

# State of Nebraska Amendments to the 2012 Edition of NFPA 1 (3-11-19)

The code sections completely struck from the document are contained below in their entirety, but have not been “struck through” for ease of reading.

**Green highlighted** sections are those that only a portion of the section has been altered. The original language has been ~~struck through~~ and the new language has been underlined.

**Yellow highlighted** sections are those that contain new language.

**Blue highlighted** sections indicate a table has been struck.

## 1.1 Scope.

~~(2) Investigation of fires, explosions, hazardous materials incidents, and other related emergency incidents~~

~~(3) Review of construction plans, drawings, and specifications for life safety systems, fire protection systems, access, water supplies, processes, hazardous materials, and other fire and life safety issues~~

~~(4) Fire and life safety education of fire brigades, employees, responsible parties, and the general public~~

~~(14) Control of emergency operations and scenes~~

~~(15) Conditions affecting fire fighter safety~~

~~1.3.2.1 Details regarding processes, methods, specifications, equipment testing and maintenance, design standards, performance, installation, or other pertinent criteria contained in those codes and standards listed in Chapter 2 of this Code shall be considered a part of this Code.~~

~~1.3.2.2~~ Where no applicable codes, standards, or requirements are set forth in this Code or contained within other laws, codes, regulations, ordinances, or bylaws adopted by the authority having jurisdiction (AHJ), compliance with applicable codes and standards of NFPA or other nationally recognized standards as are approved shall be deemed as prima facie evidence of compliance with the intent of this Code.

#### ~~1.3.2.4~~ Retroactivity of Referenced Standards to Existing

~~Conditions.~~ Unless otherwise specified by 1.3.2.4.1 through 1.3.2.4.3, the current provisions of the referenced standards shall not apply to facilities, equipment, structures, or installations that existed or were approved for construction or installation prior to the effective date of this Code.

~~1.3.2.4.1~~ Where specified by a reference standard for existing occupancies, conditions, or systems, the provisions of the referenced standards shall be retroactive.

~~1.3.2.4.2~~ Facilities, equipment, structures, and installations, installed in accordance with a reference standard, shall be maintained in accordance with the edition of the standard in effect at the time of installation.

~~1.3.2.4.3~~ In those cases where the AHJ determines that the existing situation constitutes an imminent danger, the AHJ shall be permitted to apply retroactively any portions of the current referenced standards deemed appropriate.

~~1.3.6.3~~ Repairs, renovations, alterations, reconstruction, change of occupancy, and additions to buildings shall conform to this Code and NFPA 101, and the building code.

#### ~~1.7.3~~ Interpretations.

~~1.7.3.1~~ The AHJ is authorized to render interpretations of this Code and to make and enforce rules and supplemental regulations in order to carry out the application and intent of its provisions.

~~1.7.3.2~~ Such interpretations, rules, and regulations shall be in conformance with the intent and purpose of this Code and shall be available to the public during normal business hours.

~~1.7.7~~ Where conditions exist and are deemed hazardous to life or property by the AHJ, the AHJ shall have the authority to summarily abate such hazardous conditions that are in violation of this Code.

#### ~~1.7.10 Investigation.~~

~~1.7.10.1 Authority. The AHJ shall have the authority to investigate the cause, origin, and circumstances of any fire, explosion, release of hazardous materials, or other hazardous condition.~~

~~1.7.10.2 Evidence. The AHJ shall have the authority to take custody of all physical evidence relating to the cause of the fire, explosion, release of hazardous materials, or other hazardous condition.~~

~~1.7.10.3 Limiting Access. The AHJ shall have the authority to limit access to emergencies or other similar situations.~~

~~1.7.10.4 Trade Secret. Information that could be related to trade secrets or processes shall not be made part of the public record except as could be directed by a court of law.~~

#### ~~1.7.11 Plans and Specifications.~~

~~1.7.11.1 The AHJ shall have the authority to require plans and specifications to ensure compliance with applicable codes and standards.~~

~~1.7.11.2 Plans shall be submitted to the AHJ prior to construction unless otherwise permitted by 1.7.11.4.~~

~~1.7.11.3 The construction documents for each phase shall be complete in themselves, so that review and inspection can properly be made. Preliminary plans of the total building shall be submitted with the construction documents, and with sufficient detail, so that proper evaluation can be made. Areas and items not included in the phase to be permitted shall be shown as not included. [5000:1.7.6.3.3.3]~~

~~1.7.11.4 The AHJ is authorized to exempt detached one and two family dwellings and accessory structures from the submittal of plans.~~

~~1.7.11.5 Plans shall be submitted to the AHJ prior to the change of occupancy of any existing building.~~

~~1.7.11.6 Plans shall be submitted to the AHJ prior to the alteration of the means of egress or fire protection systems of any existing building.~~

~~1.7.11.7 Plans shall be submitted to the AHJ for other conditions as deemed necessary by the AHJ to determine compliance with the applicable codes and standards.~~

~~1.7.11.8 The AHJ shall be authorized to require permits for conditions listed in 1.7.11.2, 1.7.11.5, and 1.7.11.6, unless otherwise permitted by 1.7.11.9.~~

