 16, "Open Burning and Recreational Fires." A permit is required for any fire authorized under this exception.

307.2 Reserved. ~~**Permit required.** A permit shall be obtained from the fire code official in accordance with Section 105.6 prior to kindling a fire for recognized silvicultural or range or wildlife management practices, prevention or control of disease or pests, or a bonfire. Application for such approval shall only be presented by and permits issued to the owner of the land upon which the fire is to be kindled.~~

~~**307.2.1 Authorization.** Where required by state or local law or regulations, open burning shall only be permitted with prior approval from the state or local air and water quality~~

~~management authority, provided that all conditions specified in the authorization are followed.~~

307.4 Reserved. ~~**Location.** The location for open burning shall not be less than 50 feet (15 240 mm) from any structure, and provisions shall be made to prevent the fire from spreading to within 50 feet (15 240 mm) of any structure.~~

~~**Exceptions:**~~

1. ~~Fires in approved containers that are not less than 15 feet (4572 mm) from a structure.~~
2. ~~The minimum required distance from a structure shall be 25 feet (7620 mm) where the pile size is 3 feet (914 mm) or less in diameter and 2 feet (610 mm) or less in height.~~

~~**307.4.1 Bonfires.** A bonfire shall not be conducted within 50 feet (15 240 mm) of a structure or combustible material unless the fire is contained in a barbecue pit. Conditions which could cause a fire to spread within 50 feet (15 240 mm) of a structure shall be eliminated prior to ignition.~~

~~**307.4.2 Recreational fires.** Recreational fires shall not be conducted within 25 feet (7620 mm) of a structure or combustible material. Conditions which could cause a fire to spread within 25 feet (7620 mm) of a structure shall be eliminated prior to ignition.~~

~~**308.4.1 Permit.** A permit in accordance with Section 105.6 shall be secured from the fire code official prior to the utilization of a torch or flame-producing device to remove paint from a structure.~~

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 procedures set forth in Chapter 10, Articles VIII and IX of the *City Code.* ~~*International Property Maintenance Code* and the *International Building Code*~~.

311.3 Removal of combustibles. Persons owning, or in charge or control of, a vacant building or portion thereof, shall remove therefrom all accumulations of combustible materials, flammable or combustible waste or rubbish and shall securely lock or otherwise secure doors, windows and other openings to prevent entry by unauthorized persons. The premises shall be maintained clear of waste or hazardous materials.

Exceptions:

1. Buildings or portions of buildings undergoing additions, alterations, repairs, or change of occupancy in accordance with the ~~*International Building Code*~~, where waste is controlled and removed as required by Section 304.
2. ~~Seasonally occupied buildings.~~

~~**311.5 Placards.** Any building or structure determined to be unsafe pursuant to Section 110 of this code shall be marked as required by Sections 311.5.1 through 311.5.5.~~

~~**311.5.1 Placard location.** Placards shall be applied on the front of the structure and be visible from the street. Additional placards shall be applied to the side of each entrance to the structure and on penthouses.~~

~~**311.5.2 Placard size and color.** Placards shall be 24 inches by 24 inches (610 mm by 610 mm) in size with a red background, white reflective stripes and a white reflective border. The stripes and border shall have a 2-inch (51 mm) stroke.~~

~~**311.5.3 Placard date.** Placards shall bear the date of their application to the building and the date of the most recent inspection.~~

~~**311.5.4 Placard symbols.** The design of the placards shall use the following symbols:~~

1. ~~☐This symbol shall mean that the structure had normal structural conditions at the time of marking.~~
2. ~~☒ This symbol shall mean that structural or interior hazards exist and interior fire-fighting or rescue operations should be conducted with extreme caution.~~
3. ~~☒ This symbol shall mean that structural or interior hazards exist to a degree that consideration should be given to limit fire fighting to exterior operations only, with entry only occurring for known life hazards.~~

~~**311.5.5 Informational use.** The use of these symbols shall be informational only and shall not in any way limit the discretion of the on-scene incident commander.~~

314.3 Highly combustible goods. The display of highly combustible goods, including but not limited to ~~fireworks,~~ flammable or combustible liquids, liquefied flammable gases, oxidizing materials, pyroxylin plastics and agricultural goods, in main exit access aisles, corridors, covered malls, or within 5 feet (1524 mm) of entrances to exits and exterior exit doors is prohibited when a fire involving such goods would rapidly prevent or obstruct egress.

CHAPTER 4

EMERGENCY PLANNING AND PREPAREDNESS

401.3 Emergency forces notification. In the event an unwanted fire occurs or upon the discovery of a fire, smoke or unauthorized release of flammable or hazardous materials on ~~a~~ any property, the owner or occupant shall immediately report such condition to the fire department. Building employees and tenants shall implement the appropriate emergency plans and procedures and notify the Fire Department as soon as notice can safely be given. No person shall, by verbal or written directive, require any delay in the reporting of a fire to the fire department.

403.2 Public safety plan. ~~In other than Group A or E occupancies,~~ Where the fire code official determines that an indoor or outdoor gathering of persons has an adverse impact on public safety through diminished access to buildings, structures, fire hydrants and fire apparatus access roads or where such gatherings adversely affect public safety services of any kind, the fire code official shall have the authority to order the development of, or prescribe a plan for, the provision of an approved level of public safety.

404.1 General. ~~Fire safety and evacuation plans shall comply with the requirements of this section.~~ The fire code official is authorized to require that emergency plans, employee duty assignments, employee training and fire drills be provided in buildings of any occupancy type. When required, emergency plans, employee duty assignments, employee training and fire drills shall be conducted in accordance with this chapter and Houston Fire Department LSB Standard No. 08, "Fire Drills."

404.2 Where required. When required by the fire code official, and where local fire marshal approvals are required by regulatory agencies, an approved fire safety and evacuation plan shall be prepared and maintained for the following occupancies and buildings.

1. Group A, other than Group A occupancies used exclusively for purposes of religious worship that have an occupant load less than 2,000.
2. ~~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.~~
3. ~~3~~. Group E.
4. ~~4~~ 3. Group H, in accordance with Section 407.
5. ~~5~~ 4. Group I, as required by state, federal and other regulatory agencies.
6. ~~6~~ 5. Group R-1, and High-rise R-1 in accordance with Houston Fire Department LSB Standard No. 07, "High Rise Fire Safety Plans."
7. ~~7. Group R-2 college and university buildings~~.
8. ~~8~~ 6. Group R-4, as required by state regulatory agencies.
9. ~~9~~ 7. High-rise buildings in accordance with Houston Fire Department LSB Standard No. 07, "High Rise Fire Safety Plans.

~~10~~ 8. Group M buildings having an occupant load of 500 or more persons or more than 100 persons above or below the lowest level of exit discharge.

~~11~~ 9. Covered malls exceeding 50,000 square feet (4645 m^2) in aggregate floor area.

~~12~~ 10. Underground buildings.

~~13~~ 11. Buildings with an atrium and having an occupancy in Group A, E or M.

404.3.1 Fire evacuation plans. Fire evacuation plans ~~shall~~ should include the following and any additional information as may be required by the fire code official:

1. Emergency egress or escape routes and alternate routes where available. ~~and whether evacuation of the building is to be complete or, where approved, by selected floors or areas only.~~
2. Procedures for building employees and security personnel who, when it is safe to do so, must remain to operate critical equipment before evacuating.
3. Procedures for accounting for employees and occupants after evacuation has been completed.
4. Identification ~~and assignment~~ of personnel who may need assistance with evacuation due to mobility impairment and personnel who may need to assist the mobility impaired. ~~responsible for rescue or emergency medical aid.~~
5. The preferred and any alternative means of notifying occupants of a fire or emergency.
6. The preferred and any alternative means of reporting fires and other emergencies to the fire department or designated emergency response organization.
7. Identification and assignment of personnel who can be contacted for further information or explanation of duties under the plan.
8. A description of the emergency voice/alarm communication system alert tone and preprogrammed voice messages, where provided.
9. All high-rise building evacuation plans shall conform to Houston Fire Department LSB Standard No. 07 “High-Rise Fire Safety Plans.”

Exception: Group I high-rise occupancies.

404.4 Maintenance. ~~Fire safety and~~ Emergency evacuation plans shall be reviewed or updated annually or as necessitated by changes in staff assignments, occupancy, or the physical arrangement of the building.

Exception: In high-rise occupancies, the emergency plans within fire depository boxes shall be reviewed and updated every six months to verify mobility impaired persons lists, emergency keys and any other data, in accordance with Houston Fire Department LSB Standard No. 06, “Fire Depository Boxes.”

405.1 General. Emergency evacuation drills complying with the provisions of this section shall be conducted in an occupancy when required by the fire code official in accordance with Houston Fire Department LSB Standard No. 08, “Fire Drills.” Evacuation drills in high-rise

buildings shall be conducted in accordance with Houston Fire Department LSB Standard No. 07, "High Rise Fire Safety Plans." ~~at least annually in the occupancies listed in Section 404.2 or when required by the fire code official. Drills shall be designed in cooperation with the local authorities.~~

405.2 Frequency. Fire drill frequency shall be in accordance with the Houston Fire Department LSB Standard No. 08, "Fire Drills", unless superseded by other regulatory agencies. ~~Required emergency evacuation drills shall be held at the intervals specified in Table 405.2 or more frequently where necessary to familiarize all occupants with the drill procedure.~~

~~**TABLE 405.2**~~
~~**FIRE AND EVACUATION DRILL**~~
~~**FREQUENCY AND PARTICIPATION**~~

~~GROUP OR OCCUPANCY~~	~~FREQUENCY~~	~~PARTICIPATION~~
~~Group A~~	~~Quarterly~~	~~Employees~~
~~Group B[c]~~	~~Annually~~	~~Employees~~
~~Group E~~	~~Monthly[a]~~	~~All occupants~~
~~Group I~~	~~Quarterly on each shift~~	~~Employees[b]~~
~~Group R-1~~	~~Quarterly on each shift~~	~~Employees~~
~~Group R-2[d]~~	~~Four annually~~	~~All occupants~~
~~Group R-4~~	~~Quarterly on each shift~~	~~Employees[b]~~
~~High-rise buildings~~	~~Annually~~	~~Employees~~

~~a. The frequency shall be allowed to be modified in accordance with Section 408.3.2.~~
~~b. Fire and evacuation drills in residential care/assisted living facilities shall include complete evacuation of the premises in accordance with Section 408.10.5. Where occupants receive habilitation or rehabilitation training, fire prevention and fire safety practices shall be included as part of the training program.~~
~~c. 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.~~
~~d. Applicable to Group R-2 college and university buildings in accordance with Section 408.3~~

405.6 Notification. ~~Where required by the fire code official,~~ In buildings having fire alarm monitoring services, prior notification of emergency evacuation drills shall be given to the ~~fire code official~~ jurisdiction immediately prior to the drill by calling the Houston Fire Department Office of Emergency Communications, Telephone: (713) 884-3143, and to the building's fire alarm monitoring service. The Fire Department and the monitoring service shall be immediately notified at the conclusion of emergency evacuation drills, in accordance with Houston Fire Department LSB Standard No. 08, "Fire Drills."

406.1 General. ~~Employees in the occupancies listed in Section 404.2 shall be trained in the fire emergency procedures described in their fire evacuation and fire safety plans. Training shall be based on these plans and as described in Section 404.3.~~ When required by the fire code official, employees shall be assigned duties for emergencies and shall be trained in accordance with this section.

406.3.3 Fire safety training. Employees ~~assigned fire-fighting duties~~ shall be trained to know the locations and proper use of portable fire extinguishers or other ~~manual fire-fighting~~ fire safety equipment ~~and the protective clothing or equipment required for its safe and proper use~~. In high-rise buildings, Building Emergency Response Personnel (BERP) shall be trained in accordance with applicable standards as established by the fire code official.

408.2.1 Seating plan and permits. The fire safety and evacuation plans for assembly occupancies including carnivals, festivals, fair grounds, and trade show exhibitions, shall be submitted when required by the fire code official. Plans shall include the information required by Section 404.3 and a detailed seating plan, occupant load, and occupant load limit. Deviations from the approved plans shall be allowed when approved by the fire code official, provided the occupant load limit for the occupancy is not exceeded and the aisles and exit access ways remain unobstructed.

Permits and plans are required to operate a place of assembly, or a carnival, festival or fair, to use liquid- or gas-fueled vehicles or equipment for competition or display inside an assembly occupancy, to use an assembly area for trade show exhibition purposes, or to use candles or other open-flame devices in assembly areas.

408.3 Group E occupancies and Group R-2 college and university buildings. Group E occupancies shall comply with the requirements of Sections 408.3.1 through 408.3.4 and ~~Sections 401 through 406~~ Houston Fire Department LSB Standard No. 08 "Fire Drills." Group R-2 college and university buildings shall comply with the requirements of Sections 408.3.1 and 408.3.3 ~~and Sections 401 through 406~~ Houston Fire Department LSB Standard No. 08 "Fire Drills."

408.3.1 First emergency evacuation drill. The first emergency evacuation drill of each school year ~~shall~~ is recommended but not required to be conducted within 10 days of the beginning of classes to familiarize the students and staff with the fire drill procedures.

408.3.2 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~~ Drills are not required during periods of inclement weather or when state mandated educational assessment testing is being conducted.

408.5 Group I-1 occupancies. Group I-1 occupancies shall comply with the requirements of Sections 408.5.1 through 408.5.5, ~~and~~ Sections 401 through 406, and Houston Fire Department LSB Standard No. 08 "Fire Drills."

408.5.4 Drill frequency. Emergency evacuation drills shall be conducted in accordance with Houston Fire Department LSB Standard No. 08, "Fire Drills." ~~at least six times per year, two times per year on each shift. Twelve drills shall be conducted in the first year of operation. Drills are not required to comply with the time requirements of Section 405.4.~~

408.6 Group I-2 occupancies. Group I-2 occupancies shall comply with the requirements of Sections 408.6.1 and 408.6.2, ~~and~~ Sections 401 through 406, and Houston Fire Department

LSB Standard No. 08, "Fire Drills." ~~Drills are not required to comply with the time requirements of Section 405.4.~~

408.8 Group I-4 occupancies. Group I-4 occupancies shall conform to Sections 401 through 406 and Houston Fire Department LSB Standard No. 08, "Fire Drills."

~~**408.8**~~ **408.9 Group R-1 occupancies.** Group R-1 occupancies shall comply with the requirements of Sections 408.~~8~~9.1 through 408.~~8~~9.3, ~~and~~ Sections 401 through 406, and Houston Fire Department LSB Standard No. 08, "Fire Drills." High-rise R-1 occupancies shall also be in accordance with Houston Fire Department LSB Standard No. 07, "High-Rise Fire Safety Plans."

~~**408.8.1**~~ **408.9.1 Evacuation diagrams.** A diagram depicting two evacuation routes shall be posted on or immediately adjacent to every required egress door from each hotel, motel or dormitory sleeping unit.

~~**408.8.2**~~ **408.9.2 Emergency duties.** Upon discovery of a fire or suspected fire, hotel, motel and dormitory employees shall perform the following duties:

1. Activate the fire alarm system, where provided.
2. Notify the public fire department.
3. Take other action as previously instructed.

~~**408.8.3**~~ **408.9.3 Fire safety and evacuation instructions.** Information shall be provided in the fire safety and evacuation plan required by Section 404 to allow guests to decide whether to evacuate to the outside, evacuate to an area of refuge, remain in place, or any combination of the three.

~~**408.9**~~ **408.10 Group R-2 occupancies.** Group R-2 occupancies shall comply with the requirements of Sections 408.9.1 through 408.9.3 and Sections 401 through 406.

~~**408.9.1 Emergency guide.** A fire emergency guide shall be provided which describes the location, function and use of fire protection equipment and appliances accessible to residents, including fire alarm systems, smoke alarms, and portable fire extinguishers. The guide shall also include an emergency evacuation plan for each dwelling unit.~~

~~**408.9.2 Maintenance.** Emergency guides shall be reviewed and approved in accordance with Section 401.2.~~

~~**408.9.3 Distribution.** A copy of the emergency guide shall be given to each tenant prior to initial occupancy.~~

~~**408.10**~~ **408.11 Group R-4 occupancies.** Group R-4 occupancies shall comply with the requirements of Sections 408.10.1 through 408.10.5, ~~and~~ Sections 401 through 406, and Houston Fire Department LSB Standard No. 08, "Fire Drills."

~~**408.10.1**~~**408.11.1 Fire safety and evacuation plan.** The fire safety and evacuation plan required by Section 404 shall include special staff actions, including fire protection procedures necessary for residents, and shall be amended or revised upon admission of a resident with unusual needs.

~~**408.10.2**~~**408.11.2 Staff training.** Employees shall be periodically instructed and kept informed of their duties and responsibilities under the plan. Such instruction shall be reviewed by the staff at least every two months. A copy of the plan shall be readily available at all times within the facility.

~~408.10.3~~408.11.3 Resident training. Residents capable of assisting in their own evacuation shall be trained in the proper actions to take in the event of a fire. The training shall include actions to take if the primary escape route is blocked. Where the resident is given rehabilitation or habilitation training, training in fire prevention and actions to take in the event of a fire shall be a part of the rehabilitation training program. Residents shall be trained to assist each other in case of fire to the extent their physical and mental abilities permit them to do so without additional personal risk.

~~408.10.4~~ 408.11.4 Drill frequency. Emergency evacuation drills shall be conducted in accordance with Houston Fire Department LSB Standard No. 08, "Fire Drills." ~~at least six times per year, two times per year on each shift. Twelve drills shall be conducted in the first year of operation. Drills are not required to comply with the time requirements of Section 405.4.~~

~~408.10.5~~ 408.11.5 Resident participation. Emergency evacuation drills shall involve the actual evacuation of residents to a selected assembly point and shall provide residents with experience in exiting through all required exits. All required exits shall be used during emergency evacuation drills.

Exception: Actual exiting from windows shall not be required. Opening the window and signaling for help shall be an acceptable alternative.

~~408.11~~ 408.12 Covered mall buildings. Covered mall buildings shall comply with the provisions of Sections ~~408.11.1~~ 408.12.1 through ~~408.11.3~~ 408.12.3.

~~408.11.1~~ 408.12.1 Lease plan. A lease plan shall be prepared for each covered mall building. The plan shall include the following in addition to that required by Section 404.3.2:

1. Each occupancy, including identification of tenant.
2. Exits from each tenant space.
3. Fire protection features, including the following:
   - 3.1 Fire department connections.
   - 3.2 Fire command center.
   - 3.3 Smoke management system controls.
   - 3.4 Elevators and elevator controls.
   - 3.5 Hose valves outlets.
   - 3.6 Sprinkler and standpipe control valves.
   - 3.7 Automatic fire-extinguishing system areas.
   - 3.8 Automatic fire detector zones.
   - 3.9 Fire barriers.

~~408.11.1.1~~ 408.12.1.1 ~~Approval~~ Maintenance. The lease plan shall be ~~submitted to the fire code official for approval, and shall be~~ maintained on site for immediate reference by responding fire service personnel and be available upon request by the fire code official.

~~408.11.1.2~~ 408.12.1.2 Revisions. The lease plans shall be revised annually or as often as necessary to keep them current. ~~Modifications or changes in tenants or occupancies shall not be made without prior approval of the fire code official and building official.~~

~~408.11.2~~408.12.2 Tenant identification. Each occupied tenant space provided with a secondary exit to the exterior or exit corridor shall be provided with tenant identification by business name and/or address. Letters and numbers of durable materials, at least 2 inches (50 mm) in height, shall be posted and maintained on the corridor side of the door, be plainly legible and shall contrast with their background.