~~1.7.11.9 The AHJ is authorized to exempt detached one and two family dwellings and accessory structures from the permit requirement of 1.7.11.8.~~

~~1.7.11.10 No construction work shall proceed until the AHJ has reviewed the plans for compliance with the applicable codes and standards and the applicable permits have been issued.~~

~~1.7.12.1 The AHJ shall be notified by the person performing the work when the installation is ready for a required inspection.~~

~~1.7.12.3 When any construction or installation work is being performed in violation of the plans and specifications as approved by the AHJ, a written notice shall be issued to the responsible party to stop work on that portion of the work that is in violation.~~

~~1.7.12.4 The notice shall state the nature of the violation, and no work shall be continued on that portion until the violation has been corrected.~~

~~1.7.13 Certificate of Occupancy. When the building code requires a certificate of occupancy, the certificate of occupancy shall not be issued until approved by the AHJ for fire code enforcement.~~

**1.7.14 Stop Work Order.** The AHJ shall have the authority to order an operation, construction, or use stopped when any of the following conditions exists:

(1) Work is being done contrary to provision of this Code.

~~(2) Work is occurring without a permit required by Section 1.12. (3)~~

(2) An imminent danger has been created.

#### ~~1.7.15 Imminent Dangers and Evacuation.~~

~~1.7.15.1~~ When, in the opinion of the AHJ, an imminent danger exists, the AHJ shall be authorized to order the occupants to vacate, or temporarily close for use or occupancy, a building, the right of way, sidewalks, streets, or adjacent buildings or nearby areas.

~~1.7.15.2~~ The AHJ shall be authorized to employ the necessary resources to perform the required work in order to mitigate the imminent danger.

~~1.7.15.3~~ Costs incurred by the AHJ in the performance of emergency work shall be the responsibility of the property owner or other responsible party creating such imminent danger.

#### ~~1.7.16 Standby Fire Personnel.~~

~~1.7.16.1~~ The AHJ shall have the authority to require standby fire personnel or an approved fire watch when potentially hazardous conditions or a reduction in a life safety feature exist due to the type of performance, display, exhibit, occupancy, contest or activity, an impairment to a fire protection feature, or the number of persons present.

~~1.7.16.2~~ The owner, agent, or lessee shall employ one or more qualified persons, as required and approved, to be on duty.

~~1.7.16.2.1~~ The cost of standby fire personnel shall be at no cost to the AHJ.

~~1.7.16.3\*~~ Such standby fire personnel or fire watch personnel shall be subject to the AHJ's orders at all times and shall be identifiable and remain on duty during the times such places are open to the public, when such activity is being conducted, or as required by the AHJ.

#### ~~1.7.17 Public Fire Education.~~

~~1.7.17.1~~ The AHJ shall have the authority to develop and implement a public fire safety education program as deemed necessary for the general welfare with respect to the potential fire hazards within the jurisdiction.

~~1.7.17.2~~ The AHJ shall have the authority to ensure duly authorized public fire safety education programs or public fire safety messages are disseminated to the general public.

#### ~~1.8 Duties and Powers of the Incident Commander.~~

~~1.8.1~~ Authority. The incident commander conducting operations in connection with the extinguishment and control of any fire, explosion, hazardous materials incident, natural disaster, rescue, and/or other emergency shall have authority to direct all operations of fire extinguishment, mitigation of a hazardous materials incident, natural disaster, rescue, and/or

~~control and to take necessary precautions to save life, protect property, and prevent further injury or damage.~~

~~**1.8.2** Controlling Scene. During any emergency described in 1.8.1, including the investigation of the cause of such emergency, the incident commander or authorized representative shall be permitted to control or prohibit the approach to the scene of such emergency by any vehicle, vessel, or person.~~

~~**1.8.3** Obstruction of Operations. Persons shall not obstruct the operations of the fire department or disobey any command of the incident commander or authorized representative or any part thereof, or any order of a police officer assisting the fire department.~~

~~**1.8.4** Scene Barrier. The incident commander or authorized representative in charge of an emergency scene shall have the authority to establish barriers to control access in the vicinity of such emergency and to place, or cause to be placed, ropes, guards, barricades, or other obstructions across any street or alley to delineate such emergency scene barrier.~~

~~**1.8.5** Persons, except as authorized by the incident commander in charge of the emergency, shall not be permitted to cross barriers established in accordance with 1.8.4.~~

## ~~1.9 Liability.~~

~~**1.9.1** The AHJ, and other individuals charged by the AHJ, or the incident commander of emergency operations, charged with the enforcement of this Code or any other official duties, acting in good faith and without malice in the discharge of their duties, shall not thereby be rendered personally liable for any damage that could accrue to persons or property as a result of any act or by reason of any act or omission in the discharge of their duties.~~

~~**1.9.2** The fire department and AHJ, acting in good faith and without malice in the discharge of the organizations' public duty, shall not thereby be rendered liable for any damage that could accrue to persons or property as a result of any act or by reason of any act or omission in the discharge of such duties.~~