~~Exception:~~ ~~Tenant identification is not required for anchor stores.~~

~~408.11.3~~ 408.12.3 Maintenance. Unoccupied tenant spaces shall be:

1. Kept free from the storage of any materials.
2. Separated from the remainder of the building by partitions of at least 0.5-inch-thick (12.7 mm) gypsum board or an approved equivalent to the underside of the ceiling of the adjoining tenant spaces.
3. Without doors or other access openings other than one door that shall be kept key locked in the closed position except during that time when opened for inspection.
4. Kept free from combustible waste and be broom-swept clean.

CHAPTER 5

FIRE SERVICE FEATURES

501.2 Permits. A permit shall be required as set forth in Sections ~~and~~ 105.6 ~~and 105.7~~.

SECTION 502
DEFINITIONS

FIRE DEPOSITORY BOX. A protective container, cabinet, or box that contains information manuals, packets, and keys as required by applicable LSB Standards.

KEY BOX. A ~~secure device~~ tamperproof box secured with a lock operable ~~only~~ by a fire department ~~master~~ key, and ~~containing building entry keys and other keys that may be required for access in an emergency~~ having contents as required by applicable LSB Standards.

[*EDITORIAL NOTE: New definitions shall be placed in appropriate alphabetical order positions. All other portions of Section 502 remain as set forth in the International Fire Code.]

503.2 Specifications. Fire apparatus access roads shall be installed and arranged in accordance with Sections 503.2.1 through 503.2.7 and Houston Fire Department LSB Standard No. 03, "Fire Department Access."

503.2.1 Dimensions. Fire apparatus access roads shall have an unobstructed width of not less than 20 feet (6096 mm), 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).

Exceptions:

1. When approved by the fire code official, vertical clearance may be reduced, provided the reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance.
2. When approved by the fire code official, existing access roads may have an unobstructed width of not less than 15 feet (4572 mm), when the reduction in width will not impair access by fire department equipment, or when, for access roads in existence on June 15, 1976, the designation of a greater width would necessitate structural changes to the building.

503.2.2 Authority. The fire code official shall have the authority to require an increase in the minimum access ~~widths~~ dimensions where they are inadequate for fire or rescue operations.

503.3 Marking. Where required by the fire code official, approved signs or other approved notices shall be provided for fire apparatus access roads to identify such roads or prohibit the

obstruction thereof. Marking of fire apparatus access roads shall be in accordance with Section 503.3 and Houston Fire Department LSB Standard No. 03, "Fire Department Access." Signs or notices shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.

503.3.1 Alteration, defacing of signs unlawful. A person commits an offense if the person intentionally alters, defaces, injures, knocks down, or removes, or attempts to alter, deface, injure, knock down, or remove, any sign required under the terms of this code.

503.4 Obstruction of fire apparatus access roads.

503.4.1 General. The required width of a fire apparatus access road~~s~~, private drive, private street, or private access easement utilized for fire apparatus access shall not be obstructed in any manner, including the parking of vehicles. The minimum required widths and clearances established in Section 503.2.1 shall be maintained at all times.

Exceptions:

1. Access control gates installed in accordance with Houston Fire Department LSB Standard No. 04, "Access Control Gates." See Section 105.6 for permits.
2. Parking shall not include a vehicle that has a licensed vehicle operator in constant attendance in the vehicle, provided that the licensed operator has the ability to immediately remove the vehicle in case of an emergency.

503.4.2 Removal of vehicles and obstructions. Vehicles parked and obstructions placed in violation of this code may be removed at the vehicle owner's expense by or at the direction of the fire chief, any peace officer or the property owner in accordance with applicable provisions of the *City Code* and state law.

503.4.3 Presumption of ownership. In any prosecution arising under this code that relates to the unlawful parking, standing, or stopping of a motor vehicle, it shall be presumed that the person who is the registered owner of the motor vehicle is the person who parked or stopped the vehicle at the date and time of the offense charged.

503.5 Required gates or barricades. The fire code official is authorized to require the installation and maintenance of gates or other approved barricades across fire apparatus access roads, trails or other accessways, not including public streets, alleys or highways. Access control gates and barriers shall be installed and maintained in accordance with Houston Fire Department LSB Standard No. 04, "Access Control Gates." For required permits see Section 105.6.2.

503.6 Security gates. The installation of security gates across a fire apparatus access road shall be approved by the fire ~~chief~~ code official in accordance with Houston Fire Department LSB Standard No. 04, "Access Control Gates." Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall be maintained operational at all times, or secured in the open position. Repairs shall be in accordance with original specifications and approvals.

504.1.1 Key box required. When required by the fire code official, security gates and barriers on access walkways shall be provided with approved "*9-1-1"* key boxes to facilitate emergency access into the property or building where emergency access is not readily available because of property or building design or because of distances from approved access roadways or drives to the building entrance. Key boxes shall be installed in

accordance with Houston Fire Department LSB Standard No. 05, "Key Boxes." See Section 105.6 for required permit.

504.3 Stairway access to roof. New buildings four or more stories in height, except those with a roof slope greater than four units vertical in 12 units horizontal (33.3 percent slope), shall be provided with a stairway to the roof. Stairway access to the roof shall be in accordance with Section 1009.12. Such stairway shall be marked at street and floor levels with a sign indicating that the stairway continues to the roof. Where roofs are used for roof gardens or for other purposes, stairways shall be provided as required for such occupancy classification. See Appendix H for stairway identification sign requirements.

505.1 Address numbers. New and existing buildings and occupancies therein shall have approved address numbers posted in accordance with Article V of Chapter 10 of the *City Code*., ~~building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property. These numbers shall contrast with their background. Address numbers shall be Arabic numerals or alphabet letters. Numbers shall be a minimum of 4 inches (102 mm) high with a minimum stroke width of 0.5 inch (12.7 mm).~~

SECTION 506
KEY BOXES/FIRE DEPOSITORY BOXES

506.1 Where required. Where access to or within a structure or an area is restricted because of secured openings or where immediate access is necessary for life-saving or fire-fighting purposes, the fire code official is authorized to require a key box or a fire depository box to be installed in an approved location. The key box shall be of an approved type and shall contain keys to gain necessary access as required by the fire code official. Key boxes shall be provided in accordance with Houston Fire Department LSB Standard No. 05, "Key Boxes."

506.1.1 Locks. An approved lock shall be installed on gates or similar barriers when required by the fire code official. Key boxes shall be provided in accordance with Houston Fire Department LSB Standard No. 05, "Key Boxes."

506.3 Fire depository box. A fire depository box shall be provided within all high-rise occupancies, as defined in the *Building Code*, or other facilities as may be required by the fire code official. Fire depository boxes shall be installed and maintained in accordance with Houston Fire Department LSB Standard No. 06, "Fire Depository Boxes."

506.4 Permit required. A permit is required to install and maintain a key box and/or fire depository box. See Section 105.6.

508.5.7 Removal of vehicles parked near fire hydrants. Vehicles parked within 15 feet of a fire hydrant in violation of a state law or ordinance may be removed at the vehicle owner's expense by or at the direction of the fire chief, fire code official or any peace officer in accordance with applicable provisions of the *City Code* and state law.

509.1 Features. ~~Where required by other sections of this code and in all buildings classified as high-rise buildings by the *International Building Code*, a fire command center for fire department operations shall be provided. The location and accessibility of the fire command center shall be approved by the fire department. The fire command center shall be separated from the remainder of the building by not less than a 1-hour fire barrier constructed in accordance with Section 706 of the *International Building Code* or horizontal assembly constructed in~~

~~accordance with Section 711 of the *International Building Code*, or both. The room shall be a minimum of 96 square feet (9 m^2) with a minimum dimension of 8 feet (2438 mm). A layout of the fire command center and all features required by this section to be contained therein shall be submitted for approval prior to installation. The fire command center shall comply withNFPA72 and shall contain the following features:~~

~~1. The emergency voice/alarm communication system unit.~~

~~2. The fire department communications system.~~

~~3. Fire-detection and alarm system annunciator system.~~

~~4. Annunciator visually indicating the location of the elevators and whether they are operational.~~

~~5. Status indicators and controls for air-handling systems.~~

~~6. The fire-fighter's control panel required by Section 909.16 for smoke control systems installed in the building.~~

~~7. Controls for unlocking stairway doors simultaneously.~~

~~8. Sprinkler valve and water-flow detector display panels.~~

~~9. Emergency and standby power status indicators.~~

~~10. A telephone for fire department use with controlled access to the public telephone system.~~

~~11. Fire pump status indicators.~~

~~12. Schematic building plans indicating the typical floor plan and detailing the building core, means of egress, fire protection systems, fire-fighting equipment and fire department access.~~

~~13. Work table.~~

~~14. Generator supervision devices, manual start and transfer features.~~

~~15. Public address system, where specifically required by other sections of this code.~~

Fire command centers for fire department operation shall be provided where required by and in accordance with the *Building Code*.

510.1.1 Identification of fire department connections. In addition to signs required by Section 912.4, all fire department connections to standpipe, sprinkler, or combined sprinkler/standpipe systems shall have approved signs indicating the nature of the systems and buildings served. Where a fire department connection for automatic sprinkler or standpipe systems serves only a portion of a building or a specific building within a complex, an approved sign shall be posted, indicating the portion of the building or specific building being served. The signs shall be located on or adjacent to the connection and shall be constructed of durable material. The lettering shall be not less than 1 inch (25 mm) in height on a background of contrasting color so that the lettering is clearly visible.

510.1.2 Identification of control valves. When a fire extinguishing system is provided with more than one control valve, approved identification signs indicating the portion of the system controlled by each valve shall be provided.

CHAPTER 6

BUILDING SERVICES AND SYSTEMS

601.2 Permits. Permits shall be obtained for ~~refrigeration systems and~~ stationary lead acid battery systems as set forth in Sections 105.6 ~~and 105.7~~.

603.9 Gas meters and piping.

603.9.1 Protection of meters and piping. Above-ground gas meters, regulators and piping subject to damage shall be protected by a barrier complying with Section 312 or otherwise protected in an approved manner.

603.9.2 Testing of piping and systems.

603.9.2.1 Routine testing. All gas piping systems in Groups A, E, I, R-1 and R-2 occupancies shall be tested at least every five years by a licensed plumber. Systems shall be tested in accordance with the *Plumbing Code*. A written record shall be maintained and shall be made available to the fire code official upon request.

603.9.2.2 Testing for leaks. The fire code official is authorized to require a test of the gas piping system in any building or structure, of any occupancy type, when there is reason to believe a leak may exist in the system.

604.3.1 Schedule. Inspection, testing and maintenance of emergency and standby power systems shall be in accordance with an approved schedule established upon completion and approval of the system installation and Houston Fire Department LSB Standard No. 02, "Inspection and Testing of Fire Protection and Life-Safety Equipment."

605.11 Protection of lighting fixtures and devices. All permanent or temporary lighting fixtures and devices used in mechanical spaces, service areas, exit accessways, stairways, and parking garages shall be provided with an approved protective device designed to prevent accidental breakage, contact with readily ignitable materials, or creation of electrical shock hazard.

Exceptions:

1. Listed devices approved for use in hazardous locations in accordance with the *Electrical Code*.
2. Listed incandescent bulbs or fluorescent tubes provided with approved shatter- or break-resistive protective coatings.
3. Listed devices for exterior use, with approved weather resistant bulbs.
4. Fixtures so located as to be suitably protected from accidental damage or breakage.

606.9 Remote controls. Remote control of the mechanical equipment and appliances located in the machinery room shall be provided ~~at an approved location immediately outside the machinery room and adjacent to its principal entrance~~ in accordance with the *Mechanical Code*.

606.11 Storage, use and handling. Flammable and combustible materials shall not be stored in machinery rooms for refrigeration systems. ~~having a refrigerant circuit containing more than 220 pounds (100 kg) of Group A1 or 30 pounds (14 kg) of any other group refrigerant.~~ Storage, use or handling of extra refrigerant or refrigerant oils shall be as required by Chapters 27, 30, 32 and 34.

606.12.2 Toxic and highly toxic refrigerants. Systems containing toxic or highly toxic refrigerants shall discharge vapor to the atmosphere only through an approved treatment system in accordance with Section 606.12.4 or a flaring system in accordance with Section 606.12.5.

Exception: Refrigerant R-123.

606.12.3 Ammonia refrigerant discharge. Systems containing ammonia refrigerant shall discharge ~~vapor to the atmosphere through an approved treatment system in accordance with Section 606.12.4, a flaring system in accordance with Section 606.12.5, or through an approved ammonia diffusion system in accordance with Section 606.12.6, or by other approved means~~ in accordance with the *Mechanical Code*.

~~**Exceptions:**~~

1. ~~Ammonia/water absorption systems containing less than 22 pounds (10 kg) of ammonia and for which the ammonia circuit is located entirely outdoors.~~
2. ~~When the fire code official determines, on review of an engineering analysis prepared in accordance with Section 104.7.2, that a fire, health or environmental hazard would not result from discharging ammonia directly to the atmosphere.~~

607.2 Emergency signs. An approved pictorial sign of a standardized design shall be posted adjacent to each elevator call station on all floors instructing occupants to use the exit stairways and not to use the elevators in case of fire. The sign shall read: IN FIRE EMERGENCY, DO NOT USE ELEVATOR. USE EXIT STAIRS. The lettering shall be at least ½" (13 mm) block letters on a background of contrasting color so that the lettering is clearly visible. ~~The emergency sign shall not be required for elevators that are part of an accessible means of egress complying with Section 1007.4.~~

607.3 Elevator Keys. Keys for the elevator car doors and firefighter service keys shall be kept in an approved location, in accordance with the applicable Houston Fire Department LSB Standard, for immediate use by the fire department.

CHAPTER 7

FIRE-RESISTANCE-RATED CONSTRUCTION

703.4 Testing. Horizontal and vertical sliding and rolling fire doors shall be inspected and tested annually to confirm proper operation and full closure. Fire doors, fire dampers, and other similar equipment shall be inspected and tested in accordance with Houston Fire Department 0LSB Standard No. 2, "Inspection and Testing of Fire Protection and Life-Safety Equipment." A written record shall be maintained and be available to the fire code official.

CHAPTER 9

FIRE PROTECTION SYSTEMS

901.1 Scope. The provisions of this chapter and the *Building Code* shall specify where fire protection systems are required and shall apply to the design, installation, inspection, operation, testing and maintenance of all fire protection systems.

901.2 Construction documents. The fire code official shall have the authority to require construction documents and calculations ~~for all fire protection systems and to require permits be issued~~ for the installation, rehabilitation or modification of any fire protection system. Construction documents for fire protection systems shall be submitted for review and approval in accordance with the *Building Code* prior to system installation.

~~**901.2.1 Statement of compliance.** Before requesting final approval of the installation, where required by the fire code official, the installing contractor shall furnish a written statement to the fire code official that the subject fire protection system has been installed in accordance with approved plans and has been tested in accordance with the manufacturer's specifications and the appropriate installation standard. Any deviations from the design standards shall be noted and copies of the approvals for such deviations shall be attached to the written statement.~~

901.3 Permits. Permits shall be required as set forth in Section 105~~.6 and 105.7~~ of the *Building Code*.

901.4.4 Appearance of equipment. Any device that has the physical appearance of life safety or fire protection equipment but that does not perform that life safety or fire protection function, shall be prohibited. Systems or devices that are permanently out of service or any non-required life safety system or fire protection system that no longer functions as originally installed shall be removed or the appearance changed so as not to be mistaken for functioning life safety or fire protection equipment.

901.5 Installation acceptance testing. Fire detection and alarm systems, fire-extinguishing systems, fire hydrant systems, fire standpipe systems, fire pump systems, private fire service mains and all other fire protection systems and appurtenances thereto shall be subject to acceptance tests as contained in the installation standards and as approved by the fire code official. ~~The fire code official shall be notified before any required acceptance testing.~~

The location of all fire department connections shall be approved by the fire marshal.

Inspection of fire-extinguishing systems shall be conducted by the fire marshal, and such inspection and reports shall be forwarded to the building official for posting to occupancy records. No building or structure requiring a fire-extinguishing system shall be permanently occupied without first obtaining the fire marshal's approval.

Exception: The building official shall have the authority to issue a temporary certificate of occupancy for the use of a portion or portions of a building prior to the completion of the entire structure.

901.5.1 Occupancy. It shall be unlawful to occupy any portion of a building or structure until the required fire detection, alarm and suppression systems have been tested and approved.

Exception: The building official is authorized to issue a temporary certificate of occupancy in accordance with the *Building Code*.

901.6.1 Standards. Fire protection systems shall be inspected, tested and maintained in accordance with the referenced standards listed in Table 901.6.1 and in accordance with Houston Fire Department LSB Standard No. 02, "Inspection and Testing of Fire Protection and Life-Safety Equipment" and LSB Standard No. 01, "Installation and Maintenance of Portable Fire Extinguishers."

901.6.2 Records. Records of all system inspections, tests and maintenance required by the referenced standards in Table 901.6.1, and all major repairs to the life safety and fire protection equipment systems, shall be maintained on the premises for a minimum of three years and shall be copied to the fire code official upon request.

Exception: Where inspection or testing may be on a 4- or 5- year cycle, the records shall be maintained until the next testing cycle has been completed.

901.7 Systems out of service. Where a required life safety or fire protection system is out of service, the fire department and the fire code official shall be notified immediately in accordance with Section 901.10 and, where required by the fire code official, the building shall either be evacuated or an approved fire watch or standby inspector, in accordance with Section 112, shall be provided for all occupants left unprotected by the shut down until the life safety or fire protection system has been returned to service.

Where utilized, fire watches shall be provided with at least one approved means for notification of the fire department and their only duty shall be to perform constant patrols of the protected premises and keep watch for fires.

901.10 Notification of fire department. The Houston Fire Department Office of Emergency Communications shall be immediately notified by telephone, at (713) 884-3143, whenever the required fire protection or life safety system is placed out of service for emergency or non-scheduled repairs, replacements, or service. The Fire Department shall be provided with the following information:

1. Correct street address and name of the building or structure.
2. The caller's name and contact phone number.
3. The identity of system that is impaired or shut down, and if known, the nature of impairment or failure.
4. Estimated length of time system is to be out of service for repairs.

The Fire Department Office of Emergency Communications shall again be notified when the system is restored to normal operational status.

901.11 Fire pumps. Fire pumps shall be listed by Factory Mutual, Underwriters Laboratories or another approved agency. Such pumps shall be automatic operation and the system flow and pressure shall be sized based on not exceeding 100% of the pump rated capacity. See the

Electrical Code for additional requirements. When such pumps are not approved for direct connection to the city main, the source of supply for such pumps shall be a minimum 2500-gallon suction tank served from the city main.

901.12 Outside sprinkler control valve. Outside control in the form of a wall post indicator valve or post indicator valve shall be provided for each sprinkler system. An indicating-type gate valve shall be required when sprinkler systems are supplied by the standpipe system.

901.13 Two-way standpipe connections. Class I and Class III standpipe systems shall be equipped with a two-way fire department inlet connection. Systems with three or more standpipes shall be provided with not less than two two-way fire department inlet connections.

SECTION 902
DEFINITIONS

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

OPEN BUILDING. A building having each wall at least 80 percent open.

STANDPIPE, TYPES OF. ~~Standpipe types are as follows:~~

~~**Automatic dry.** A dry standpipe system, normally filled with pressurized air, that is arranged through the use of a device, such as a dry pipe valve, to admit water into the system piping automatically upon the opening of a hose valve. The water supply for an automatic dry standpipe system shall be capable of supplying the system demand~~.