~~**1.9.3** Any suit brought against the AHJ, the incident commander, or such individuals because of such act or omission performed in the enforcement of any provision of such codes or other pertinent laws or ordinances implemented through the enforcement of this Code or enforced by the code enforcement agency shall be defended by this jurisdiction until final termination of such proceedings, and any judgment resulting therefrom shall be assumed by this jurisdiction.~~

~~**1.9.4** 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 the code enforcement agency or its parent jurisdiction be held as assuming any such liability by reason of the inspections authorized by this Code or any permits or certificates issued under this Code.~~

## ~~1.10 Fire Code Board of Appeals.~~

~~1.10.1 Establishment of Fire Code Board of Appeals. A Board of Appeals shall be established to rule on matters relating to the fire code and its enforcement.~~

### ~~1.10.1.1 Membership.~~

~~1.10.1.1.1 The members of the Board of Appeals shall be appointed by the governing body of the jurisdiction.~~

~~1.10.1.1.2 The Board of Appeals shall consist of five or seven principal members and one ex officio member representative of the AHJ. Each principal member shall be permitted to have an alternate with similar experience to serve in his or her stead when necessary.~~

~~1.10.1.1.2.1 The jurisdiction governing body shall have the authority to appoint alternates who shall serve when a principal member is unable to fulfill their obligations. Alternates shall have the full authority and responsibility of principal members when serving in place of a principal member.~~

~~1.10.1.1.3 Members and alternate members shall be appointed based on their education, experience, and knowledge.~~

~~1.10.1.1.4 Members and alternates shall be appointed to a 3-year term.~~

~~1.10.1.1.5 Members and alternates shall be composed of individuals experienced in the following fields or professions:~~

- ~~(1) Engineering or architectural design~~
- ~~(2) General contracting~~
- ~~(3) Fire protection contracting~~
- ~~(4) Fire department operations or fire code enforcement~~
- ~~(5) Building code enforcement~~
- ~~(6) Legal~~
- ~~(7) General public~~

~~1.10.1.1.5.1~~ Members and alternates shall not be employees, agents, or officers of the jurisdiction.

~~1.10.1.1.5.2~~ Members and alternates shall be residents of the jurisdiction.

~~1.10.1.1.5.3~~ No more than one member shall represent the same field or provision listed in 1.10.1.1.5.

~~1.10.1.1.6~~ The representative of the AHJ shall be an ex officio member and shall be entitled to participate in all discussions. The ex officio member shall not be entitled to a vote.

~~1.10.1.1.7~~ No member of the Board of Appeals shall sit in judgment on any case in which the member holds a direct or indirect property or financial interest in the case.

~~1.10.1.1.8~~ The board shall select one of its members to serve as chair and one member to serve as vice chair.

~~1.10.2~~ Rules and Procedures of the Board of Appeals. The Board of Appeals shall have the authority to establish rules and regulations for conducting its business that are consistent with the provisions of this Code.

~~1.10.3~~ Authority of the Board of Appeals.

~~1.10.3.1~~ The Board of Appeals shall provide for the reasonable interpretation of the provisions of this Code and issue rulings on appeals of the decisions of the AHJ.

~~1.10.3.2~~ The ruling of the Board of Appeals shall be consistent with the letter of the Code or when involving issues of clarity, ensuring that the intent of the Code is met with due consideration for public safety and fire fighter safety.

~~1.10.3.3~~ The Board of Appeals shall have the authority to grant alternatives or modifications through procedures outlined in Section 1.4 of the Code.

~~1.10.3.4~~ The Board of Appeals shall not have the authority to waive the requirements of the Code.

~~1.10.3.5~~ The Board of Appeals decisions shall not be precedent setting.

~~1.10.4~~ Means of Appeals.

~~1.10.4.1~~ Any person with standing shall be permitted to appeal a decision of the AHJ to the Board of Appeals when it is claimed that any one or more of the following conditions exist:



~~(1) The true intent of the Code has been incorrectly interpreted.~~

~~(2) The provisions of the Code do not fully apply.~~

~~(3) A decision is unreasonable or arbitrary as it applies to alternatives or new materials.~~

~~1.10.4.2 An appeal shall be submitted to the AHJ in writing within 30 calendar days of notification of violation. The appeal shall outline all of the following:~~

~~(1) The Code provision(s) from which relief is sought~~

~~(2) A statement indicating which provisions of 1.10.4.1 apply~~

~~(3) Justification as to the applicability of the provision(s) cited in 1.10.4.1~~

~~(4) A requested remedy~~

~~(5) Justification for the requested remedy stating specifically how the Code is complied with, public safety is secured, and fire fighter safety is secured~~

~~1.10.4.3\* Documentation supporting an appeal shall be submitted to the AHJ at least 7 calendar days prior to the Board of Appeals hearing.~~

~~1.10.5 Meetings and Records.~~

~~1.10.5.1 Meetings of the Board of Appeals shall be held at the call of the chair, at such other times as the board determines, and within 30 calendar days of the filing of a notice of appeal.~~

~~1.10.5.2 All hearings before the Board of Appeals shall be open to the public.~~

~~1.10.5.3 The Board of Appeals shall keep minutes of its proceedings showing the vote of each member on every question or, if the member is absent or fails to vote, these actions shall be recorded.~~