Automatic wet. A wet standpipe system that has a water supply that is capable of supplying the system demand automatically.

~~**Manual dry.** A dry standpipe system that does not have a permanent water supply attached to the system. Manual dry standpipe systems require water from a fire department pumper to be pumped into the system through the fire department connection in order to supply the system demand.~~

Manual wet. A wet standpipe system connected to a water supply for the purpose of maintaining water within the system but which does not have a water supply capable of delivering the system demand attached to the system. Manual wet standpipe systems require water from a fire department pumper (or the like) to be pumped into the system in order to supply the system demand.

~~**Semiautomatic dry.** A dry standpipe system that is arranged through the use of a device, such as a deluge valve, to admit water into the system piping upon activation of a remote control device located at a hose connection. A remote control activation device shall be provided at each hose connection. The water supply for a semiautomatic dry standpipe system shall be capable of supplying the system demand.~~

[*EDITORIAL NOTE: New definitions shall be placed in appropriate alphabetical order positions. All other portions of Section 902 remain as set forth in the International Fire Code.]

903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.

Exceptions:

1. Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided those spaces or areas are equipped throughout with an automatic fire alarm system and are separated from the remainder of the building by fire barriers consisting of not less than 1-hour fire-resistance-rated walls and 2-hour fire-resistance-rated floor/ceiling assemblies.
2. In other than Group H occupancies, a sprinkler system shall not be required in open buildings.

903.2.1.3 Group A-3. An automatic sprinkler system shall be provided for Group A-3 occupancies 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; or
3. The fire area is located on a floor other than the level of exit discharge.

Exceptions:

1. Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.
2. In lieu of a sprinkler system for a temporary use occupancy, the applicant may agree to provide a fire watch program under which one or more fire fighters of this jurisdiction will be present on the premises at all times when the amusement occupancy is open for use. The fire marshal shall promulgate regulations regarding the qualifications, deployment and numbers of fire fighters, which regulations shall be predicated upon public safety for the purpose of preventing fires and allowing safe egress in the event of a fire. The jurisdiction shall not be obligated to provide fire fighters for this purpose.

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

1. Throughout all Group E fire areas greater than 20,000 square feet (1858 m^2) in area.
2. ~~Throughout every portion of educational buildings below~~ Where the fire area is located on a floor other than the level of exit discharge.

   Exception: An automatic sprinkler system is not required in any fire area or area below the level of exit discharge where every classroom throughout the building has at least one exterior exit door at ground level.

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

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

Where the Group F-1 occupancy is located above the level of exit discharge, the sprinklers shall be provided in all floors between the Group F-1 occupancy and the level of exit discharge.

903.2.6 Group M. An automatic sprinkler system shall be provided throughout ~~buildings~~ floor areas containing a Group M occupancy where one of the following conditions exists:

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

Where the Group M occupancy is located above the level of exit discharge, the sprinklers shall be provided in all floors between the Group M occupancy and the level of exit discharge.

903.2.7 Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout ~~all buildings~~ floor areas with a Group R fire area.

Where the Group R occupancy is located above the level of exit discharge, the sprinklers shall be provided in all floors between the Group R occupancy and the level of exit discharge.

Exception: Group R-3 occupancies, unless otherwise required by this code.

903.2.8 Group S-1. An automatic sprinkler system shall be provided throughout ~~all buildings~~ floor areas 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; or
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).

Where the Group S-1 occupancy is located above the level of exit discharge, the sprinklers shall be provided in all floors between the Group S-1 occupancy and the level of exit discharge.

903.2.11 Reserved. ~~**During construction.** Automatic sprinkler systems required during construction, alteration and demolition operations shall be provided in accordance with Section 1413.~~

903.3.1 Standards. Sprinkler systems shall be designed and installed in accordance with Section~~s~~ 903.3.1.1, 903.3.1.2 or 903.3.1.3. Where listed for such use, fire sprinklers that have been tested and/or approved by a nationally recognized testing laboratory shall be accepted as equivalent.

903.3.1.1.1 Exempt locations. Automatic sprinklers shall not be required in the following rooms or areas where such rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from any room merely because it is damp, of fire-resistance rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the ~~fire code~~ building official.
3. Generator and transformer rooms separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.
4. In rooms or areas that are of noncombustible construction with wholly noncombustible contents.
5. Elevator machine rooms where all of the following apply:
   - 5.1 The elevator machine room is separated from the remainder of the building by a fire barrier at least equal to that required for the hoistway enclosure with a minimum of one hour.
   - 5.2 The machine room shall be used exclusively for machines and equipment required for the operation of the elevator.
   - 5.3 Smoke detectors are provided as required by the Elevator Safety Code.

903.3.6 Hose threads. Fire hose threads and fittings used in connection with automatic sprinkler systems shall be ~~as prescribed by the fire code official~~ National Standard hose threads.

903.3.7 Fire department connections. The location of fire department connections shall be approved by the ~~fire code official~~ fire marshal and shall have 2.5 inch hose connections. Fire department connections shall be located on the street side of buildings, fully visible and recognizable from the street or nearest point of fire department vehicle access or as otherwise approved by the fire marshal.

903.4.1 Signals. Alarm, supervisory and trouble signals shall be distinctly different and shall be automatically transmitted to an approved central station, remote supervising station or proprietary supervising station as defined in NFPA 72 or, when approved by the ~~fire code official~~ fire marshal, 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.

904.11.2 System interconnection. The actuation of the fire extinguishing system shall automatically shut down the fuel ~~or~~ and electrical power supply to the cooking equipment, electrical receptacles, and devices that are located under the hood. The fuel and electrical supply reset shall be manual.

904.11.6.4 Extinguishing system service. Automatic fire-extinguishing systems shall be serviced and tagged at least every 6 months and after activation of the system. Inspection shall be by qualified individuals, and a record of the service and inspection maintained on premises and made available ~~certificate of inspection shall be forwarded~~ to the fire code official upon ~~completion.~~ request. See Houston Fire Department LSB Standard No. 02, "Inspection and Testing of Fire Protection and Life-Safety Equipment."

905.3.1 Building height. Class III standpipe systems shall be installed throughout buildings where the floor level of the highest story is located more than 30 feet (9144 mm) above the lowest level of the fire department vehicle access, or where the floor level of the lowest story is located more than 30 feet (9144 mm) below the highest level of fire department vehicle access.

Exceptions:

1. Class I standpipes are allowed in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2.
2. ~~Class I manual standpipes are allowed in open parking garages where the highest floor is located not more than 150 feet (45 720 mm) above the lowest level of fire department vehicle access.~~
3. ~~Class I manual dry standpipes are allowed in open parking garages that are subject to freezing temperatures, provided that the hose connections are located as required for Class II standpipes in accordance with Section 905.5.~~
4. ~~4~~2. Class I standpipes are allowed in basements equipped throughout with an automatic sprinkler system.
5. ~~5~~3. In determining the lowest level of fire department vehicle access, it shall not be required to consider:

~~5~~3.1 Recessed loading docks for four vehicles or less, and

~~5~~3.2 Conditions where topography makes access from the fire department vehicle to the building impractical or impossible.

905.3.2 Group A. Class I automatic wet standpipes shall be provided in nonsprinklered Group A buildings having an occupant load exceeding 1,000 persons.

~~**Exceptions:**~~

~~1. Open-air-seating spaces without enclosed spaces.~~

~~2. Class I automatic dry and semiautomatic dry standpipes or manual wet standpipes are allowed in buildings where the highest floor surface used for human occupancy is 75 feet (22 860 mm) or less above the lowest level of fire department vehicle access.~~

905.3.4 Stages. Stages greater than 1,000 square feet (93 m^2) in area shall be equipped with a Class ~~III~~ II wet standpipe system with 1½-inch ~~and 2½-inch~~ (38 mm ~~and 64 mm~~) hose connections on each side of the stage.

Exception: Where the building or area is equipped throughout with an automatic sprinkler system, the hose connections are allowed to be supplied from the automatic sprinkler system ~~a 1½ inch (38 mm) hose connection shall be installed in accordance with NFPA 13 or in accordance with NFPA 14 for Class II or III standpipes~~.

905.3.5 Underground buildings. Underground buildings shall be equipped throughout with a Class I automatic wet ~~or manual wet~~ standpipe system.

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

1. In every required stairway, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at ~~an intermediate~~ each floor level landing ~~between floors~~, unless otherwise approved by the fire ~~code official~~ marshal.
2. On each side of the wall adjacent to the exit opening of a horizontal exit.

   Exception: Where floor areas adjacent to a horizontal exit are reachable from exit stairway hose connections by a 30-foot (9144 mm) hose stream from a nozzle attached to 100 feet (30 480 mm) of hose, a hose connection shall not be required at the horizontal exit.
3. In every exit passageway, at the entrance from the exit passageway to other areas of a building.
4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall.
5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), each standpipe shall be provided with a hose connection located either on the roof or at the highest landing of a stairway with stair access to the roof. An

additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.

6. Where the most remote portion of a nonsprinklered floor or story is more than 150 feet (45 720 mm) from a hose connection or the most remote portion of a sprinklered floor or story is more than 200 feet (60 960 mm) from a hose connection, the fire code official is authorized to require that additional hose connections be provided in approved locations.

905.5 Location of Class II standpipe hose connections. Class II standpipe hose connections shall be accessible and shall be located so that all portions of the building are within 30 feet (9144 mm) of a variable nozzle attached to 100 feet (30 480 mm) of hose.

905.8 ~~Dry standpipes.~~ ~~Dry standpipes shall not be installed.~~ **Design pressure**. Design pressure at the uppermost valve for a Class II standpipe system shall be 35 psi.

~~Exception:~~ ~~Where subject to freezing and in accordance with NFPA 14.~~

906.2 General requirements. Portable fire extinguishers shall be selected, installed and maintained in accordance with this section, ~~and~~ NFPA 10, and Houston Fire Department LSB Standard No. 01, "Installation and Maintenance of Portable Fire Extinguishers."

Exceptions:

1. The travel distance 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 three 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 three 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 ensure that hydrostatic tests are conducted at the frequency required by NFPA10.

907.1.3 State smoke alarm requirements for dwellings. Installation, inspection, and repair of smoke alarms in certain dwellings is governed by Subchapter F of Chapter 92 of the Texas Property Code. No provision of this section or other provision of this Code shall

be deemed to excuse compliance with the subject state law, and to the extent of any inconsistency, the state law shall control.

907.2 Where required—new buildings and structures. An approved manual, automatic or manual and automatic 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 907.10, unless other requirements are provided by another section of this code. Where automatic sprinkler protection installed in accordance with Section 903.3.1.1 or 903.3.1.2 is provided and connected to the building fire alarm system, automatic heat detection required by this section shall not be required.

The automatic fire detectors shall be smoke detectors. Where ambient conditions prohibit installation of automatic smoke detection, other automatic fire detection shall be allowed.

Exception: In other than Group H occupancies, a fire alarm system shall not be required in open buildings.

907.2.3 Group E. A manual and automatic fire alarm system 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. Group E occupancies with an occupant load of less than 50.
2. Manual fire alarm boxes are not required in Group E occupancies where the building is protected throughout by an approved supervised automatic sprinkler system and has a local alarm to notify all occupants. ~~all of the following apply:~~

   ~~2.1. Interior corridors are protected by smoke detectors with alarm verification.~~

   ~~2.2. Auditoriums, cafeterias, gymnasiums and the like are protected by heat detectors or other approved detection devices.~~

   ~~2.3. Shops and laboratories involving dusts or vapors are protected by heat detectors or other approved detection devices.~~

   ~~2.4. Off-premises monitoring is provided.~~

   ~~2.5. The capability to activate the evacuation signal from a central point is provided.~~

   ~~2.6. In buildings where normally occupied spaces are provided with a two-way communication system between such spaces and a constantly attended receiving station from where a general evacuation alarm can be sounded, except in locations specifically designated by the fire code official.~~
3. Manual fire alarm boxes shall not be required in Group E occupancies where the building is equipped throughout with an approved automatic sprinkler system, the notification appliances will activate on sprinkler water flow and manual activation is provided from a normally occupied location.

907.2.3.1 Group E educational. Smoke detectors shall be installed in any interior corridor serving as an exit and in storerooms, mechanical rooms, janitorial rooms and

similar areas. Smoke detectors shall not be required in toilet rooms, classrooms or offices.

Exception: Approved heat detectors may be installed in lieu of smoke detectors in mechanical rooms, janitorial rooms and similar areas.

907.2.3.2 Group E child care with an occupant load of 50 or more. Smoke detectors shall be installed in corridors, in common areas and in each room or area that exceeds 20 square feet in floor area.

907.2.3.3 Group E child care with an occupant load of less than 50. Smoke detectors shall be installed in each occupiable area. All such detectors shall be interconnected in such a way that the activation of any detector shall automatically activate the alarm of all detectors, unless provided with a fire alarm system in accordance with Section 907.2.3.

907.2.3.4 Manual fire alarm boxes. Where required in Group E occupancies, manual fire alarm boxes shall be located in accordance with Section 907.3.

907.2.6 Group I. A manual fire alarm system shall be installed in Group I occupancies. An electrically supervised, automatic smoke detection system shall be provided in accordance with Sections 907.2.6.1 and 907.2.6.2.

~~**Exception:** Manual fire alarm boxes in resident or patient sleeping areas of Group I-1 and I-2 occupancies 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 907.4.1 are not exceeded.~~

~~**907.2.6.2 Group I-2.** Corridors in nursing homes (both intermediate care and skilled nursing facilities), detoxification facilities and spaces permitted to be open to the corridors by Section 407.2 of the *International Building Code* shall be equipped with an automatic fire detection system. Hospitals shall be equipped with smoke detection as required in Section 407.2 of the *International Building Code.*~~

~~**Exceptions:**~~

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

Patient rooms. Patient sleeping units within Group I-1 and I-2 occupancies shall be provided with UL 268 type smoke detectors. Such detectors in Groups I-2 shall provide a visual display on the corridor side of each patient sleeping unit, and shall provide an audible and visual alarm at the nursing station attending each sleeping unit. In patient

sleeping units equipped with automatic door closures having integral smoke detectors on the room side, the integral detector may substitute for the room smoke detector, provided it performs the required functions.

907.2.6.4 Group I-4. Group I-4 occupancies shall have a manual fire alarm and automatic fire detection system installed in accordance with Section 907.2.3.

907.2.9 Group R-2. A manual fire alarm system shall be installed in Group R-2 occupancies where:

1. Any dwelling unit or sleeping unit is located three or more stories above the lowest level of exit discharge;
2. Any dwelling unit or sleeping unit is located more than one story below the highest level of exit discharge of exits serving the dwelling unit or sleeping unit; or
3. The building contains more than 16 dwelling units or sleeping units.

Exceptions:

1. A fire alarm system is not required in buildings not more than two stories in height where all dwelling units or sleeping units and contiguous attic and crawl spaces are separated from each other and public or common areas by at least 1-hour fire partitions and each dwelling unit or sleeping unit has an exit directly to a public way, exit court or yard.
2. Manual fire alarm boxes are not required throughout the building when the following conditions are met:
   2.1. The building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2; and
   2.2. The notification appliances will activate upon sprinkler flow.
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 1023.6, Exception 4.~~

907.2.10.1.4 Group E child day care facilities. Unless a fire alarm system is provided meeting the requirements of Section 907.2.3, a smoke alarm shall be provided in each occupiable area of child day care facilities with an occupant load of less than 50. Where more than one smoke alarm is required, the smoke alarms shall be interconnected in such a manner that activation of one alarm shall activate all the alarms.

907.2.12.1 Automatic fire detection. Smoke detectors shall be provided in accordance with this section. Smoke detectors shall be connected to an automatic fire

alarm system in accordance with NFPA 72. The activation of any detector required by this section shall operate the emergency voice/alarm communication system and shall place into operation all stair pressurization and atria fans to restrict the recirculation of smoke. Activation of any detector or any flow detector shall initiate the designed function of smoke dampers, fans and other components of the smoke-control system, unless the smoke-control system is designed or required to be manually activated only.

Rate of rise detectors may be used in lieu of smoke detectors in parking garages.

Smoke detectors shall be located as follows:

1. In each mechanical equipment, electrical, transformer, telephone equipment, central control station, or similar room which is not provided with sprinkler protection, elevator machine rooms, and in elevator lobbies.

2. ~~In the main return air and exhaust air plenum of each air-conditioning system having a capacity greater than 2,000 cubic feet per minute (cfm) (0.94 m^3/s). Such detectors shall be located in a serviceable area downstream of the last duct inlet.~~ In either the return-air plenum or main supply air duct of every air-conditioning and mechanical ventilating system with fans having a rated capacity of 2200 cfm (1 m^3/s) or greater. Activation of the products of combustion detector shall cut off electric current to the fan and shall operate the voice alarm signaling system of the required automatic fire alarm system.

   Exception: If air movement provided by the air-conditioning system or mechanical ventilating system is a designed component of the smoke-control system, the smoke detector need not shut off electric current to the fan.

3. ~~At each connection to a vertical duct or riser serving two or more stories from a return air duct or plenum of an air-conditioning system. In Group R-1 and R-2 occupancies, a listed smoke detector is allowed to be used in each return-air-riser carrying not more than 5,000 cfm (2.4 m^3/s) and serving not more than 10 air-inlet openings.~~ At each connection to a duct or riser serving two or more stories from a return-air duct or plenum of an air-conditioning system having an air volume of 2200 cfm (1 m^3/s) or greater.

4. In each exit corridor within 3 feet (910 mm) of each exit-access door to a stair. When exit corridors are not clearly defined, they shall be assumed to be 8 feet (2400 mm) wide connecting exit stairways.

5. In commercial kitchens.

   Exception: Rate of rise detectors may be installed in lieu of smoke detectors, with spacing every 500 square feet (47 m^2).

907.2.12.2 Emergency voice/alarm communication system. The operation of any automatic fire detector, sprinkler water-flow device or manual fire alarm box shall automatically sound an alert tone followed by voice instructions giving approved information and directions for a general or staged evacuation ~~on a minimum~~ of the alarming floor, the floor above and the floor below in accordance with the building's fire safety and evacuation plans required by Section 404. Speakers shall be provided throughout the building by paging zones. As a minimum, paging zones shall be provided as follows:

1. Elevator groups.

2. Exit stairways.
3. Each floor.
4. Areas of refuge as defined in Section 1002.1.

Alarms shall not sound in elevator groups or exit stairs.

907.2.12.2.2 Live voice messages. The emergency voice/alarm communication system shall also have the capability to broadcast live voice messages through ~~paging zones on a selective and all-call basis~~ speakers located in elevators, exit stairways and throughout a selected floor or floors.

907.2.12.3 Fire department communication system. An approved two-way, fire department communication system designed and installed in accordance with NFPA 72 shall be provided for fire department use. It shall operate between a fire command center complying with Section 509 and elevators, elevator lobbies, emergency and standby power rooms, fire pump rooms, areas of refuge and inside enclosed exit stairways. The fire department communication device shall be provided at each floor level within the enclosed exit stairway.

~~**Exception:** Fire department radio systems where approved by the fire department.~~

907.3.1.7 Group R-2. A fire alarm system shall be installed in existing Group R-2 occupancies more than three stories in height or with more than 16 dwelling units 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 0.75 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 1023.6, Exception 4.
4. Condominiums, as defined by Chapter 82 of the Texas Property Code.
5. A fire alarm system is not required in buildings that do not have interior corridors serving dwelling units (or in any dwellings that do not exit into an interior corridor) unless rehabilitation work is performed in the building with a cost that is equal to or exceeds twenty five percent (25%) of the market value of the building.