~~1.10.5.4 The Board of Appeals shall keep records of its examinations and other official actions.~~

~~1.10.5.5 Minutes and records of the Board of Appeals shall be public record.~~

~~1.10.5.6 A quorum shall consist of not less than 5 members or alternates.~~

~~1.10.5.7 In varying the application of any provision of this Code, or in modifying an order of the AHJ, a two thirds vote of the quorum shall be required.~~

~~1.10.6 Decisions.~~

~~1.10.6.1 Every decision of the Board of Appeals shall be entered in the minutes of the board meeting.~~

~~1.10.6.2~~ A decision of the Board of Appeals to modify an order of the AHJ shall be in writing and shall specify the manner in which such modification is made, the conditions upon which it is made, the reasons therefore, and justification linked to specific code sections.

~~1.10.6.3~~ Every decision shall be promptly filed in the office of the AHJ and shall be open for public inspection.

~~1.10.6.4~~ A certified copy shall be sent by mail or delivered in person to the appellant, and a copy shall be publicly posted in the office of the AHJ for 2 weeks after filing.

~~1.10.6.5~~ The decision of the Board of Appeals shall be final, subject to such remedy as any aggrieved party might have through legal, equity, or other avenues of appeal or petition.

~~1.10.6.6~~ If a decision of the Board of Appeals reverses or modifies a refusal, order, or disallowance of the AHJ, or varies the application of any provision of this Code, the AHJ shall take action immediately in accordance with such decision.

### ~~1.11~~ Records and Reports.

~~1.11.1~~ A record of examinations, approvals, equivalencies, and alternates shall be maintained by the AHJ and shall be available for public inspection during business hours in accordance with applicable laws.

~~1.11.2~~ The AHJ shall keep a record of all fire prevention inspections, including the date of such inspections and a summary of any violations found to exist, the date of the services of notices, and a record of the final disposition of all violations.

### ~~1.11.3~~ Emergency Response Records.

~~1.11.3.1~~ The fire department shall keep a record of fire and other emergency responses occurring within its jurisdiction and of facts concerning the same, including statistics as to the extent and damage caused by such fires or emergencies.

~~1.11.3.2~~ The fire department shall report its incident record data, collected in accordance with 1.11.3, to the recognized state agency responsible for collecting such data.

~~1.11.4~~ All records required to be kept shall be maintained until their usefulness has been served or as required by law.

### ~~1.12~~ Permits and Approvals.

~~1.12.1~~ The AHJ shall be authorized to establish and issue permits, certificates, and approvals pertaining to conditions, operations, or materials hazardous to life or property pursuant to Section 1.12.

~~1.12.2 Applications for permits shall be made to the AHJ on forms provided by the jurisdiction and shall include the applicant's answers in full to inquiries set forth on such forms.~~

~~1.12.2.1 Applications for permits shall be accompanied by such data as required by the AHJ and fees as required by the jurisdiction.~~

~~1.12.2.2 The AHJ shall review all applications submitted and issue permits as required.~~

~~1.12.2.3 If an application for a permit is rejected by the AHJ, the applicant shall be advised of the reasons for such rejection.~~

~~1.12.2.4 Permits for activities requiring evidence of financial responsibility by the jurisdiction shall not be issued unless proof of required financial responsibility is furnished.~~

### ~~1.12.3 Conditions of Approval.~~

~~1.12.3.1 Any conditions of the initial approval by the AHJ of a use, occupancy, permit, or construction shall remain with the use, occupancy, permit, or construction unless modified by the AHJ.~~

~~1.12.3.2 The AHJ shall be permitted to require conditions of approval be memorialized via recording in the public records, as part of the plat, permit, or other method as approved by the AHJ.~~

### ~~1.12.4 Approvals by Other AHJs.~~

~~1.12.4.1 The AHJ shall have the authority to require evidence to show that other regulatory agencies having jurisdiction over the design, construction, alteration, repair, equipment, maintenance, process, and relocation of structures have issued appropriate approvals.~~

~~1.12.4.2 The AHJ shall not be held responsible for enforcement of the regulations of such other regulatory agencies unless specifically mandated to enforce those agencies' regulations.~~

### ~~1.12.5 Misrepresentation.~~

~~1.12.5.1 Any attempt to misrepresent or otherwise deliberately or knowingly design; install; service; maintain; operate; sell; represent for sale; falsify records, reports, or applications; or other related activity in violation of the requirements prescribed by this Code shall be a violation of this Code.~~

~~1.12.5.2 Such violations shall be cause for immediate suspension or revocation of any related approvals, certificates, or permits issued by this jurisdiction.~~

~~1.12.5.3~~ Such violations shall be subject to any other criminal or civil penalties as available by the laws of this jurisdiction.

~~1.12.6~~ Permits.

~~1.12.6.1~~ A permit shall be predicated upon compliance with the requirements of this Code and shall constitute written authority issued by the AHJ to maintain, store, use, or handle materials; to conduct processes that could produce conditions hazardous to life or property; or to install equipment used in connection with such activities.

~~1.12.6.2~~ Any permit issued under this Code shall not take the place of any other approval, certificate, license, or permit required by other regulations or laws of this jurisdiction.

~~1.12.6.3~~ Where additional permits, approvals, certificates, or licenses are required by other agencies, approval shall be obtained from those other agencies.

~~1.12.6.4~~ The AHJ shall have the authority to require an inspection prior to the issuance of a permit.

~~1.12.6.5~~ A permit issued under this Code shall continue until revoked or for the period of time designated on the permit.

~~1.12.6.6~~ The permit shall be issued to one person or business only and for the location or purpose described in the permit.

~~1.12.6.7~~ Any change that affects any of the conditions of the permit shall require a new or amended permit.

~~1.12.6.8~~ The AHJ shall have the authority to grant an extension of the permit time period upon presentation by the permittee of a satisfactory reason for failure to start or complete the work or activity authorized by the permit.

~~1.12.6.9~~ A copy of the permit shall be posted or otherwise readily accessible at each place of operation and shall be subject to inspection as specified by the AHJ.

~~1.12.6.10~~ Any activity authorized by any permit issued under this Code shall be conducted by the permittee or the permittee's agents or employees in compliance with all requirements of this Code applicable thereto and in accordance with the approved plans and specifications.

~~1.12.6.11~~ No permit issued under this Code shall be interpreted to justify a violation of any provision of this Code or any other applicable law or regulation.

~~1.12.6.12~~ Any addition or alteration of approved plans or specifications shall be approved in advance by the AHJ, as evidenced by the issuance of a new or amended permit.

~~1.12.6.13\*~~ Permits shall be issued by the AHJ and shall indicate the following:

(1) Operation, activities, or construction for which the permit is issued

~~(2) Address or location where the operation, activity, or construction is to be conducted~~

~~(3) Name, address, and phone number of the permittee~~

~~(4) Permit number~~

~~(5) Period of validity of the permit~~

~~(6) Inspection requirements~~

~~(7) Name of the agency authorizing the permit (AHJ) (8) Date of issuance~~

~~(9) Permit conditions as determined by the AHJ~~

~~1.12.6.14 Any application for, or acceptance of, any permit requested or issued pursuant to this Code shall constitute agreement and consent by the person making the application or accepting the permit to allow the AHJ to enter the premises at any reasonable time to conduct such inspections as required by this Code.~~

~~1.12.7 Revocation or Suspension of Permits.~~

~~1.12.7.1 The AHJ shall be permitted to revoke or suspend a permit or approval issued if any violation of this Code is found upon inspection or in case any false statements or misrepresentations have been submitted in the application or plans on which the permit or approval was based.~~

~~1.12.7.2 Revocation or suspension shall be constituted when the permittee is duly notified by the AHJ.~~

~~1.12.7.3 Any person who engages in any business, operation, or occupation, or uses any premises, after the permit issued therefore has been suspended or revoked pursuant to the provisions of this Code, and before such suspended permit has been reinstated or a new permit issued, shall be in violation of this Code.~~

~~1.12.8 Permits shall be required in accordance with Table 1.12.8(a) through Table 1.12.8(d).~~

~~1.13 Certificates of Fitness.~~

~~1.13.1 Authorization. The AHJ shall have the authority to require certificates of fitness and collect fees for individuals or companies performing any of the following activities:~~

~~(1) Inspection, servicing, or recharging of portable fire extinguishers~~

~~(2) Installation, servicing, modification, or recharging of fixed fire extinguishing systems~~

~~(3) Installation, servicing, or modification of fire alarm or fire communication systems~~

~~(4) Installation, modification, or servicing of gas or oil burning heating systems~~

- ~~(5) Chimney sweep operations~~
- ~~(6) Installation, inspection, servicing, or modification of range hood systems~~
- ~~(7) Installation or servicing of private fire service mains and their appurtenances~~
- ~~(8) Crowd management services required by the Code~~
- ~~(9) Utilization of pyrotechnics before a proximate audience~~
- ~~(10) Installation, modification, or maintenance of liquefied petroleum gas or liquefied natural gas tanks or systems~~
- ~~(11) Installation or modification of medical gas systems where a permit is required by Table 1.12.8(a)~~
- ~~(12) Installation, modification, or maintenance of standpipe systems~~
- ~~(13) Installation, modification, or maintenance of automatic sprinkler systems~~
- ~~(14) Installation, modification, or maintenance of fire pumps (15) Installation, modification, or maintenance of tanks, wells, or drafting points used for fire protection water supplies~~

~~1.13.2 Mandatory. The AHJ shall require certificates of fitness and collect fees for individuals or companies performing any of the following activities:~~

- ~~(1) Use of explosive materials~~
- ~~(2) Fireworks displays involving display fireworks, 1.3G~~

~~1.13.3 The AHJ shall be responsible for the issuance of certificates of fitness required by the AHJ.~~

~~1.13.4 All applications for a certificate of fitness shall be filed with the AHJ on forms provided by the AHJ.~~

~~1.13.5 Certification of Applicant.~~

~~1.13.5.1 Every individual or company applying for a certificate of fitness shall furnish to the AHJ evidence of a familiarity with applicable codes, regulations, standards, listings, guidelines, and construction and safety practices for the activity for which the certificate of fitness is issued.~~

~~1.13.5.2\* The AHJ shall also utilize certification programs provided by national organizations acceptable to the AHJ, where available, to determine evidence of compliance with 1.13.5.1.~~

~~1.13.5.3 The AHJ shall investigate every application for a certificate of fitness.~~

~~1.13.5.4\*~~ The investigation shall include an examination of the applicant's experience and training in the field of the certificate of fitness for which application has been made.