The fire alarm system required by this Section shall not be required to be monitored by a third party. This fire alarm system only requires pull stations that will produce a local audible alarm and activate in an on-site management office, if the property in which the building is located has an on-site management office.

907.3.1.7.1 Compliance schedule. When required by Section 907.3.1.7 for buildings containing an interior corridor, a fire alarm system shall be installed with audible pull-station alarms in accordance with the schedule set forth in Section 907.3.1.7.3.

907.3.1.7.2 Construction documents. Construction documents for fire alarm systems shall be submitted for review and approval prior to system installation. Construction documents shall include but not be limited to the requirements of Section 907.1.1.

907.3.1.7.3 Compliance dates. When required by Section 907.3.1.7, owners of existing Group R-2 occupancy buildings shall have a fire alarm system installed and approved by the fire marshal within the time frames allowed by this section. When properties could be categorized in more than one compliance time frame, the property shall be allotted the greater amount of time for compliance.

1. Properties shall comply within two (2) years of **[***the effective date of this code***]** or of annexation into the jurisdiction when the property contains a total of 50 dwelling units or less that are required to install a fire alarm system.
2. Properties shall comply within three (3) years of **[***the effective date of this code***]** or of annexation into the jurisdiction when the property contains a total of more than 50 dwelling units that are required to install a fire alarm system.

907.3.1.7.4 Extensions. The fire marshal is authorized to grant an extension of time for additional periods not exceeding 180 days for reasonable cause. All applications for extension shall be filed in writing with the fire marshal. The owner of the building shall set forth the following information on such an application:

1. The specific requirements of this chapter for which the owner is seeking an extension of time;
2. The period of time the owner believes is necessary to meet the requirements; and
3. The reasons why the owner believes such an extension of time is necessary.

907.3.2.1 General. Existing Group R-1, R-3 and R-4 occupancies not already provided with single-station smoke alarms shall be provided with approved single-station smoke alarms. Installation shall be in accordance with Section 907.2.10, except as provided in Sections 907.3.2.1.1, 907.3.2.2 and 907.3.2.3.

907.3.2.1.1 Group R-2 requirements. In existing Group R-2 occupancies, a battery-operated single-station smoke alarm shall be required to be installed in rooms designated for sleeping purposes within one year of **[***the effective date of this code***]** or date of annexation.

Interconnection and power supply requirements found in this Sections 907.3.2.2 and 907.3.2.3, shall not be required unless the building undergoes

alterations or repairs that result in the removal of interior walls or ceiling finishes exposing the structure, which could provide access to the building wiring.

907.3.3 Group R owner and tenant duties. The owner or manager of a residential building shall ensure that the smoke detector(s) required by Section 907.3 of this code are installed and operational when the tenant first occupies the unit. After the tenant takes possession of the unit, it shall be the duty of the tenant to regularly test the smoke detector(s) in the unit, and the tenant shall notify the owner immediately in writing of any problem, defect, malfunction or failure of any detector in the unit. Upon notification by the tenant, or upon notification by an inspector of the jurisdiction, that a smoke detector in the residential unit is not in proper working order, the owner shall have the detector(s) repaired or replaced.

Exception: The provisions of this section do not apply to dwelling units governed by Subchapter F of Chapter 92 of the Texas Property Code.

907.20 Inspection, testing, and maintenance. The maintenance and testing schedules and procedures for fire alarm and fire detection systems shall be in accordance with this section, ~~and~~ Chapter 10 of NFPA 72, and Houston Fire Department LSB Standard No. 02, "Inspection and Testing of Fire Protection and Life-Safety Equipment."

909.10.4 Automatic dampers. Automatic dampers~~, regardless of the purpose for which they are~~ installed within the smoke control system, shall be tested and listed in accordance with ~~and conform to~~ the requirements of ~~approved~~ recognized standards as follows: UL 555, UL 555C, UL 555S, and AMCA 511.

909.12.1 Wiring. In addition to meeting requirements of the ~~ICC *Electrical Code*~~, ~~all~~ mechanical smoke control wiring, regardless of voltage, shall be fully enclosed within continuous raceways. The requirement of this section shall apply only to wiring extending from the fire alarm system control unit that activates any required smoke-control system component such as relays, fans, dampers, or stair pressurization systems.

909.20 Maintenance. Smoke control systems shall be maintained to ensure to a reasonable degree that the system is capable of controlling smoke for the duration required. The system shall be maintained in accordance with the manufacturer's instructions and Sections 909.20.1 through 909.20.5 and in accordance with Houston Fire Department LSB Standard No. 02, "Inspection and Testing of Fire Protection and Life-Safety Equipment."

912.4 Signs. A metal sign with raised letters at least 1 inch (25 mm) in size shall be mounted on all fire department connections serving automatic sprinklers, standpipes or fire pump connections. Such signs shall read: AUTOMATIC SPRINKLERS or STANDPIPES or TEST CONNECTION or a combination thereof as applicable. See Section 510.1.1 for additional identification sign requirements.

912.6 Inspection, testing and maintenance. All fire department connections shall be periodically inspected, tested and maintained in accordance with NFPA 25 and Houston Fire Department LSB Standard No. 02, "Inspection and Testing of Fire Protection and Life-Safety Equipment."

913.5 Testing and maintenance. Fire pumps shall be inspected, tested and maintained in accordance with the requirements of this section, ~~and~~ NFPA 25 and Houston Fire Department LSB Standard No. 02, “Inspection and Testing of Fire Protection and Life-Safety Equipment."

CHAPTER 10

MEANS OF EGRESS

[B] SECTION 1002
DEFINITIONS

~~**ACCESSIBLE MEANS OF EGRESS.** A continuous and unobstructed way of egress travel from any accessible point in a building or facility to a public way.~~

~~**AREA OF REFUGE.** An area where persons unable to use stairways can remain temporarily to await instructions or assistance during emergency evacuation.~~

STAIRWAY. One or more flights of stairs, either exterior or interior, with the necessary landings and platforms connecting them, to form a continuous and uninterrupted passage from one level to another. Stairs or ladders used only to attend equipment or to access an attic or window well are not considered as a stairway.

[*EDITORIAL NOTE: New definitions shall be placed in appropriate alphabetical order positions. All other portions of Section 1002 remain as set forth in the International Fire Code.

1003.3 Reserved. ~~**Protruding objects.** Protruding objects shall comply with the requirements of Sections 1003.3.1 through 1003.3.4.~~

~~**1003.3.1 Headroom.** Protruding objects are permitted to extend below the minimum ceiling height required by Section 1003.2 provided a minimum headroom of 80 inches (2032 mm) shall be provided for any walking surface, including walks, corridors, aisles and passageways. Not more than 50 percent of the ceiling area of a means of egress shall be reduced in height by protruding objects.~~

~~**Exception:** Door closers and stops shall not reduce headroom to less than 78 inches (1981 mm).~~

~~A barrier shall be provided where the vertical clearance is less than 80 inches (2032 mm) high. The leading edge of such a barrier shall be located 27 inches (686 mm) maximum above the floor.~~

~~**1003.3.2 Free-standing objects.** A free-standing object mounted on a post or pylon shall not overhang that post or pylon more than 4 inches (102 mm) where the lowest point of the leading edge is more than 27 inches (686 mm) and less than 80 inches (2032 mm) above the walking surface. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (685 mm) maximum or 80 inches (2030 mm) minimum above the finished floor or ground.~~

~~**Exception:** This requirement shall not apply to sloping portions of handrails serving stairs and ramps.~~

~~**1003.3.3 Horizontal projections.** Structural elements, fixtures or furnishings shall not project horizontally from either side more than 4 inches (102 mm) over any walking surface between the heights of 27 inches (686 mm) and 80 inches (2032 mm) above the walking surface.~~

~~**Exception:** Handrails serving stairs and ramps are permitted to protrude 4.5 inches (114 mm) from the wall.~~

~~**1003.3.4 Clear width.** Protruding objects shall not reduce the minimum clear width of accessible routes as required in Section 1104 of the *International Building Code*.~~

1003.7 Elevators, escalators and moving walks. Elevators, escalators and moving walks shall not be used as a component of a required means of egress from any other part of the building. See Section 607.2 for emergency signs at elevator landings.

~~**Exception:** Elevators used as an accessible means of egress in accordance with Section 1007.4.~~

TABLE 1004.1.1
MAXIMUM FLOOR AREA ALLOWANCES PER OCCUPANT[a]

FUNCTION OF THE SPACE	FLOOR AREA IN SQ. FT. PER OCCUPANT
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.) Arcade/Game rooms	 11 gross 15 gross
Assembly with fixed seats	See 1004.7
Assembly without fixed seats Concentrated (chairs only– not fixed) auditoriums, churches and chapels, dance floors, lobbies accessory to assembly occupancy, lodge rooms, reviewing stands, stadiums, waiting areas Standing space Unconcentrated (tables and chairs) conference rooms, dining rooms, drinking establishments, gymnasiums, lounges, and stages	 7 net 5 net 15 net
Bowling centers, allow 5 persons for each lane including 15 feet of runway, and for each additional areas	7 net
Business areas	100 gross

Children's homes and homes for the aged	80 net
Courtrooms– other than fixed seating areas	40 net
Day care (for children or the aged)	35 net
Dormitories	50 gross
Educational Classroom area Shops and other vocational areas	 20 net 50 net
Exercise rooms (aerobics, gymnasiums)	50 gross
H-5 Fabrication and manufacturing areas	200 gross
Industrial areas	100 gross
Institutional areas Inpatient treatment areas Outpatient treatment areas Sleeping areas	 240 gross 100 gross 120 gross
Kitchens, commercial	200 gross
Library Reading rooms Stack area	 50 net 100 gross
Locker rooms	50 gross
Mercantile Areas on other floors Basement and grade floor areas Storage, stock, shipping areas	 60 gross 30 gross 300 gross
Parking garages	200 gross
Residential R-1, R-2, R-4 R-3	 200 gross 300 gross
Skating rinks, swimming pools Rink and pool Decks	 50 gross 15 gross
Stages and platforms	15 net
Accessory storage areas, mechanical equipment room	300 gross
Warehouses	500 gross

For SI: 1 square foot = 0.0929 m²

a. Where an occupancy or use is not specifically listed, the building official shall determine the occupant load using the occupancy or use it most nearly resembles.

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 authorized agent. Overcrowding or

admittance of any person beyond the approved occupant load shall not be allowed. See Sections 107.5 and 107.6.

[**Replace TABLE 1005.1 with the following**]

TABLE 1005.1
EGRESS WIDTH PER OCCUPANT SERVED

OCCUPANCY	STAIRWAYS (inches per occupant)	OTHER EGRESS COMPONENTS
All occupancies	0.3	0.2

1006.5 Testing and Maintenance. The equipment providing emergency power for means of egress illumination and exit signs shall be maintained in an operable condition and in accordance with Houston Fire Department LSB Standard No.02, "Inspection and Testing of Fire Protection and Life Safety Equipment."

[B] SECTION 1007
~~ACCESSIBLE MEANS OF EGRESS~~
RESERVED

[*Editorial Note: Delete this section in its entirety and reserve.]

1008.1.3.4 Electronic Locks. ~~**Access-controlled egress doors.** The entrance doors in a means of egress in buildings with an occupancy in Group A, B, E, M, R-1 or R-2 and entrance doors to tenant spaces in occupancies in Groups A, B, E, M, R-1 and R-2 are permitted to be equipped with an approved entrance and egress access control system which shall be installed in accordance with all of the following criteria:~~

1. ~~A sensor shall be provided on the egress side arranged to detect an occupant approaching the doors. The doors shall be arranged to unlock by a signal from or loss of power to the sensor.~~
2. ~~Loss of power to that part of the access control system which locks the doors shall automatically unlock the doors.~~
3. ~~The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches (1016 mm to 1219 mm) vertically above the floor and within 5 feet (1524 mm) of the secured doors. Ready access shall be provided to the manual unlocking device and the device shall be clearly identified by a sign that reads "PUSH TO EXIT." When operated, the manual unlocking device shall result in direct interruption of power to the lock – independent of the access control system electronics – and the doors shall remain unlocked for a minimum of 30 seconds.~~
4. ~~Activation of the building fire alarm system, if provided, shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.~~

~~5. Activation of the building automatic sprinkler or fire detection system, if provided, shall automatically unlock the doors. The doors shall remain unlocked until the fire alarm system has been reset.~~

~~6. Entrance doors in buildings with an occupancy in Group A, B, E or M shall not be secured from the egress side during periods that the building is open to the general public.~~

1008.1.3.4.1 Definitions. For the purpose of this section, the following definitions apply:

FAIL SAFE. Shall mean that the loss of power to the part of the system that locks the door shall automatically unlock the door.

FAIL SECURE. Shall mean that the loss of power to the locking system will allow the doors to remain locked.

1008.1.3.4.2 Requirements. Except as specified in other parts of this code, electronic locks shall meet the following requirements:

1. Electronic locks that are electronically locked from the ingress side and can be mechanically unlocked from the egress side, can be fail secure from the ingress side.

   Exception: Stairway enclosure re-entry doors required by Section 403 of the ~~*International* *Building Code*~~ shall be fail safe.

2. Electronic locks that unlock electronically from the egress side shall be fail safe and must be unlocked by a listed direct power-interrupting device without time-delay. If a motion sensor is used, a secondary in-line releasing device in the form of a button conspicuously located near the door shall be installed. If the lock is controlled by a relay, removal of power from the relay shall also cause the lock to fail open.

   Exception: Egress-control devices meeting the requirement of Section 1008.1.8.6 may be of the time-delay type.

3. Doors in excess of the number required for exits may be electronically controlled, provided there is a push button deactivating device (minimum of 1 ½ inch in size) conspicuously located near the door along with a sign stating "PUSH TO OPEN DOOR."

4. An exit door from an elevator lobby may be controlled by an electronic lock with an emergency release device (direct inline power interrupting switch) on the lobby side, provided the building has an automatic fire alarm system, including smoke detectors, located in the lobby and corridors and/or a complete sprinkler system that is interconnected to the fire alarm system. The release device may be either a manual fire alarm pull station or a push button (minimum of 1½ inch in size) located near the door with a sign stating: "PUSH/PULL TO RELEASE DOOR IN AN EMERGENCY." The locking device must release upon activation of the fire alarm or the sprinkler system and must be manually reset after being released.

1008.1.6 Thresholds. Thresholds at doorways shall not exceed 0.75 inch (19.1 mm) in height for sliding doors serving dwelling units or 0.5 inch (12.7 mm) for other doors. Raised thresholds and floor level changes greater than 0.25 inch (6.4 mm) at doorways shall be beveled with a slope not greater than one unit vertical in two units horizontal (50-percent slope).

Exception: The threshold height shall be limited to 7.75 inches (197 mm) where the occupancy is Group R-2 or R-3; the door is an exterior door that is not a component of the required means of egress; and the door, other than an exterior storm or screen door does not swing over the landing or step~~; and the doorway is not on an accessible route as required by Chapter 11 of the *International Building Code* and is not part of an Accessible unit, Type A unit or Type B unit~~.

1008.1.7 Door arrangement. Space between two doors in a series shall be 48 inches (1219 mm) minimum plus the width of a door swinging into the space. Doors in a series shall swing either in the same direction or away from the space between the doors.

Exceptions:

1. The minimum distance between horizontal sliding power-operated doors in a series shall be 48 inches (1219 mm).
2. Storm and screen doors serving individual dwelling units in Groups R-2 and R-3 need not be spaced 48 inches (1219 mm) from the other door.
3. Doors within individual dwelling units in Groups R-2 and R-3~~ other than within Type A dwelling units~~.

1008.1.8 Door operations. Whenever a building or space is occupied, ~~E~~except as specifically permitted by this section egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort.

1008.1.8.3 Locks and latches. Locks and latches shall be permitted to prevent operation of doors where any of the following exists:

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

   2.1. ~~The locking device is readily distinguishable as locked,~~

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

   2.2~~3~~. The use of the ~~key-operated~~ locking device is revokable by the fire code official for~~ due cause~~ failure to conform to any applicable requirement of this code or other laws.
3. Where egress doors are used in pairs, approved automatic flush bolts shall be permitted to be used, provided that the door leaf having the automatic flush bolts has no doorknob or surface-mounted hardware.

4. 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. In buildings in occupancy Group B that have an occupant load of 10 or less, doors may be equipped with a manually operated deadbolt in addition to a door latch.

1008.1.8.4 Bolt locks. Manually operated flush bolts or surface bolts that operate vertically are not permitted.

Exceptions:

1. On doors not required for egress in individual dwelling units or sleeping units.

2. ~~Where a pair of doors serves a storage or equipment room, manually operated edge- or surface-mounted bolts are permitted on the inactive leaf.~~ When one active leaf of a pair of doors provides the required exit width, manually operated edge- or surface-mounted bolts may be used on the inactive leaf, and a door closer need not be provided on the inactive leaf.

3. In buildings in occupancy Group B that have an occupant load of 10 or less, doors may be equipped with a manually operated deadbolt in addition to a door latch.

1008.1.8.6 Delayed egress locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group ~~A, E and~~ H occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 6 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.

2. The doors unlock upon loss of power controlling the lock or lock mechanism.

3. The door locks shall have the capability of being unlocked by a signal from the fire command center.

4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds (67 N) is applied for 1 second to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.

   Exception: Where approved, a delay of not more than 30 seconds is permitted.

5. A sign shall be provided on the door located above and within 12 inches (305 mm) of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.
6. Emergency lighting shall be provided at the door.

1008.1.9 Panic and fire exit hardware. Where panic and fire exit hardware is installed, it shall comply with the following:

1. The actuating portion of the releasing device shall extend at least one-half of the door leaf width.
2. The maximum unlatching force shall not exceed 15 pounds (67 N) applied in the direction of travel.

Each door in a means of egress from a Group A or E occupancy having an occupant load of 50 or more and any Group H occupancy shall not be provided with a latch or lock unless it is panic hardware or fire exit hardware.

Exception: A main exit of a Group A occupancy in compliance with Section 1008.1.8.3, Item 2.

Electrical rooms with equipment rated 1,200 amperes or more and over 6 feet (1829 mm) wide that contain overcurrent devices, switching devices or control devices with exit access doors must be equipped with panic hardware and doors must swing in the direction of egress.

If balanced doors are used and panic hardware is required, the panic hardware shall be the push-pad type, and the pad shall not extend more ~~then~~ than one-half the width of the door measured from the latch side.

1008.2.2 Security gates. In locations other than on doors where panic hardware is required, security gates may be installed provided they remain open when the premises is occupied by anyone other than security personnel.

1009.3 Stair treads and risers. Stair riser heights shall be 7 inches (178 mm) maximum and 4 inches (102 mm) minimum. Stair tread depths shall be 11 inches (279 mm) minimum. The riser height shall be measured vertically between the leading edges of adjacent treads. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. Winder treads shall have a minimum tread depth of 11 inches (279 mm) measured at a right angle to the tread's leading edge at a point 12 inches (305 mm) from the side where the treads are narrower and a minimum tread depth of 10 inches (254 mm).