~~1.13.5.5~~ When the AHJ determines that an applicant is not fit to receive the certificate of fitness because of the applicant's inability to comply with the provisions of this Code, the AHJ shall refuse to issue the certificate of fitness.

~~1.13.5.6~~ If the refusal is based on the applicant's inability to pass an examination given to determine competency, the applicant shall not be permitted to apply again for the certificate of fitness within a 10 day period following the examination.

~~1.13.6~~ Certificates of fitness shall not be transferable.

~~1.13.7~~ Certificates of fitness shall be issued for the period of time as indicated on the certificate of fitness as determined by the AHJ, but such period of time shall not exceed 3 years.

~~1.13.8~~ Applications for renewal of a certificate of fitness shall be filed in the same manner as an application for an original certificate.

~~1.13.9~~ Each individual or company holding a certificate of fitness shall notify the AHJ in writing of any address change within 10 days after such change.

~~1.13.10~~ A certificate of fitness shall be in the form of an identification card. The card shall contain the following information:

~~(1)~~ Purpose for which the certificate of fitness is issued

~~(2)~~ Date of expiration

~~(3)~~ Information necessary to easily identify the individual to whom the certificate of fitness is issued

~~(4)~~ Signature of the individual to whom the certificate of fitness is issued

~~(5)~~ Name and signature of the AHJ or a designated representative

~~(6)~~ Statement printed thereon in bold type the following: THIS CERTIFICATE IS NOT AN ENDORSEMENT OF THIS INDIVIDUAL OR COMPANY BY THE AUTHORITY HAVING JURISDICTION.

~~1.13.11~~ Any individual or company to whom a certificate of fitness has been granted shall, upon request, produce and show proper identification and the certificate of fitness to anyone for whom that individual seeks to render services or to the AHJ.

~~1.13.12~~ Revocation or Suspension of Certificates of Fitness.

~~1.13.12.1~~ The AHJ shall be permitted to revoke or suspend a certificate of fitness issued if any violation of this Code is found upon inspection or where any false statements or misrepresentations are submitted in the application on which the approval was based.

~~1.13.12.2~~ — Revocation or suspension shall be constituted when notification is served, posted, or mailed to the address of record for the certificate holder.

~~1.13.12.3~~ — Failure on the part of an individual to give such notification of a change of address required by 1.13.9 shall constitute grounds for revocation of the certificate of fitness.

~~1.13.12.4~~ — Revocations or suspensions of a certificate of fitness by the AHJ are appealable to the Board of Appeals as established in Section 1.10.

#### ~~1.14~~ Plan Review.

~~1.14.1~~ — Where required by the AHJ for new construction, modification, or rehabilitation, construction documents and shop drawings shall be submitted, reviewed, and approved prior to the start of such work as provided in Section 1.14.

~~1.14.1.1~~ — Plans for haunted houses and ghost walks shall be submitted to the authority having jurisdiction and shall meet the requirements of 14.1.1.1 through 14.1.1.3

~~1.14.1.1.1~~ — A dimensional site plan showing the proximity of the haunted house or ghost walk to other structures or hazardous areas, and the path of travel from the building or area to the public way shall be provided.

~~1.14.1.1.2~~ — A floor plan of the haunted house shall be provided and shall include;

(A) Dimensions (total square footage, width of exits, aisles or interior pathways, etc.)

(B) Location of exits, exit signs, and emergency lighting units.

(C) Location of fire extinguishers.

(D) Location of electrical panel(s) and light switches.

(E) Location of smoke alarms and/or fire alarm panel.

(F) Normal use of any structure(s), (i.e.: auditorium, school, church, etc.)

(G) Staff positions.

~~1.14.1.1.3~~ — Ghost walks and crop mazes shall meet the requirements of Section 10.15.11.

~~1.14.2~~ — The applicant shall be responsible to ensure that the following conditions are met:

(1) The construction documents include all of the fire protection requirements.