Exceptions:

1. Alternating tread devices in accordance with Section 1009.9.
2. Spiral stairways in accordance with Section 1009.8.
3. Aisle stairs in assembly seating areas where the stair pitch or slope is set, for sightline reasons, by the slope of the adjacent seating area in accordance with Section 1025.11.2.
4. In Group R-3 occupancies; within dwelling units in Group R-2 occupancies; and in Group U occupancies that are accessory to a Group R-3 occupancy or accessory to individual dwelling units in Group R-2 occupancies; the maximum riser height

shall be 7.75 inches (197 mm); the minimum tread depth shall be 10 inches (254 mm); the minimum winder tread depth at the walk line shall be 10 inches (254 mm); and the minimum winder tread depth shall be 6 inches (152 mm). A nosing not less than 0.75 inch (19.1 mm) but not more than 1.25 inches (32 mm) shall be provided on stairways with solid risers where the tread depth is less than 11 inches (279 mm).

5. See Section 1027.10 for the replacement of existing stairways.

6. Private steps and stairways serving an occupant load of less than 10 and stairways to unoccupied roofs may be constructed with an 8-inch maximum (203 mm) rise and a 9-inch minimum (229 mm) run.

1009.10 Handrails. Stairways shall have handrails on each side and shall comply with Section 1012. Where glass is used to provide the handrail, the handrail shall also comply with Section 2407 of the ~~*International*~~ *Building Code*.

Exceptions:

1. Aisle stairs complying with Section 1025 provided with a center handrail need not have additional handrails.
2. Stairways within dwelling units, spiral stairways and aisle stairs serving seating only on one side are permitted to have a handrail on one side only.
3. Decks, patios and walkways that have a single change in elevation where the landing depth on each side of the change of elevation is greater than what is required for a landing do not require handrails.
4. ~~In Group R-3 occupancies, a change in elevation consisting of a single riser at an entrance or egress door does not require handrails.~~ Stairways having less than four risers and serving one individual dwelling unit in Group R-2, R-3, or Group U occupancies need not have handrails.
5. ~~Changes in room elevations of only one riser within dwelling units and sleeping units in Group R-2 and R-3 occupancies do not require handrails.~~

1011.2 Illumination. Exit signs shall be internally or externally illuminated.

~~**Exception:** Tactile signs required by Section 1011.3 need not be provided with illumination~~.

1011.3 Reserved. ~~**Tactile exit signs.** A tactile sign stating EXIT and complying with ICC A117.1 shall be provided adjacent to each door to an egress stairway, an exit passageway and the exit discharge.~~

1014.4 Aisles. Aisles serving as a portion of the exit access in the means of egress system shall comply with the requirements of this section. Aisles shall be provided from all occupied portions of the exit access which contain seats, tables, furnishings, displays and similar fixtures or equipment. Aisles serving assembly areas, other than seating at tables, shall comply with Section 1025. Aisles serving reviewing stands, grandstands and bleachers shall also comply with Section 1025.

The required width of aisles shall be unobstructed. Where required by the fire code official, approved methods for identification and maintenance of aisles shall be provided to prohibit their obstruction.

Exception: Doors, when fully opened, and handrails 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. Other nonstructural projections such as trim and similar decorative features are permitted to project into the required width 1.5 inches (38 mm) from each side.

1017.1 Construction. Corridors shall be fire-resistance rated in accordance with Table 1017.1. 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 at least one door directly to the exterior and rooms for assembly purposes have at least 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 or sleeping unit in an occupancy in Group 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 which is a space requiring only a single means of egress complying with Section 1015.1.
5. A fire-resistance rating is not required for corridors in one-story buildings housing Groups B, F, M, and S occupancies.
6. A fire-resistance rating is not required for corridors 30 feet (9144 mm) or more in width.
7. In other than Type I or II construction, exterior exit balcony roof assemblies may be of heavy timber construction without concealed spaces.
8. In Groups B, F, M and S occupancies where exits are available from an open floor area.
9. In Groups B, F, M and S occupancies within a single tenant suite or space, corridors need not be separated.
10. In Groups B, F, M and S occupancies where one-hour fire-resistant corridors are required, walls shall be permitted to terminate at a noncombustible ceiling.

1017.3 Dead ends. Where more than one exit or exit access doorway is required, the exit access shall be arranged such that there are no dead ends in corridors more than 20 feet (6096 mm) in length.

Exceptions:

1. In occupancies in Group I-3 of Occupancy Condition 2, 3 or 4 (see Section 202), the dead end in a corridor shall not exceed 50 feet (15 240 mm).
2. In occupancies in Groups B, ~~and F~~, M and S where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, the length of dead-end corridors shall not exceed 50 feet (15 240 mm).

3. A dead-end corridor shall not be limited in length where the length of the dead-end corridor is less than 2.5 times the least width of the dead-end corridor.

1017.4 Air movement in corridors. Corridors shall not serve as supply, return, exhaust, relief or ventilation air ducts.

Exceptions:

1. Use of a corridor as a source of makeup air for exhaust systems in rooms that open directly onto such corridors, including toilet rooms, sleeping units, dormitory rooms, bathrooms, dressing rooms, smoking lounges and janitor closets, shall be permitted, provided that each such corridor is directly supplied with outdoor air at a rate greater than the rate of makeup air taken from the corridor.
2. Where located within a dwelling unit, the use of corridors for conveying return air shall not be prohibited.
3. Where located within tenant spaces of 1,000 square feet (93 m^2) or less in area, utilization of corridors for conveying return air is permitted.
4. Air induced from the corridor into rooms required to be maintained under negative pressure with respect to the corridor by this code, other regulatory authorities, or standards~~,~~ shall be limited to the quantity required to maintain the required room pressure.
5. Air leakage into the corridor from rooms required to be maintained under positive pressure with respect to the corridor by this code, other regulatory authorities, or standards~~,~~ shall be limited to the quantity required to maintain the required room pressure.

1020.1.6 Stairway floor number signs. A sign shall be provided at each floor landing in interior exit enclosures connecting more than three stories designating the floor level, the terminus of the top and bottom of the stair enclosure and the identification of the stair. The signage shall also state the story of, and the direction to the exit discharge and the availability of roof access from the stairway for the fire department. The sign shall be located 5 feet (1524 mm) above the floor landing in a position that is readily visible when the doors are in the open and closed positions. See Appendix H for installation requirements.

Exception: Buildings with previously approved signs may retain those signs until the signs are replaced. The replacement signs shall be installed in accordance with Appendix H.

1020.1.6.1 Signs on occupancy side of stairway doors. Approved stairway identification signs shall be located at each floor level on the occupancy side of all interior vertical exit enclosures, regardless of height of the building. See Appendix H for installation requirements.

Exception: Buildings with previously approved signs may retain those signs until the signs are replaced. The replacement signs shall be installed in accordance with Appendix H.

1020.1.6.2 Reentry. Where stairway doors may be locked from the stairway side in accordance with the *Building Code,* provisions for reentry shall be provided. In buildings not provided with an emergency control station or where the control station is

not attended at all times while the building is occupied, alternate methods for releasing stairway doors shall be provided as required by the fire code official.

1025.2 Assembly main exit. Group A occupancies that have an occupant load of greater than 300 shall be provided with a main exit. The main exit shall be of sufficient width to accommodate not less than one-half of the occupant load, but such width shall not be less than the total required width of all means of egress leading to the exit. Where the ~~building~~ assembly area is classified as a Group A occupancy, the main exit shall front on at least one street or an unoccupied space of not less than 10 feet (3048 mm) in width that adjoins a street or public way.

Exception: In assembly occupancies where there is no well-defined main exit or where multiple main exits are provided, exits shall be permitted to be distributed around the perimeter of the ~~building~~ assembly area provided that the total width of egress is not less than 100 percent of the required width.

1025.3 Assembly other exits. In addition to having access to a main exit, each level in a Group A occupancy having an occupant load greater than 300 shall be provided with additional means of egress that shall provide an egress capacity for at least one-half of the total occupant load served by that level and comply with Section 1015.2.

Exception: In assembly occupancies where there is no well-defined main exit or where multiple main exits are provided, exits shall be permitted to be distributed around the perimeter of the ~~building~~ assembly area, provided that the total width of egress is not less than 100 percent of the required width.

1025.9.6 Assembly aisle obstructions. There shall be no obstructions in the required width of aisles except for handrails as provided in Section 1025.13. Where required by the fire code official, approved methods for identification and maintenance of aisles shall be provided to prohibit their obstruction.

1027.16.7 Maintenance. Fire escapes shall be kept clear and unobstructed at all times and shall be maintained in good working order. Inspections, testing, and maintenance shall be in accordance with Houston Fire Department Life Safety Bureau Standard No.2, “Inspection and Testing of Fire Protection and Life Safety Systems.”

CHAPTER 11

AVIATION FACILITIES

1106.19.1.2 ~~Monthly~~ Quarterly inspection. A more thorough inspection, performed as described in Section 3-16.2, NFPA 407 including working pressure testing, shall be accomplished for each hose on a ~~monthly~~ quarterly basis. This inspection shall include examination of the fuel delivery nozzle inlet screen for rubber particles, which indicates problems with the hose lining.

1106.19.2 Damaged hose. Hose that has been subjected to severe abuse, such as a severe end-pull, flattening or crushing by a vehicle, or sharp bend or kinking shall be immediately removed from service. Such hoses shall be hydrostatically tested in accordance with the manufacturer's recommendations prior to being returned to service.

CHAPTER 14

FIRE SAFETY DURING CONSTRUCTION AND DEMOLITION

1404.2 Waste disposal. Combustible debris shall not be accumulated within buildings. Combustible debris, rubbish and waste material shall be removed from buildings at the end of each shift of work. Combustible debris, rubbish and waste material shall not be allowed to accumulate around or overflow from dumpsters. Combustible debris, rubbish and waste material shall not be disposed of by burning on the site ~~unless approved~~. Combustible waste storage dumpsters shall be used and maintained in accordance with Section 304.

1417.1.1 Permits. Permits are required for the use of asphalt kettles and for roof torching operations. See Section 105.6.

1417.4 Torches and other flame-producing devices. Use of torches or other flame-producing devices for application of roofing membranes is prohibited.

Exception: When approved by the fire code official, roofing operations shall be conducted in accordance with Houston Fire Department LSB Standard No. 11, "Roofing Operations."

CHAPTER 15

FLAMMABLE FINISHES

1504.2 Location of spray-finishing operations. Spray finishing operations conducted in buildings used for Group A, E, I or R occupancies shall be located in a spray room protected with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 and separated vertically and horizontally from other areas in accordance with the ~~*International*~~ *Building Code*. In other occupancies, spray-finishing operations shall be conducted in a spray room, spray booth or spraying space approved for such use. Outside spraying or spray-finishing operations in basements or sub-basements are prohibited except when approved by the fire code official.

Exceptions:

1. Automobile undercoating spray operations and spray-on automotive lining operations conducted in areas with approved natural or mechanical ventilation shall be exempt from the provisions of Section 1504 when approved and where utilizing Class IIIA or IIIB combustible liquids.
2. In buildings other than Group A, E, I or R occupancies, approved limited spraying space in accordance with Section 1504.9.
3. Resin application areas used for manufacturing of reinforced plastics complying with Section 1509 shall not be required to be located in a spray room, spray booth or spraying space.

CHAPTER 22

MOTOR FUEL-DISPENSING FACILITIES AND REPAIR GARAGES

2201.1 Scope. Automotive motor fuel-dispensing facilities, marine motor fuel-dispensing facilities, fleet vehicle motor fuel-dispensing facilities and repair garages shall be in accordance with this chapter and the ~~*International Building Code, International Fuel Gas Code*~~ the *Plumbing Code* and the ~~*International*~~ *Mechanical Code*. Such operations shall include both operations that are accessible to the public and private operations.

Note: See applicable provisions of state law and regulations adopted by the Texas Commission on Fire Protection and the Railroad Commission of Texas for additional requirements.

2201.3 Construction documents. Construction documents with plans and specifications shall be submitted for review and approval prior to the installation or construction of automotive, marine or fleet vehicle motor fuel-dispensing facilities and repair garages in accordance with Section 105.4. A site plan shall be submitted that illustrates the location of flammable liquid, LP-gas, LNG or CNG storage vessels and their spatial relation to each other, property lines and building openings. Both above-ground and underground storage vessels shall be shown on plans. For each type of station, plans and specifications shall include, but not limited to, the following:

1. **Flammable and Combustible Liquids:** The type and design of underground and above-ground liquid storage tanks; the location and design of the fuel dispensers and dispenser nozzles; the design and specifications for related piping, valves and fittings; the location and classification of electrical equipment, including emergency fuel shutdown devices; and specifications for fuel storage and venting components.
2. **Liquefied Petroleum Gas:** Equipment and components as required in NFPA 58 and the Liquefied Petroleum Gas Safety Rules of the Railroad Commission of Texas; the location and design of the LP-gas dispensers and dispenser nozzles; the design, specifications and location of related piping, valves and fittings; the location and classification of electrical equipment, including emergency fuel shutdown devices; and specifications for fuel storage and pressure-relief components.
3. **Compressed Natural Gas:** When provided, the location of CNG compressors; the location and design of CNG dispensers and vehicle fueling connections; the design, specifications and location for related piping, valves and fittings; the location and classification of electrical equipment, including emergency fuel shutdown devices; and specifications for fuel storage and pressure-relief components. All installations shall be in accordance with this section, the Regulations for Compressed Natural Gas of the Railroad Commission of Texas, and NFPA 52.
4. **Liquefied Natural Gas:** Equipment and components as required by NFPA 57; the location and design of the LNG dispensers and dispenser nozzles; the design, specifications and location for related piping, valves and fittings; the location and classification of electrical equipment, including emergency fuel shutdown devices; and specifications for fuel storage and pressure-relief components.

2203.2 Emergency disconnect switches. An approved, clearly identified and readily accessible emergency disconnect switch shall be provided at an approved location, to stop the transfer of fuel to the fuel dispensers in the event of a fuel spill or other emergency. An emergency disconnect switch for exterior fuel dispensers shall be located within 100 feet (30 480 mm) of, but not less than 20 feet (6096 mm) from, the fuel dispensers. The sign lettering shall be not less than 2 inches (50 mm) in height on a background of contrasting color so that the lettering is clearly visible. Signs shall be provided in approved locations and distinctly labeled as: EMERGENCY FUEL SHUTOFF. For interior fuel-dispensing operations, the emergency disconnect switch shall be installed at an approved location. Such devices shall be distinctly labeled ~~as: EMERGENCY FUEL SHUTOFF~~. Signs shall be provided in approved locations.

2206.2.3 Above-ground tanks located outside, above grade. Above-ground tanks shall not be used for the storage of Class I, II or IIIA liquid motor fuels except as provided by this section and Houston Fire Department Standard No.13, "Outside Protected Aboveground Tanks for Generators and Fire Pumps."

1. Above-ground tanks used for outside, above-grade storage of Class I liquids shall be listed and labeled as protected above-ground tanks and be in accordance with Chapter 34. Such tanks shall be located in accordance with Table 2206.2.3.
2. Above-ground tanks used for above-grade storage of Class II or IIIA liquids are allowed to be protected above-ground tanks or, when approved by the fire code official, other above-ground tanks that comply with Chapter 34. Tank locations shall be in accordance with Table 2206.2.3.
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 3406.2.

2206.7.3 Mounting of dispensers. Dispensing devices except those installed on top of a protected above-ground tank that qualifies as vehicle-impact resistant, 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. Dispensing devices shall be installed and securely fastened to their mounting surface in accordance with the dispenser manufacturer's instructions. Dispensing devices installed indoors shall be located in an approved position where they cannot be struck by an out-of-control vehicle descending a ramp or other slope. LP-gas dispensers shall be in accordance with Section 2207 and the Liquefied Petroleum Gas Safety Rules of the Railroad Commission of Texas.

CNG dispensers shall be in accordance with the Regulations for Compressed Natural Gas of the Railroad Commission of Texas and NFPA 52. LNG dispensers shall be in accordance with NFPA 57.

2207.4.1 Limits established by law. For the storage and dispensing of LP-gas within the districts of limitations, see Sections 203 and 3804.

2208.1 General. Motor fuel-dispensing facilities for compressed natural gas (CNG) fuel shall be in accordance with this section and Chapter 30 and the Regulations for Natural Gas of the Railroad Commission of Texas.

2208.3 Location of dispensing operations and equipment. Compression, storage and dispensing equipment shall be located above ground, outside.

Exceptions:

1. Compression, storage or dispensing equipment shall be allowed in buildings of noncombustible construction, as set forth in the ~~*International* *Building Code*~~, which are unenclosed for three quarters or more of the perimeter.
2. Compression, storage and dispensing equipment shall be allowed indoors or in vaults in accordance with Chapter 30.
3. The storage and dispensing of CNG within the district of limitations shall be in accordance with Section 203.

SECTION 2212
LIQUEFIED NATURAL GAS MOTOR VEHICLE FUEL-DISPENSING STATIONS

2211.1 General. Fuel-dispensing stations utilizing LNG shall be in accordance with this section.

2211.2 Standards. LNG motor vehicle fuel-dispensing operations and facilities shall be in accordance with NFPA 57 and NFPA 59-A.

2211.3 Limits established by law. The storage and dispensing of LNG within the districts of limitations shall be in accordance with Section 203.

CHAPTER 23

HIGH-PILED COMBUSTIBLE STORAGE

2306.6 Building access. Where building access is required by Table 2306.2, fire apparatus access roads in accordance with Section 503 shall be provided within 150 feet (45 720 mm) of all portions of the exterior walls of buildings used for high-piled storage.

Exceptions:

1. Where fire apparatus access roads cannot be installed because of topography, railways, waterways, non-negotiable grades or other similar conditions, provided that the fire code official is authorized to require additional fire protection.
2. The fire code official may authorize deviations from the provisions of this section to allow access to no less than 60 percent of the perimeter of the entire building, provided the building is completely protected with an approved automatic fire sprinkler system and has either:
    - 2.1 An approved wet firefighting system that utilizes 2-1/2 inch (64 mm) discharge hose connections installed adjacent to each fire department access door not fronting an access roadway and is capable of delivering a minimum of 500 gallons per minute (1,893 L/m) through the 2-1/2 inch (64 mm) discharge connections, in accordance with NFPA standards; *or*
    - 2.2 An approved dry firefighting system that incorporates each of the following:
        - 2.2.1 2-1/2 inch (64 mm) discharge hose connections installed adjacent to each fire department access door not fronting an access road.
        - 2.2.2 Minimum 4 inch (102 mm) IPS pipe for up to and including 1,000 feet (305 m) in length, or 6 inches (152 mm) IPS pipe for over 1,000 feet (305 m) in length.
        - 2.2.3 Fire department connections (FDC) installed at approved locations identified by signs stating “DRY PIPE HOSE SYSTEM” installed on or immediately adjacent to each FDC, which signs shall be permanent, durable and reflective in nature with lettering design in Helvetica Medium and a minimum height size of 2 inches (50 mm).

For requirements on water supply, see Section 508.

2306.6.1.4 Marking of access doors. Firefighter access doors shall be labeled with “**HFD**” on the exterior in the top left hand corner. The letters shall be not less than four inches (100 mm) in height on a contrasting background. Lettering shall be legible, durable, and reflective in nature.

CHAPTER 24

TENTS, CANOPIES AND OTHER MEMBRANE STRUCTURES

2403.2 Approval required. Tents, canopies, and membrane structures having an area of 1200 square feet (112 m^2) or more, or an aggregate of 1200 square feet or more ~~in excess of 200 square feet (19 m^2) and canopies 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.

Exception:

1. Tents used exclusively for recreational camping purposes.

~~2. Fabric canopies open on all sides which comply with all of the following:~~

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

~~2.2. The aggregate area of multiple canopies 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.~~

2404.8 Fireworks. Fireworks shall not be used within 100 feet (30 480 mm) of tents, canopies or membrane structures except as approved by the fire code official.

CHAPTER 26

WELDING AND OTHER HOT WORK

2603.7 Roofing operations utilizing flame-producing devices. Use of torches or other flame producing devices for application of roofing membranes is prohibited. See Section 1416.

Exception: When approved by the fire code official, roofing operations shall be conducted in accordance with Houston Fire Department LSB Standard No. 11, “Roofing Operations.”

CHAPTER 27

HAZARDOUS MATERIALS—GENERAL PROVISIONS

2703.9.2 Security. When required by the fire code official, ~~S~~storage, dispensing, use and handling areas shall be secured against unauthorized entry and safeguarded in a manner approved by the fire code official. When security fences are installed, the fences shall be:

1. Substantially built of iron, steel or concrete that is fabricated and installed in accordance with the *Building Code*.
2. No portion of the fence shall be less than 6 feet (1830 mm) above the surrounding floor or ground surface.
3. Topped by three rows of barbed wire, 4 inches (100 mm) apart that is applied in a manner authorized by the *City Code*.
4. Equipped with necessary openings that are designed and fabricated to provide security equivalent to the fence and remain locked at all times except when in use by authorized personnel.
5. Located 5 feet (1525 mm) or more from the tank, valves or piping.

Note: For LP-gas transfer and storage facilities see Section 3807.4.

CHAPTER 30

COMPRESSED GASES

SECTION 3008
MEDICAL OXYGEN IN PATIENT AREAS

3008.1 General. The storage, handling, and use of medical oxygen in patient areas shall be in accordance with this section in addition to other requirements of this code.

3008.2 Use of smoking materials. No smoking materials, open flames, spark- or flame-producing devices, portable electrical space heaters, or other burning combustible materials shall be used in any patient area where medical oxygen is in use and for at least 30 minutes after the use of oxygen in the area has been discontinued.

3008.3 "Oxygen in use" signs. In rooms where medical oxygen is in use, the owner, manager operator, or person in charge of any hospital, clinic, day surgery, dialysis unit, medical school, dental school, medical lab, blood bank, nursing home, or related facility~~,~~ shall display at least two signs to read “No Smoking–Oxygen in Use.”

The signs shall be printed in letters at least 1 ½ inch (40 mm) in height on highly contrasting background. The remainder of the lettering shall be readily readable. Signs may be on cardboard, metal, or plastic. The signs shall not be less than 6 inches (150 mm) in length and 4 inches (100 mm) in width, unless otherwise approved by the fire code official.

One sign shall be posted upon the door leading into a patient's room and another shall be posted upon or readily adjacent to the oxygen unit, where it will be unobstructed and readily visible.

CHAPTER 32

CRYOGENIC FLUIDS

3203.6.1.2 Surfaces beneath containers. The surface of the area on which stationary containers are placed, including the surface of the area located below the point where connections are made for the purpose of filling such containers, shall be compatible with the fluid in the container. For liquid oxygen stationary containers, surfacing of noncombustible material shall be provided at ground level under liquid delivery connections for the storage container(s) and the delivery vehicle. Asphaltic and bitumastic paving or organic material (wood, wood byproducts or similar materials) shall not be used as paving materials. This area shall be at least 3 feet (910 mm) in diameter from points at ground level upon which leakage of liquid oxygen might occur during unloading and normal operation of the system. The area under the mobile supply equipment shall be at least the full width of the vehicle and at least 8 feet (2.4 m) in the direction of the vehicle axis. The layout of the slope, if any, of such areas shall consider possible flow of spilled liquid oxygen to adjacent combustible materials. The area around the stationary containers, fill connections and delivery pad shall be kept clear of all trash and organic matter.

3204.3.1.1 Location. Stationary containers shall be located in accordance with Section 3203.6. Containers of cryogenic fluids shall not be located within diked areas containing other hazardous materials.

Storage of flammable cryogenic fluids in stationary containers outside of buildings is prohibited within the limits established by law as the limits of districts in which such storage is prohibited ~~(see Section 3 of the Sample Ordinance for Adoption of the *International Fire Code* on page v).~~ in accordance with Section 203, unless approved by the fire code official.

CHAPTER 33

EXPLOSIVES AND FIREWORKS

3301.1.3 Fireworks. The possession, manufacture, storage, sale, handling and use of fireworks are prohibited.

Exceptions:

1. Storage and handling of fireworks as allowed in Section 3304.
2. ~~Manufacture, assembly and testing of fireworks as allowed in Section 3305.~~
3. ~~—~~The use of fireworks for display as allowed in Section 3308.
4. ~~The possession, storage, sale, handling and use of specific types of Division 1.4G fireworks where allowed by applicable laws, ordinances and regulations, provided such fireworks comply with, CPSC 16 CFR, Parts 1500 and 1507, and DOTn 49 CFR, Parts 100-178, for consumer fireworks.~~
3. Fireworks being transported in international, intrastate, or interstate commerce through the jurisdiction between points of origin and destination outside of the jurisdiction in accordance with all applicable municipal or state laws, ordinances, and regulations, provided the fireworks comply with federal regulations CPSC 16 CFR, Parts 1500-1507, and DOTn 49, Parts 100-178, for consumer fireworks. The provisions of this exception shall extend only to bona fide commercial transportation and distribution of fireworks in commercial quantities among manufacturers, wholesalers and dealers. Transportation shall be by way of established hazardous materials transportation routes through and around the jurisdiction.

3301.1.3.1 Seizure of fireworks. The presence of any fireworks within this jurisdiction in violation of this chapter is hereby declared to be a common and public nuisance. The fire code official is directed and required to seize and cause to be safely destroyed any fireworks found in violation of this code. Any member of the Life Safety and Fire Prevention Bureau of the Houston Fire Department or any police officer of the jurisdiction is empowered to stop the transportation of and detain any fireworks found being transported illegally.

3301.1.6 Limits established by law. Storage, handling and use of explosive materials is prohibited within the districts of limitations established by Section 203.

Exceptions:

1. Where permitted and approved by the fire code official and building official during construction and demolition, and in accordance with Sections 1407 and 3308.
2. Pyrotechnical displays and special effects, in accordance with Section 3308.

3301.2.4 Financial responsibility. Before a permit is issued, as required by Section 3301.2, the applicant shall file with the jurisdiction a corporate surety bond in the principal

sum of ~~$100,000~~ $1,000,000 or a public liability insurance policy for the same amount, for the purpose of the payment of all damages to persons or property which arise from, or are caused by, the conduct of any act authorized by the permit upon which any judicial judgment results. The fire code official is authorized to specify a greater or lesser amount when, in his or her opinion, conditions at the location of use indicate a greater or lesser amount is required. Government entities shall be exempt from this bond requirement.

3305.1 General. The manufacture, assembly and testing of explosives, ammunition, and blasting agents ~~and fireworks~~ shall comply with the requirements of this section and NFPA 495 ~~or NFPA 1124~~.

Exceptions:

1. The hand loading of small arms ammunition prepared for personal use and not offered for resale.
2. The mixing and loading of blasting agents at blasting sites in accordance with NFPA 495.
3. The use of binary explosives or plosophoric materials in blasting or pyrotechnic special effects applications in accordance with NFPA 495 or NFPA 1126.

3305.1.1 Manufacturing of fireworks prohibited. The manufacturing of fireworks is prohibited, and no provision of this section shall be construed to authorize the manufacturing of fireworks within the jurisdiction.

3305.5 Buildings and equipment. Buildings or rooms that exceed the maximum allowable quantity per control area of explosive materials shall be operated in accordance with this section and constructed in accordance with the requirements of the *~~International~~ Building Code* for Group H occupancies.

~~**Exception:** Fireworks manufacturing buildings constructed and operated in accordance with NFPA 1124.~~

3308.2 Permit application. A permit to store, handle, or use fireworks for displays or pyrotechnic special effects materials shall be granted only to an individual who possesses a valid Pyrotechnic Operator's License or Pyrotechnics Special Effects Operator's License issued by the State of Texas. Prior to issuing permits for a fireworks display, plans for the 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.

3308.2.1 Outdoor displays. In addition to the requirements of Section 403, permit applications for outdoor fireworks displays using Division 1.3G fireworks shall include a diagram of the location at which the display will be conducted, including the site from which fireworks will be discharged; the location of buildings, highways, overhead obstructions and utilities; and the lines behind which the audience will be restrained. As part of the review of the permit application, the fire chief's office shall be consulted regarding requirements for standby fire apparatus. Also, see Section 112 and Houston Fire Department LSB Standard No. 12, "Fireworks Display."

3308.2.2 Proximate audience displays. Where the separation distances required by Section 3308.4 and NFPA 1123 are unavailable or cannot be secured, only proximate audience displays conducted in accordance with NFPA 1126 shall be allowed. Applications for proximate audience displays shall include plans indicating the required clearances for spectators and combustibles, crowd control measures, smoke control measures, and requirements for standby personnel and equipment when provision of such personnel or equipment is required by the fire code official in accordance with Section 112.

3308.3 Approved displays. Approved displays shall include only the approved Division 1.3G, Division 1.4G, and Division 1.4S fireworks, shall be handled by an approved ~~competent~~ pyrotechnic operator, and the fireworks shall be arranged, located, discharged and fired in a manner that will not pose a hazard to property or endanger any person. The pyrotechnic operator shall be responsible for all aspects of a display related to pyrotechnics storage, handling and use.

3308.11 Retail display and sale. The display and sale of fireworks is prohibited within the jurisdiction. ~~Fireworks displayed for retail sale shall not be made readily accessible to the public. A minimum of one pressurized-water portable 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 conspicuously posted in areas where fireworks are stored or displayed for retail sale.~~

CHAPTER 34

FLAMMABLE AND COMBUSTIBLE LIQUIDS

3403.5.5 Security. When required by the fire code official, storage areas, tanks, piping, valves, regulating equipment and accessories shall be protected against tampering or trespassers by fencing or other control measures in accordance with Section 2703.9.2.

3403.6.9.2 Swing joints. Approved swing joints shall be installed on all underground liquid, vapor and vent piping where the piping leaves the dispensing island or location and just before where the pipe connects to any underground tank fittings. Swing joints shall also be installed on piping that is rigidly supported or connected between fixed points and that is subject to thermal expansion or differential movements. No pipe nipple used in connection with a double swing joint or where piping joins tanks shall exceed 12 inches (300 mm) in length.

Exception: Listed flexible connectors are allowed in lieu of swing joints when approved by the fire code official.

3404.2.9.5.1 Locations where above-ground tanks are prohibited. Storage of Class I and II liquids in above-ground tanks outside of buildings is prohibited within the limits established by law as the limits of districts in which such storage is prohibited ~~(see Section 3 of the Sample Ordinance for Adoption of the *International Fire Code* on page v).~~ in accordance with Section 203, unless approved by the fire code official. See Houston Fire Department LSB Standard No.13, "Outside Protected Above-Ground Tanks for Generators and Fire Pumps."

3404.2.12.3 Existing tanks and piping. The fire code official is authorized to require leak-testing for existing underground storage tanks and piping when there is reasonable cause to believe that a leak exists. The method of testing shall be approved by the fire code official.

3404.3.4.4 Special provisions for ~~L~~liquids used for maintenance and operation of equipment. In all occupancies, quantities of flammable and combustible liquids in excess of 10 gallons (38 L) used for maintenance purposes and the operation of equipment shall be stored in liquid storage cabinets in accordance with Section 3404.3.2. Quantities not exceeding 10 gallons (38 L) are allowed to be stored outside of a cabinet when in approved ~~containers~~ safety cans located in ~~private garages or other~~ approved locations.

In other than Group H Occupancies, quantities of flammable and combustible liquids used for demonstration, treatment and laboratory work exceeding 10 gallons (38 L) shall be stored in storage cabinets in accordance with Section 3404.3.2. Quantities not exceeding 10 gallons (38 L) shall be stored in approved safety cans, in approved locations.

3404.3.5.4 Combustible materials. In areas that are inaccessible to the public, Class I, II and IIIA liquids shall not be stored in the same pile or rack section as ordinary combustible commodities unless such materials are packaged together as kits.

Exception: When an approved fire suppression system is installed, alternate storage arrangements are permitted if they are consistent with the capabilities of the suppression systems.

3404.3.8.5 Warehouse hose lines. In liquid storage warehouses, ~~either~~ 1½-inch (38 mm) lined or 1-inch (25 mm) hard rubber ~~hand~~ hose lines, or approved wheeled fire extinguishers shall be provided in sufficient number to reach all liquid storage areas and shall be in accordance with Section 903 or Section 905.

3404.4.8 Empty containers and tank storage. ~~The storage of e~~Empty tanks and containers previously used for the storage of flammable or combustible liquids, unless free from explosive vapors, shall be stored as required for filled containers and tanks. Tanks and containers when emptied shall have the covers or plugs immediately replaced in openings and shall be separated from filled containers. Empty tanks and containers that have been rendered free of explosive vapors shall be visibly marked as "EMPTY," or the area where the containers are stored shall be marked with an approved sign indicating "EMPTY CONTAINERS."

3405.2.4 Class I, II and III-A liquids. Class I and II liquids or Class III-A liquids that are heated up to or above their flash points shall be drawn or transferred into vessels, containers, or portable tanks using ~~by~~ one of the following methods:

Exception: Liquids in containers not exceeding a 5.3-gallon (20 L) capacity.

1. From safety cans complying with UL 30.
2. Through an approved closed piping system.
3. From containers or tanks by an approved pump taking suction through an opening in the top of the container or tank.
4. For Class ~~IB, IC,~~ II and III-A liquids, from containers or tanks by gravity through an approved self-closing or automatic-closing valve when the container or tank and dispensing operations are provided with spill control and secondary containment in accordance with Section 3403.4. Class ~~I~~A liquids shall not be dispensed by gravity from tanks.
5. Approved engineered liquid transfer systems.
6. From original shipping containers with a capacity of 5 gallons (19 L) or less.

3406.2.4.4 Locations where above-ground tanks are prohibited. The storage of Class I and II liquids in above-ground tanks is prohibited within the limits established by law as the limits of districts in which such storage is prohibited ~~(see Section 3 of the Sample Ordinance for Adoption of the *International Fire Code* on page v)~~ in accordance with Section 203, unless approved by the fire code official. See Houston

Fire Department LSB Standard No.13, "Outside Aboveground Tanks for Generators and Fire Pumps."

3406.2.5 Type of tank. Tanks shall be provided with top openings only ~~or shall be elevated for gravity discharge~~.

3406.2.5.1.1 Pumps and fittings. Tanks ~~with top openings only~~ shall be equipped with a tightly and permanently attached, approved pumping device having an approved hose of sufficient length for filling vehicles, equipment or containers to be served from the tank. Either the pump or the hose shall be equipped with a padlock to its hanger to prevent tampering. An effective antisiphoning device shall be included in the pump discharge unless a self-closing nozzle is provided. Siphons or internal pressure discharge devices shall not be used.

~~**3406.2.5.2 Tanks for gravity discharge.** Tanks with a connection in the bottom or the end for gravity-dispensing liquids shall be mounted and equipped as follows:~~

~~1. Supports to elevate the tank for gravity discharge shall be designed to carry all required loads and provide stability.~~

~~2. Bottom or end openings for gravity discharge shall be equipped with a valve located adjacent to the tank shell which will close automatically in the event of fire through the operation of an effective heat-activated releasing device. Where this valve cannot be operated manually, it shall be supplemented by a second, manually operated valve.~~

~~The gravity discharge outlet shall be provided with an approved hose equipped with a self-closing valve at the discharge end of a type that can be padlocked to its hanger.~~

3406.3 Reserved. ~~**Well drilling and operating.** Wells for oil and natural gas shall be drilled and operated in accordance with Sections 3406.3.1 through 3406.3.8.~~

~~**3406.3.1 Location.** The location of wells shall comply with Sections 3406.3.1.1 through 3406.3.1.3.2.~~

~~**3406.3.1.1 Storage tanks and sources of ignition.** Storage tanks or boilers, fired heaters, open-flame devices or other sources of ignition shall not be located within 25 feet (7620 mm) of well heads. Smoking is prohibited at wells or tank locations except as designated and in approved posted areas.~~

~~**Exception:** Engines used in the drilling, production and serving of wells.~~

~~**3406.3.1.2 Streets and railways.** Wells shall not be drilled within 75 feet (22 860 mm) of any dedicated public street, highway or nearest rail of an operating railway.~~

~~**3406.3.1.3 Buildings.** Wells shall not be drilled within100 feet (30 480 mm) of buildings not necessary to the operation of the well.~~

~~**3406.3.1.3.1 Group A, E or I buildings.** Wells shall not be drilled within 300 feet (91 440 mm) of buildings with an occupancy in Group A, E or I.~~

~~**3406.3.1.3.2 Existing wells.** Where wells are existing, buildings shall not be constructed within the distances set forth in Section 3406.3.1 for separation of wells or buildings.~~

3406.3.2 Waste control. Control of waste materials associated with wells shall comply with Sections 3406.3.2.1 and 3406.3.2.2.

3406.3.2.1 Discharge on a street or water channel. Liquids containing crude petroleum or its products shall not be discharged into or on streets, highways, drainage canals or ditches, storm drains or flood control channels.

3406.3.2.2 Discharge and combustible materials on ground. The surface of the ground under, around or near wells, pumps, boilers, oil storage tanks or buildings shall be kept free from oil, waste oil, refuse or waste material.

3406.3.3 Sumps. Sumps associated with wells shall comply with Sections 3406.3.3.1 through 3406.3.3.3.

3406.3.3.1 Maximum width. Sumps or other basins for the retention of oil or petroleum products shall not exceed 12 feet (3658 mm) in width.

3406.3.3.2 Backfilling. Sumps or other basins for the retention of oil or petroleum products larger than 6 feet by 6 feet by 6 feet (1829 mm by 1829 mm by 1829 mm) shall not be maintained longer than 60 days after the cessation of drilling operations.

3406.3.3.3 Security. Sumps, diversion ditches and depressions used as sumps shall be securely fenced or covered.

3406.3.4 Prevention of blowouts. Protection shall be provided to control and prevent the blowout of a well. Protection equipment shall meet federal, state and other applicable jurisdiction requirements.

3406.3.5 Storage tanks. Storage of flammable or combustible liquids in tanks shall be in accordance with Section 3404. Oil storage tanks or groups of tanks shall have posted in a conspicuous place, on or near such tank or tanks, an approved sign with the name of the owner or operator, or the lease number and the telephone number where a responsible person can be reached at any time.

3406.3.6 Soundproofing. Where soundproofing material is required during oil field operations, such material shall be noncombustible.

3406.3.7 Signs. Well locations shall have posted in a conspicuous place on or near such tank or tanks an approved sign with the name of the owner or operator, name of the leasee or the lease number, the well number and the telephone number where a responsible person can be reached at any time. Such signs shall be maintained on the premises from the time materials are delivered for drilling purposes until the well is abandoned.

3406.3.8 Field-loading racks. Field-loading racks shall be in accordance with Section 3406.5.

CHAPTER 38

LIQUEFIED PETROLEUM GASES

3801.1 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~~ the Liquefied Gas Safety Rules of the Railroad Commission of Texas. Properties of LP-gases shall be determined in accordance with Appendix B of NFPA 58.

3801.2 Permits. Permits shall be required as set forth in Section~~s~~ 105.6 ~~and 105.7~~ to store, use, handle or dispense LP-gas, or to install or maintain LP-gas container(s) in excess of 125 gallons (473 L) aggregate water capacity. A permit is required to use any amount of LP-gas for demonstrations, public exhibitions, portable heating (excluding R occupancies), or temporary commercial cooking, or on mobile food carts. As used in this Chapter, the term mobile food unit shall have the meaning set forth in Chapter 20 of the *City Code*.