~~(2) The shop drawings are correct and in compliance with the applicable codes and standards.~~

~~(3) The contractor maintains an approved set of construction documents on site.~~

~~1.14.3 It shall be the responsibility of the AHJ to promulgate rules that cover the following:~~

~~(1) Criteria to meet the requirements of Section 1.14~~

~~(2) Review of documents and construction documents within established time frames for the purpose of acceptance or providing reasons for nonacceptance~~

~~1.14.4 Review and approval by the AHJ shall not relieve the applicant of the responsibility of compliance with this Code.~~

~~1.14.5 When required by the AHJ, revised construction documents or shop drawings shall be prepared and submitted for review and approval to illustrate corrections or modifications necessitated by field conditions or other revisions to approved plans.~~

~~1.15 Technical Assistance.~~

~~1.15.1 The AHJ shall be permitted to require a review by an approved independent third party with expertise in the matter to be reviewed at the submitter's expense.~~

~~1.15.2 The independent reviewer shall provide an evaluation and recommend necessary changes of the proposed design, operation, process, or new technology to the AHJ.~~

~~1.15.3 The AHJ shall be authorized to require design submittals to bear the stamp of a registered design professional.~~

~~1.15.4 The AHJ shall make the final determination as to whether the provisions of this Code have been met.~~

~~1.16 Notice of Violations and Penalties.~~

~~1.16.1 Where Required. Whenever the AHJ determines violations of this Code, a written notice shall be issued to confirm such findings.~~

~~1.16.2 Serving Notice of Violation.~~

~~1.16.2.1 Any order or notice of violation issued pursuant to this Code shall be served upon the owner, operator, occupant, registered agent, or other person responsible for the condition or violation by one of the following means:~~

~~(1) Personal service~~

~~(2) Mail to last known address of the owner, operator, or registered agent~~

~~1.16.2.2 For unattended or abandoned locations, a copy of such order or notice of violation shall be posted on the premises in a conspicuous place at or near the entrance to such premises, and the order or notice shall be disseminated in accordance with one of the following:~~

~~(1) Mailed to the last known address of the owner, occupant, or registered agent~~

~~(2) Published in a newspaper of general circulation wherein the property in violation is located~~

~~1.16.2.3 Refusal of an owner, occupant, operator, or other person responsible for the violation to accept the violation notice shall not be cause to invalidate the violation or the notice of violation. When acceptance of a notice of violation is refused, valid notice shall have deemed to have been served under this section provided the methods of service in 1.16.2.1 or 1.16.2.2 have been followed.~~

~~1.16.3 Destruction or Removal of Notice. The mutilation, destruction, or removal of a posted order or violation notice without authorization by the AHJ shall be a separate violation of this Code and punishable by the penalties established by the AHJ.~~

~~1.16.4 Penalties.~~

~~1.16.4.1 Any person who fails to comply with the provisions of this Code, fails to carry out an order made pursuant to this Code, or violates any condition attached to a permit, approval, or certificate shall be subject to the penalties established by the AHJ.~~

~~1.16.4.2 Where the AHJ establishes a separate penalty schedule, violations of this Code shall be subject to a \$250.00 penalty.~~

~~1.16.4.3 Failure to comply with the time limits of an order or notice of violation issued by the AHJ shall result in each day that the violation continues being regarded as a separate offense and shall be subject to a separate penalty.~~

~~1.16.4.4 A separate notice of violation shall not be required to be served each day for a violation to be deemed a separate offense.~~

~~1.16.5 Abatement. Where a violation creates an imminent danger, the AHJ is authorized to abate such hazard in accordance with 1.7.15.~~

## ~~Chapter 2 Referenced Publications~~

~~2.1 General. The documents referenced in this chapter or portions of such documents are referenced within this Code and shall be considered part of the requirements of this document.~~

~~(1)\*Documents referenced in this chapter or portion of such documents shall only be applicable to the extent called for within other chapters of this Code.~~

~~(2) Where the requirements of a referenced code or standard differ from the requirements of this Code, the requirements of this Code shall govern.~~

~~2.2 NFPA Publications. National Fire Protection Association,~~

~~1 Batterymarch Park, Quincy, MA 02169-7471.~~

~~NFPA 10, Standard for Portable Fire Extinguishers, 2010 edition. NFPA 11, Standard for Low-, Medium-, and High-Expansion~~

~~Foam, 2010 edition.~~

~~NFPA 12, Standard on Carbon Dioxide Extinguishing Systems, 2011 edition.~~

~~NFPA 12A, Standard on Halon 1301 Fire Extinguishing Systems, 2009 edition.~~

~~NFPA 13, Standard for the Installation of Sprinkler Systems, 2010 edition.~~

~~NFPA 13D, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, 2010 edition.~~

~~NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height, 2010 edition.~~

~~NFPA 14, Standard for the Installation of Standpipe and Hose Systems, 2010 edition.~~

~~NFPA 15, Standard for Water Spray Fixed Systems for Fire Protection, 2012 edition.~~

~~NFPA 16, Standard for the Installation of Foam-Water Sprinkler and Foam-Water Spray Systems, 2011 edition.~~

~~NFPA 17, Standard for Dry Chemical Extinguishing Systems, 2009 edition.~~

~~NFPA 17A, Standard for Wet Chemical Extinguishing Systems, 2009 edition.~~

~~NFPA 20, Standard for the Installation of Stationary Pumps for Fire Protection, 2010 edition.~~

~~NFPA 22, Standard for Water Tanks for Private Fire Protection, 2008 edition.~~

~~NFPA 24, Standard for the Installation of Private Fire Service Mains and Their Appurtenances, 2010 edition.~~

~~NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, 2011 edition.~~

~~NFPA 30, Flammable and Combustible Liquids Code, 2012 edition.~~

~~NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages, 2012 edition.~~

~~NFPA 30B, Code for the Manufacture and Storage of Aerosol Products, 2011 edition.~~