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.

3801.2.1 Mobile food units. No permit for the use of LP-gas in connection with a mobile food unit shall be issued unless the operator provides to the fire department: (1) proof of a current mobile food unit medallion issued by the health officer, (2) a detailed description of the means and methods by which the operator will secure the LP-gas container against shifting (bracing) and will protect the LP-gas container against damage (blocking) by third parties, which means and methods are approved by the fire department, and (3) pays the administrative and permit fees as set forth in Sections 105 .8 and 105 .9, and Table 105 .8 of this code.

3801.3 Construction documents. Where a single container is more than ~~2,000 gallons (7570 L)~~ 500 gallons (1893 L) in water capacity or the aggregate capacity of containers is more than ~~4,000 gallons (15140 L)~~ 2000 gallons (7570 L) in water capacity, the installer shall submit construction documents for such installation.

3803.2.1 Portable containers. Portable LP-gas containers, as defined in NFPA 58, shall not be used in or on buildings except as specified in NFPA 58~~,~~ ~~and~~ Sections 3803.2.1.1 through 3803.2.1.~~7~~9, and Houston Fire Department LSB Standard No. 10, "LP-Gas and Open Flame Use, and LSB Standard No.11, Roofing Operations."

3803.2.1.2 Construction and temporary heating. Portable containers are allowed to be used in buildings or areas of buildings undergoing construction ~~or for temporary heating as set forth in Sections 6.17.4, 6.17.5 and 6.17.8 of NFPA 58.~~ when attached to approved torches. The aggregate capacity of containers inside a building shall not exceed 250 pounds (113 kg) water capacity. Containers connected for use shall be promptly removed from the building when the torch is not in use. Containers not connected for use shall be stored outside the building in accordance with Table 3804.3. Portable LP-gas containers shall not be attached to temporary or portable heating appliances.

3803.2.1.3 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. The aggregate capacity of containers inside a building shall not exceed 250 pounds (113 kg) water capacity. Containers connected for use shall not be stored inside a building or structure unless stored within a room constructed in accordance with the requirements of Section 3809.10. Containers not connected for use shall be stored outside the building in accordance with Table 3809.12. ~~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).~~

3803.2.1.4 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). The aggregate amount of LP-gas used or stored shall not exceed 60 pounds (27 kg) LP-gas capacity. In educational occupancies, portable LP-gas containers shall not be used or stored except as permitted by Sections 3803.2.1.5 and 3803.2.1.6.

3803.2.1.5 Demonstration uses. Portable LP-gas containers are allowed to be used temporarily for demonstrations and public exhibitions when approved by the fire code official. 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). Containers not connected for use shall be stored outside the building in accordance with Table 3809.12.

3803.2.1.7 Use for food preparation inside buildings. ~~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 NFPA58.~~ LP-gas containers shall not be used for residential or commercial food preparation inside of a building or structure.

Exception: When 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 provided that an individual appliance shall not have more than two 10-oz (0.3 L), non-refillable LP-gas containers connected directly to the appliance any time. Containers shall comply with nationally recognized standards, have a maximum water capacity of 1.08 lbs (0.5 kg) per container and shall not be manifolded. The appliance's fuel containers shall be an integral part of the listed commercial food service device and shall be connected without the use of a rubber hose. The aggregate amount of LP-gas used or stored shall not exceed 60 lbs (27 kg) LP-gas capacity. In educational occupancies, portable LP-gas containers shall not be used or stored except as permitted by Sections 3803.2.1.5 and 3803.2.1.6.

3803.2.1.8 Use for food preparation outside buildings. When approved, LP-gas containers may be used for commercial cooking outside buildings or in the operation of a mobile food unit in accordance with Houston Fire Department LSB Standard No. 10, "LP-Gas and Open Flame Use." For permits, see Section 105 .6.

3803.2.1.9 Group B and M occupancies. In Group B and M occupancies, portable LP-gas containers are allowed to be used to supply quantities necessary for minor repairs or minor fabrication work, when connected to an approved appliance. The containers shall not exceed a 12 pound (5 kg) water capacity. When more than one container is present in the same room, each container shall be separated from the others by a distance of not less than 20 feet (6096 mm). Containers not connected for use shall be stored outside the building in accordance with Table 3809.12.

3803.2.2 Industrial vehicles and floor maintenance machines. Containers on industrial vehicles and floor maintenance machines shall comply with NFPA58, Section 11.12 and 11.13. Industrial lift trucks stored inside of buildings shall be kept in an approved area. Containers not attached for use shall be stored outside of the building in accordance with Table 3809.12.

3804.2 Maximum capacity within established limits. Within the limits established by law in Section 203 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 Ordinance for Adoption of the *International Fire Code* on page v)~~.

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 containers, degree of fire protection to be provided and capabilities of the local fire department. See also Houston Fire Department LSB Standard No. 10, "LP-Gas and Open Flame Use."

3807.4 Protecting containers from vehicles and tampering. ~~Where exposed to vehicular damage due to proximity to alleys, driveways or parking areas,~~ When required by the fire code official, LP-gas containers, regulators and piping shall be suitably protected in accordance with ~~Section 312~~ the Liquefied Petroleum Gas Safety Rules of the Railroad Commission of Texas.

SECTION 3812
MOBILE FOOD UNITS

3812.1 General. No permit for the use of LP-gas in connection with a mobile food unit shall be issued unless the operator provides to the fire department: (1) proof of a current mobile food unit medallion issued by the health officer, (2) a detailed description of the means and methods by which the operator will secure the LP-gas container against shifting {bracing) and will protect the LP-gas container against damage (blocking) by third parties, which means and methods are approved by the fire department, and (3) pays the administrative and permit fees as set forth in Sections 105 .8 and 105 .9, and Table 105 .8 of this code. In addition to complying with the applicable requirements of this chapter, the operator of a mobile food unit in, on or in conjunction with which LP-gas is used to cook or otherwise prepare food shall obtain from the fire department a permit for the use of LP-gas and LP-gas equipment for each mobile food unit

and shall make the permit available for inspection and/or copying upon the request of any peace officer, fire department employee, or health officer.

3812.2 Filling. 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.

3812.3 Spacing. The operator of a mobile food unit in, on, or in conjunction with which any amount of LP-gas is used to prepare food shall not operate such unit within 60 feet of another mobile food unit.

3812.4 Transport. The fire department is authorized and directed to take action as may be reasonably necessary to protect the public health, safety and welfare where any operator of a mobile food unit engaged in the transportation of LP-gas within the city is suspected of violating any state or federal laws, rules and regulations, as amended from time to time, specifically Title 49, Part 173.6 of the Federal Code of Regulations.

CHAPTER 45

REFERENCED STANDARDS

NFPA	National Fire Protection Association Batterymarch Park Quincy, MA 02269	
Standard reference number	**Title**	**Referenced in code section number**
10–~~02~~ 07	Portable Fire Extinguishers	Table 901.6.1, 906.2, 906.3, Table 906.3(1), Table 906.3(2), 2106.3
11–~~02~~ 07	Low –,Medium-, High Expansion Foam	904.7, 3404.2.9.1.2
11A–99	Medium- and High-Expansion Foam Systems	904.7, 3404.2.9.1.2
12–~~00~~ 05	Carbon Dioxide Extinguishing Systems	Table 901.6.1, 904.8, 904.11
12A–04	Halon 1301 Fire Extinguishing Systems	Table 901.6.1, 904.9
13–~~02~~ 07	Installation of Sprinkler Systems	Table 704.1, 903.3.1.1, 903.3.2, 903.3.5.1.1, 903.3.5.2, 904.11, 905.3.4, 907.9, 2301.1, 2304.2, Table 2306.2, 2306.9, 2307.2, 2307.2.1, 2308.2.2, 2308.2.2.1, 2310.1, 2501.1, 2804.1, 2806.5.7, 3404.3.3.9, Table 3404.3.6.3(7), 3404.3.7.5.1, 404.3.8.4
13D–~~02~~ 07	Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes	903.3.1.3, 903.3.5.1.1
13R–~~02~~ 07	Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height	903.3.1.2, 903.3.5.1.1, 903.3.5.1.2, 903.4
14–~~03~~ 07	Installation of Standpipe and Hose Systems	905.2, 905.3.4, 905.4.2, 905.8
15–~~01~~ 07	Water Spray Fixed Systems for Fire Protection	3404.2.9.1.3
16–~~03~~ 07	Installation of Foam-water Sprinkler and Foam-water Spray Systems	904.7, 904.11
17–02	Dry Chemical Extinguishing Systems	Table 901.6.1, 904.6, 904.11
17A–02	Wet Chemical Extinguishing Systems	Table 901.6.1, 904.5, 904.11
20–~~03~~ 07	Installation of Stationary Pumps for Fire Protection	913.1, 913.2, 913.5.1
22–03	Water Tanks for Private Fire Protection	508.2.2
24–~~02~~ 07	Installation of Private Fire Service Mains and their Appurtenances	508.2.1, 1909.5
25–~~02~~ 08	Inspection, Testing and Maintenance of Water-Based Fire Protection Systems	508.5.3, Table 901.6.1, 904.7.1, 912.6, 913.5
30–~~03~~ 08	Flammable and Combustible Liquids Code	3403.6.2, 3403.6.2.1, 3404.2.7, 3404.2.7.1, 3404.2.7.2, 3404.2.7.3.6, 3404.2.7.4, 3404.2.7.6, 3404.2.7.7, 3404.2.7.8, 3404.2.7.9, 3404.2.9.2, 3404.2.9.3, 3404.2.9.5.1.1, 3404.2.9.5.1.2, 3404.2.9.5.1.3, 3404.2.9.5.1.4, 3404.2.9.5.1.5, 3404.2.9.5.2, 3404.2.9.6.4, 3404.2.10.2, 3404.2.11.4, 3404.2.11.5.2, 3404.2.12.1, 3404.3.1, 3404.3.6, 3404.3.7.2.3, 3404.3.7.5.1, 3404.3.8.4, 3406.8.3
30A–~~03~~ 08	Code for Motors Fuel-dispensing Facilities and Repair Garages	2201.4, 2201.5, 2201.6, 2206.6.3, 2210.1
30B–~~02~~ 07	Manufacture and Storage of Aerosol Products	2801.1, 2803.1, 2804.1 Table 2804.3.1, Table 2804.3.2, Table 2804.3.2.2, 2804.4.1,2804.5.2, 2804.6, Table 2806.2, 2806.2.3, 2806.3.2, Table 2806.4, 2806.5.1, 2806.5.6, 2807.1, 2806.5.1, 2806.5.6, 2807.1
31–~~01~~ 06	Installation of Oil-burning Equipment	603.1.7, 603.3.1, 603.3.3
32–~~00~~ 07	Dry Cleaning Plants	1207.1, 1207.3
33–~~03~~ 07	Spray Application Using Flammable or Combustible Materials	1504.3.2
34–~~03~~ 07	Dipping and Coating Processes Using Flammable or Combustible Liquids	1505.3, 1505.4.1.1

35–~~99~~ 05	Manufacture of Organic Coatings 2001.3, 2005.4
40–~~01~~ 07	Storage and Handling of Cellulose Nitrate Film 306.2
51–~~02~~ 07	Design and Installation of Oxygen-fuel Gas Systems for Welding, Cutting, and Allied Processes 2601.5, 2607.1, 2609.1
51A–~~01~~ 06	Acetylene Cylinder Charging Plants 2608.1
52–~~02~~ 06	Compressed Natural Gas (CNG) Vehicular Fuel Systems 3001.1
55–05	Standard for the Storage, Use and Handling of Compressed Gases and Cryogenic Fluids In Portable and Stationary Containers Cylinders and Tanks 2209.2.1, 3201.1, 3501.1, 4001.1
57–02	Liquefied Natural Gas (LNG) Vehicular Fuel Systems 3001.1
58–~~04~~ 08	Liquefied Petroleum Gas Code 3801.1, 3803.1, 3803.2.1, 3803.2.1.2, 3803.2.1.7, 3803.2.2, 3804.1, 3804.3.1, 3804.4, 3806.2, 3806.3, 3807.2, 3808.1, 3808.2, 3809.11.2, 3811.3
59A–~~01~~ 06	Production, Storage and Handling of Liquefied Natural Gas (LNG) 3001.1, 3201.1
61–~~02~~ 08	Prevention of Fires and Dust Explosions in Agricultural and Food Products Facilities ..... Table 1304.1
69–~~02~~ 08	Explosion Prevention Systems ..... 911.1, 911.3, Table 1304.1
72–~~02~~ 07	National Fire Alarm Code ..... 509.1, Table 901.6.1, 903.4.1, 904.3.5, 907.2, 907.2.1.1, 907.2.10, 907.2.10.4, 907.2.11.2, 907.2.11.3, 907.2.12.2.3, 907.2.12.3, 907.3, 907.5, 907.6, 907.10.2, 907.11, 907.15, 907.17, 907.18, 907.20, 907.20.2, 907.20.5
80–~~99~~ 07	Fire Doors and Fire Windows 703.2, 1008.1.3.3
85–~~04~~ 07	Boiler and Combustion System Hazards Code ..... Table 1304.1
86–~~03~~ 07	Ovens and Furnaces 2101.1
92B–05	Smoke Management Systems in Malls, Atria and Large Spaces 909.8
99–~~02~~ 05	Health Care Facilities 3006.4
101–~~03~~ 06	Life Safety Code 1025.6.2
110–~~02~~ 05	Emergency and Standby Power Systems 604.1, 604.3, 604.4, 913.5.2, 913.5.3
111–~~01~~ 05	Stored Electrical Energy Emergency and Standby Power Systems 604.1, 604.3, 604.4
120–~~99~~ 04	Coal Preparation Plants ..... Table 1304.1
160–~~01~~ 06	Flame Effects Before an Audience 308.3.6
211–~~03~~ 06	Chimneys, Fireplaces, Vents and Solid Fuel-Burning Appliances 603.2
230–03	Fire Protection of Storage 2301.1, 2308.4, 2310.1,2501.1, 3404.3.3.9
241–~~00~~ 04	Safeguarding Construction, Alteration, and Demolition Operations 1401.1
260–03	Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture 805.1.1.1, 805.2.1.1, 805.3.1.1
261–03	Method of Test for Determining Resistance of Mock-Up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes 805.2.1.1, 850.3.1.1
265–02	Method of Fire Tests for Evaluating Room Fire Growth e Contribution of Textile Wall Coverings in Full Height Panels and Walls 803.5.1, 803. 5.1.1, 803.5.1.2
286–~~00~~ 06	Standard Method of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth 803.1, 803.1.2, 803.1.2.1, 803.5.1
303–~~00~~ 06	Fire Protection Standard for Marinas and Boatyards 905.3.7
385–~~00~~ 07	Tank Vehicles for Flammable and Combustible Liquids..... 3406.5.4.5, 3406.6, 3406.6.1
407–~~01~~ 07	Aircraft Fuel Servicing 1106.2, 1106.3
409–~~01~~ 04	Aircraft Hangars..... 914.8.2, 914.8.5
430–~~00~~ 04	Storage of Liquid and Solid Oxidizers 4004.1.4
484–~~02~~ 06	Combustible Metals, Metal Powders, and Metal Dusts..... Table 1304.1
490–02	Storage of Ammonium Nitrate 3301.1.5
495–~~01~~ 06	Explosive Materials Code 911.1, 911.4, 3301.1.1, 3301.1.5, 3302.1, 3304.2, 3304.6.2, 3304.6.3, 3304.7.1, 3305.1, 3305.5, 3306.1, 3306.5.2.1, 3306.5.2.3, 3307.1, 3307.9, 3307.11, 3307.15
498–~~01~~ 06	Safe Havens and Interchange Lots for Vehicles Transporting Explosives..... 3301.1.2
505–~~02~~ 06	Powered Industrial Trucks, Including Type Designations, Areas of Use, Maintenance, and Operation 2703.7.3

654 ~~00~~ 06	Prevention of Fire and Dust Explosions from the Manufacturing, Processing and Handling of Combustible Particulate Solids ..... Table 1304.1
655 ~~01~~ 07	Prevention of Sulfur Fires and Explosions ..... Table 1304.1
664 ~~02~~ 07	Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities ..... Table 1304.1, 1905.3
701 ~~99~~ 04	Methods of Fire Tests for Flame-propagation of Textiles and Films 806.2, 807.1, 807.1.2, 807.2, 807.4.2.2, 1703.5
703 ~~00~~ 06	Fire Retardant Impregnated Wood and Fire Retardant Coatings for Building Materials 803.4
704 ~~01~~ 07	Identification of the Hazards of Materials for Emergency Response 606.7, 1802.1, 2404.2, 2703.2.2.1, 2703.2.2.2, 2703.5, 2703.10.2, 2705.1.10, 2705.2.1.1, 2705.4.4, 3203.4.1, 3404.2.3.2
750 ~~03~~ 06	Water Mist Fire Protection Systems ..... Table 901.6.1
1122 ~~02~~ 08	Model Rocketry 3301.1.4
1123 ~~00~~ 06	Fireworks Display 3302.1, 3304.2, 3308.1, 3308.2.2, 3308.5, 3308.6
1124 ~~03~~ 06	Manufacture, Transportation, Storage and Retail Sales of Fireworks and Pyrotechnic Articles 3302.1, 3304.2, 3305.1, 3305.3, 3305.4, 3305.5
1125 ~~01~~ 07	Manufacture of Model Rocket and High Power Rocket Motors 3301.1.4
1126 ~~01~~ 06	Use of Pyrotechnics Before a Proximate Audience 3304.2, 3305.1, 3308.1, 3308.2.2, 3308.4, 3308.5
1127 ~~02~~ 08	High Power Rocketry 3301.1.4
2001 ~~04~~ 08	Clean Agent Fire Extinguishing Systems ..... Table 901.6.1, 904.10

APPENDIX A

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

BOARD OF APPEALS

A101.2 ~~Membership~~ Organization. ~~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.~~ There is hereby created a Board of Appeals, consisting of 11 members. Five members at a meeting shall constitute a quorum. The positions on the board shall be filled as follows:

Position 1. By a well-respected citizen of the jurisdiction.

Position 2. By the fire code official or his duly authorized representative, who shall provide a board secretary.

Position 3. By the Fire Chief or his duly authorized representative.

Position 4. By the Director of Public Works and Engineering or his duly authorized representative.

Position 5. By a well-respected citizen of the jurisdiction, who shall serve as chairman.

Position 6. By a professional engineer registered as such under the laws of Texas, who shall be actively engaged in the practice as a fire protection engineer.

Position 7. By a person who is a member of the Building Owners and Managers Association of Houston.

Position 8. By a person who is engaged or employed in the chemical or petroleum industry.

Position 9. By a person who is a member of the Houston Apartment Association.

Position 10. By a person who is fire protection contractor.

Position 11. By a person who is an architect registered by the State of Texas.

The legal department shall have an attorney present for each board meeting, who shall advise the board on legal matters relative to topics under board jurisdiction.

The Fire Chief, the Fire Code Official (Fire Marshal), and the Director of Public Works and Engineering may each designate in writing a person under his supervision to act in his place as his duly authorized representative. The representative designation shall be filed in the minutes of the board.

With the exception of the Fire Chief, the Fire Code Official (Fire Marshal), and the Director of Public Works and Engineering, members of the board shall be appointed by the Mayor, subject to confirmation by the City Council, and shall serve for a term of two years. The terms of the appointees for Positions 1, 6, 7, and 9 commence on January 1 of each odd-numbered year and end on December 31 of the following even-numbered year. The terms of the appointees for Positions 5, 8, 10 and 11 commence on January 1 of each even-numbered year and end on

December 31 of the following odd-numbered year. Members shall hold over until a successor is appointed and qualified.

Whenever any position on the board becomes vacant by reason of death, resignation or removal, the vacancy shall be filled for the unexpired term of the member being replaced. Should a vacancy occur on the board, the Mayor shall appoint, subject to confirmation by the City Council, another qualified person to serve the unexpired term of the vacancy. Any member of the board may be removed at any time by the Mayor without consent of the City Council.

~~**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 Per Diem.~~Terms of office.~~ ~~Members shall be appointed for terms of four years. No member shall be reappointed to serve more than two consecutive full terms.~~ Each member of the board shall be compensated at the rate of $50.00 per diem for each meeting the member attends and at which a quorum is present; provided, however, no member shall be paid for more than three meetings in any one month. A jurisdiction employee who is a member of the board shall be paid only for those meetings that the employee attends at which a quorum is present and that are not held during, or that continue beyond, the employee's regular working hours.

~~**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 Duties of the Board of Appeals. ~~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.~~ The duties of the board shall be to hear appeals from decisions of the fire code official as to the suitability of alternate materials and types of construction and to provide

for reasonable interpretations of the provisions of this code. In cooperation with the fire code official, the board shall submit an annual report to the Mayor and the City Council containing a summary of the actions of the board during the preceding year. The board may make recommendations to the Mayor for amendments to this code.

A101.5 Procedures. ~~**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.~~ The board shall adopt reasonable rules and regulations for conduct of its duties. Petitions for hearings before the board shall be in writing, filed with the fire code official, and heard by the board within 30 days from the date that the petition was filed. A majority of the members present, constituting a quorum, shall conduct business of the board. All decisions and findings shall be rendered in writing with copies to the fire code official, petitioner and all other parties to the hearing. Subject to compliance with Rule 12 of the City Council's Rules of Procedure (see Section 2-2 of the *City Code*), any interested person who is aggrieved by a decision of the board may appeal to the City Council, provided that written notice to the City Council for the appeal is delivered to the City Secretary within 10 days from the date the board renders the decision. All appeals to the City Council are subject to Rule 12 of the City Council's Rules of Procedure. Parties wishing to preserve their right of appeal must comply with Rule 12.

A101.6 Posting of agenda. ~~**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.~~ The board shall prepare and post an agenda in compliance with the Texas Open Meetings Law.

~~**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 D

FIRE APPARATUS ACCESS ROADS

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

D101.1 Scope. Fire apparatus access roads shall be in accordance with this appendix and all other applicable requirements of the ~~*International Fire Code*~~*Fire Code*, and Houston Fire Department LSB Standard No. 03, "Fire Department Access" and LSB Standard No. 04, "Access Control Gates."

D103.1 Access road width with a hydrant. Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet (7925 mm). ~~See Figure D103.1.~~

EDITORIAL NOTE: ***DELETE FIGURE D103.1***

TABLE D103.4
REQUIREMENTS FOR DEAD-END FIRE APPARATUS ACCESS ROADS

LENGTH (feet)	WIDTH (feet)	TURNAROUNDS REQUIRED
0-150	20	None required
151-500	20	120-foot Hammerhead, 60 foot "Y" or 96-foot-diameter cul-de-sac ~~in accordance with Figure D103.1~~
501-750	26	120-foot Hammerhead, 60 foot "Y" or 96-foot-diameter cul-de-sac ~~in accordance with Figure D103.1~~
Over 750	Special approval required	

For SI: 1 foot = 304.8 mm.

D103.5 Fire apparatus access road gates. For fire apparatus access road gate requirements refer to Houston Fire Department LSB Standard No. 04, "Access Control Gates." ~~Gates securing the fire apparatus access roads shall comply with all of the following criteria:~~

~~1. The minimum gate width shall be 20 feet (6096 mm).~~

~~2. Gates shall be of the swinging or sliding type.~~

~~3. Construction of gates shall be of materials that allow manual operation by one person.~~

~~4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.~~

~~5. Electric gates shall be equipped with a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.~~

~~6. Manual opening gates shall not be locked with a padlock or chain and padlock unless they are capable of being opened by means of forcible entry tools or when a key box containing the key(s) to the lock is installed at the gate location.~~

~~7. Locking device specifications shall be submitted for approval by the fire code official.~~

D103.6 Signs. For fire apparatus access road/Fire Lane sign requirements, refer to Houston Fire Department LSB Standard No. 03, "Fire Department Access." ~~Where required by the fire code official, fire apparatus access roads shall be marked with permanent NO PARKING – FIRE LANE signs complying with Figure D103.6. Signs shall have a minimum dimension of 12 inches (305 mm) wide by 18 inches (457 mm) high and have red letters on a white reflective background. Signs shall be posted on one or both sides of the fire apparatus road as required by Section D103.6.1 or D103.6.2.~~

APPENDIX H

STAIRWAY IDENTIFICATION

SECTION H101
GENERAL

H101.1 Signs in stairways. Standardized signs shall be provided in buildings that are four (4) or more stories in height. The signs shall be installed in stairways to identify each stair, floor level number, roof access information, the upper and lower termination of the stairway, and reentry information. Signs within stairways shall be located above the floor landing in a position that is readily visible when the door is in the open or closed position and in accordance with the Texas Accessibility Standards. See also Section 1005.3.2.4.

SECTION H102
OCCUPANCY SIDE OF STAIRWAY DOORS

H102.1 Signs on occupancy (tenant) side of stairway doors. Standardized identification signs shall be located at each level on the occupancy (tenant) side of all enclosed stairways, regardless of the height of the building.

H102.2 Details for signs installed on the occupancy (tenant) side of doors.

H102.2.1 Stairway identification. Stairway identification signs shall have an alphabetic letter or name identification. The name identification shall precede the word “STAIR” and any alphabetic letter shall follow the word “STAIR”, such as "STAIR A" or "WEST STAIR," to be placed at the top of the sign in 2-inch (50 mm) high block lettering. Numerical and written numbers shall not be used for stairwell identification. See Section H105.

H102.2.2 Reentry. Where stairway doors are locked from the stairway side to prohibit reentry to a floor, "NO REENTRY" shall be placed at the bottom of the sign in 1-inch (25 mm) high block lettering.

SECTION H103
SIGNS INSTALLED IN STAIRWAYS

H103.1 Stairway identification. Stairway identification signs shall have an alphabetic letter or name identification. The name identification shall precede the word “STAIR” and any alphabetic letter shall follow the word “STAIR”, such as “STAIR A” or “WEST STAIR”, to be placed at the top of the sign in 1-inch (25 mm) high block lettering. Numerical and written numbers shall not be used for stairwell identification. See Section H105.

H103.2 Roof access. The roof access condition, such as ROOF ACCESS LOCKED or NO ROOF ACCESS, shall be placed under the stairway identification in 1-inch (25 mm) high block lettering.

H103.3 Floor level number. The floor level number shall be placed in the middle of the sign in 2-inch (50 mm) high block lettering. The mezzanine levels shall have the letter “M” preceding

the floor number. Basement levels shall have the letter "B" preceding the floor number. No other designation for mezzanine and basement levels shall be used.

H103.4 Lower and upper terminus. The lower and upper terminus designation of the stairway shall be placed under the floor number in 1-inch (25 mm) high block lettering.

H103.5 Reentry. Where stairway doors are locked from the stairway side to prohibit reentry to a floor, "NO REENTRY" shall be placed under the lower and upper terminus designation in 1-inch (25 mm) high block lettering. Additionally, the nearest floor above and below where a person can reenter from the stairway shall be placed at the bottom of the sign in 1-inch (25 mm) high block lettering.

SECTION H104
COMPLIANCE WITH TEXAS ACCESSIBILITY STANDARDS (TAS)

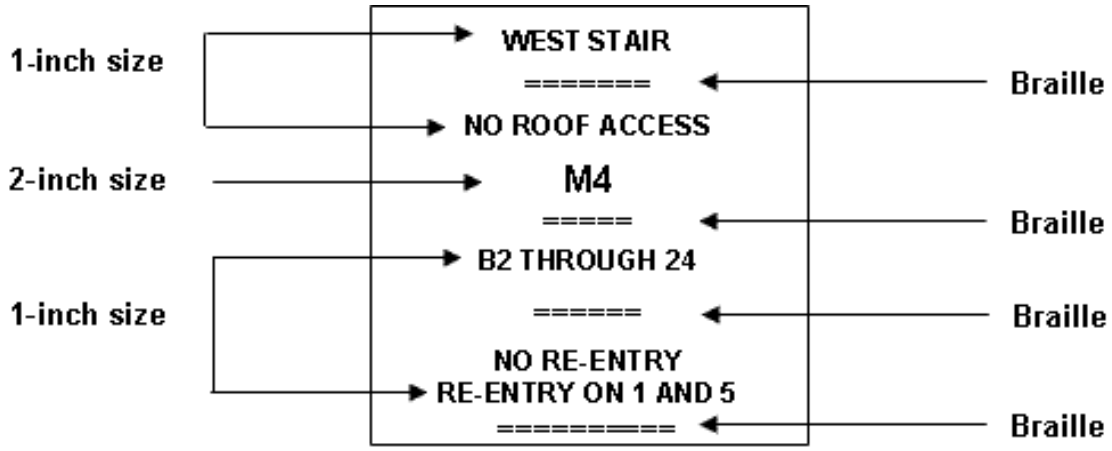
H104.1 Raised and braille characters/character proportions. Stairway identification, floor level number and reentry information on signs shall comply with TAS requirements for raised and Braille characters. All other letters and numbers on the sign shall comply with TAS requirements for character proportions.

H104.2 Finish and contrast. All characters and backgrounds of signs shall comply with TAS requirements for finish and contrast.

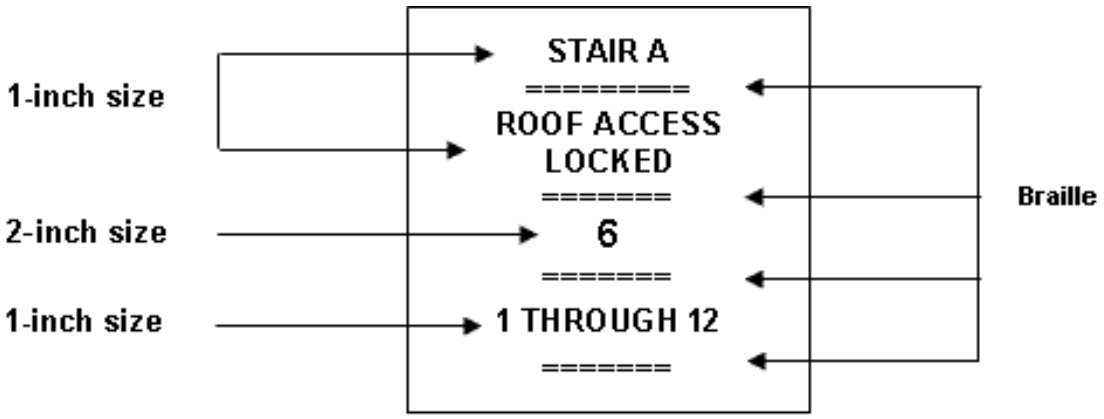
H104.3 Mounting location and height. All signs shall comply with TAS requirements for mounting location and height.

SECTION H105
SIGN EXAMPLES

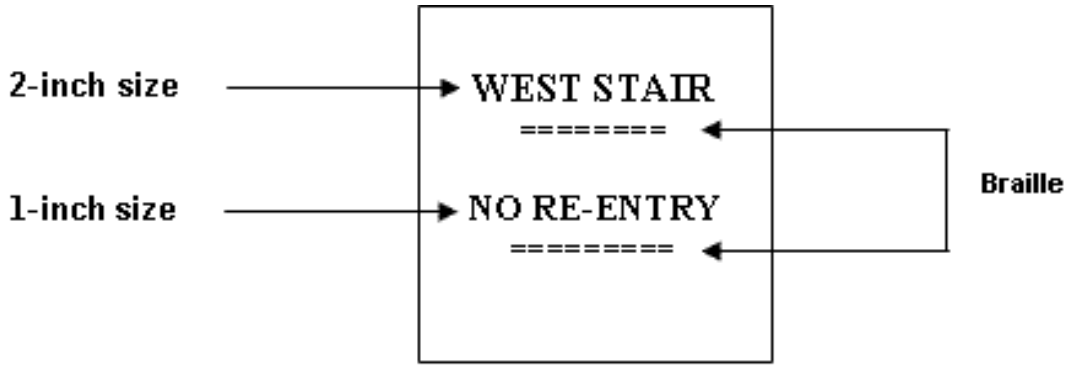
H105.1 Inside stairway: (with restricted re-entry.)



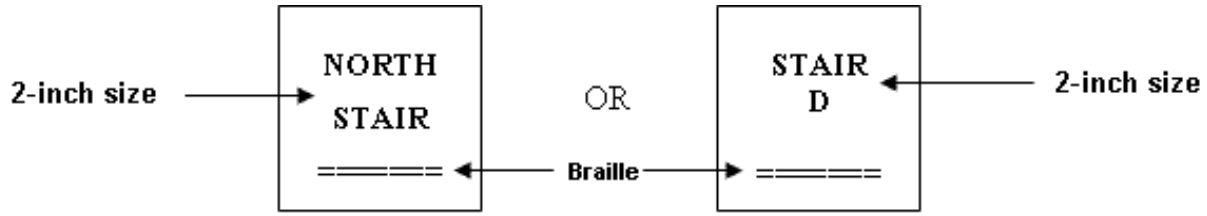
H105.2 Inside stairway: (without restricted re-entry).



H105.3 Occupancy side of stairway: (with restricted re-entry).



H105.4 Occupancy side of stairway: (without restricted re-entry).



APPENDIX I

AUTOMATIC SPRINKLER SYSTEMS, FIRE ALARM AND DETECTION SYSTEMS IN EXISTING NON HIGH-RISE ATRUIUM BUILDINGS

SECTION I101
GENERAL

I101.1 Purpose. The purpose of this appendix chapter is to provide a reasonable degree of safety to persons occupying existing atrium buildings by providing for the installation of automatic sprinkler systems or fire alarm and detection systems in buildings that do not already have such systems in compliance with this appendix.

I101.2 Application. This appendix chapter shall apply to existing atrium buildings within the corporate limits of the jurisdiction on January 1, 2008, and any atrium buildings annexed into the corporate limits after that date.

Exception: The provision of this appendix shall not apply to the following:

1. Atrium buildings built in accordance with Section 1717 as added to the *City of Houston Building Code* by Ordinance 81-879 or subsequent versions of that Section.
2. Existing high-rise buildings, as defined in Appendix J.

SECTION I102
DEFINITION

I102.1 Definition. The following term shall, for the purposes of this appendix, have the meaning ascribed in this section.

ATRIUM. An opening connecting three or more stories other than enclosed stairways, elevators, hoistways, escalators, plumbing, electrical, air-conditioning or other equipment, which is closed at the top and not defined as a mall. Stories, as used in this definition, do not include balconies within assembly groups or mezzanines that comply with Section 505 of the *Building Code*.

SECTION I103
FIRE PROTECTION AND DETECTION SYSTEMS

I103.1 Required. All existing atrium buildings shall be equipped with one of the following:

1. An automatic and manual fire alarm system in accordance with NFPA 72 and smoke detectors installed in every room exceeding 40 square feet as well as all common areas according to the compliance schedule set forth in Section I104.
2. An automatic sprinkler system with total coverage throughout the building in accordance with NFPA 13 and with the capability to alarm all occupants throughout the

building using alarm notification appliances as required by Section 907. Such sprinkler system shall be installed according to the compliance schedule set forth in Section I104.

SECTION I104
COMPLIANCE SCHEDULE

I104.1 Letter of intent. On or before July 1, 2008, or within six months after the date of annexation of the building into the jurisdiction, owners of existing atrium buildings shall provide the fire code official with a letter expressing the owner's intent to comply with this section.

I104.2 Compliance check points. Except as provided by this section, owners of existing atrium buildings shall comply with the following schedule:

1. If the owner chooses to install an alarm system and smoke detectors in accordance with subsection 1 of Section I103.1, the total square footage of the building shall be equipped with an operational automatic and manual fire alarm system and smoke detectors on or before January 1, 2010, or within two years of annexation into the jurisdiction.
2. If the owner chooses to install a sprinkler system in accordance with subsection 2 of Section I103.1:
   - 2.1 Fifty percent of the building shall be equipped with an operational automatic sprinkler system with the capability to alarm all occupants throughout the building on or before January 1, 2013, or within five years of annexation of the building into the jurisdiction.
   - 2.2 The total square footage of the building shall be equipped with an operational automatic sprinkler system with the capability to alarm all occupants throughout the building on or before January 1, 2015, or within seven years of annexation of the building into the jurisdiction.

APPENDIX J

AUTOMATIC SPRINKLER SYSTEMS IN EXISTING HIGH-RISE BUILDINGS

SECTION J101
GENERAL

J101.1 Purpose. The purpose of this appendix chapter is to provide a reasonable degree of safety to persons occupying existing high-rise buildings by providing for installation of automatic sprinkler systems in such buildings that do not already have such systems.

J101.2 Application. This appendix chapter shall apply to and the term "existing high-rise building" shall be construed to mean any high-rise building existing within the corporate limits of the city on December 31, 2005, and any high-rise building annexed into the corporate limits after that date.

Exceptions: The provisions of this appendix shall not apply to the following:

1. Airport traffic control towers in accordance with Sections 412 and 907.2.22 of the Building Code.
2. Open parking garages in accordance with Section 406.3 of the Building Code.
3. Buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the Building Code.
4. Low-hazard special industrial occupancies in accordance with Section 503.1.2 of the Building Code.
5. Buildings with an occupancy in Group H in accordance with Section 415 of the Building Code.
6. Individually-owned individual dwelling units in high-rise buildings.

SECTION J102
DEFINITION

J102.1 Definition. The following term shall, for the purposes of this appendix, have the meaning ascribed in this section.

HIGH-RISE BUILDING. A building of any type of construction that has floors that are used for human occupancy located more than 75 feet above grade plane, as measured from the top of the floor surface.

SECTION J103
AUTOMATIC SPRINKLER SYSTEMS

J103.1 Required. All existing high-rise buildings shall be equipped with an automatic sprinkler system in accordance with NFPA 13 according to the compliance schedule set forth in Section J104.

SECTION J104
COMPLIANCE SCHEDULE

J104.1 Letter of Intent. On or before December 31, 2006, or within one year after the date of annexation of the building into the jurisdiction, owners of existing high-rise buildings shall provide the fire code official with a letter expressing the owner's intent to comply with this section.

J104.2 Compliance check points. Except as provided by this section, owners of existing high-rise buildings shall comply with the following schedule for installation of automatic sprinkler systems:

1. On or before December 31, 2009, or within four years after the date of annexation of the building into the jurisdiction, a water supply in accordance with NFPA 13 shall be installed to all floors of the building, and the owner shall provide the fire code official with written plans for compliance with this appendix and schedules for completion of the work stated in the written plan
2. On or before December 31, 2014, or within nine years after the date of annexation of the building into the jurisdiction, a minimum of 50% of the floors shall be equipped with an operational automatic sprinkler system.
3. On or before December 31, 2017, or within twelve years after the date of annexation of the building into the jurisdiction, the total square footage of the building shall be equipped with an operational automatic sprinkler system.