~~NFPA 31, Standard for the Installation of Oil-Burning Equipment, 2011 edition.~~

~~NFPA 32, Standard for Drycleaning Plants, 2011 edition. NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials, 2011 edition.~~

~~NFPA 34, Standard for Dipping, Coating, and Printing Processes Using Flammable or Combustible Liquids, 2011 edition.~~

~~NFPA 35, Standard for the Manufacture of Organic Coatings, 2011 edition.~~

~~NFPA 36, Standard for Solvent Extraction Plants, 2009 edition. NFPA 37, Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines, 2010 edition.~~

~~NFPA 40, Standard for the Storage and Handling of Cellulose Nitrate Film, 2011 edition.~~

~~NFPA 45, Standard on Fire Protection for Laboratories Using Chemicals, 2011 edition.~~

~~NFPA 51, Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes, 2007 edition.~~

~~NFPA 51A, Standard for Acetylene Cylinder Charging Plants, 2012 edition.~~

~~NFPA 51B, Standard for Fire Prevention During Welding, Cutting, and Other Hot Work, 2009 edition.~~

~~NFPA 52, Vehicular Gaseous Fuel Systems Code, 2010 edition. NFPA 54, National Fuel Gas Code, 2012 edition.~~

~~NFPA 55, Compressed Gases and Cryogenic Fluids Code, 2010 edition.~~

~~NFPA 58, Liquefied Petroleum Gas Code, 2011 edition. NFPA 59, Utility LP Gas Plant Code, 2012 edition.~~

~~NFPA 59A, Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG), 2009 edition.~~

~~NFPA 61, Standard for the Prevention of Fires and Dust Explosions in Agricultural and Food Processing Facilities, 2008 edition.~~

~~NFPA 68, Standard on Explosion Protection by Deflagration Venting, 2007 edition.~~

~~NFPA 69, Standard on Explosion Prevention Systems, 2008 edition.~~

~~NFPA 70<sup>®</sup>, National Electrical Code<sup>®</sup>, 2011 edition.~~

~~NFPA 72<sup>®</sup>, National Fire Alarm and Signaling Code, 2010 edition. NFPA 75, Standard for the Protection of Information Technology Equipment, 2009 edition.~~

~~NFPA 76, Standard for the Fire Protection of Telecommunications Facilities, 2009 edition.~~

~~NFPA 80, Standard for Fire Doors and Other Opening Protectives, 2010 edition.~~

~~NFPA 82, Standard on Incinerators and Waste and Linen Handling Systems and Equipment, 2009 edition.~~

~~NFPA 85, Boiler and Combustion Systems Hazards Code, 2011 edition.~~

~~NFPA 86, Standard for Ovens and Furnaces, 2011 edition.~~

~~NFPA 88A, Standard for Parking Structures, 2011 edition.~~

~~NFPA 90A, Standard for the Installation of Air Conditioning and Ventilating Systems, 2012 edition.~~

~~NFPA 90B, Standard for the Installation of Warm Air Heating and Air Conditioning Systems, 2012 edition.~~

~~NFPA 91, Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Noncombustible Particulate Solids, 2010 edition.~~

~~NFPA 92, Standard for Smoke Control Systems, 2012 edition. NFPA 96, Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations, 2011 edition.~~

~~NFPA 99, Health Care Facilities Code, 2012 edition. NFPA 101®, Life Safety Code®, 2012 edition.~~

~~NFPA 102, Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures, 2011 edition.~~

~~NFPA 105, Standard for Smoke Door Assemblies and Other Opening Protectives, 2010 edition.~~

~~NFPA 110, Standard for Emergency and Standby Power Systems, 2010 edition.~~

~~NFPA 111, Standard on Stored Electrical Energy Emergency and Standby Power Systems, 2010 edition.~~

~~NFPA 120, Standard for Fire Prevention and Control in Coal Mines, 2010 edition.~~

~~NFPA 122, Standard for Fire Prevention and Control in Metal/ Nonmetal Mining and Metal Mineral Processing Facilities, 2010 edition.~~

~~NFPA 130, Standard for Fixed Guideway Transit and Passenger Rail Systems, 2010 edition.~~

~~NFPA 140, Standard on Motion Picture and Television Production Studio Soundstages, Approved Production Facilities, and Production Locations, 2008 edition.~~

~~NFPA 150, Standard on Fire and Life Safety in Animal Housing Facilities, 2009 edition.~~

~~NFPA 160, Standard for the Use of Flame Effects Before an Audience, 2011 edition.~~

~~NFPA 170, Standard for Fire Safety and Emergency Symbols, 2009 edition.~~

~~NFPA 204, Standard for Smoke and Heat Venting, 2012 edition. NFPA 211, Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances, 2010 edition.~~

~~NFPA 220, Standard on Types of Building Construction, 2012 edition.~~

~~NFPA 221, Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls, 2012 edition.~~

~~NFPA 232, Standard for the Protection of Records, 2012 edition. NFPA 241, Standard for Safeguarding Construction, Alteration, and Demolition Operations, 2009 edition.~~

~~NFPA 251, Standard Methods of Tests of Fire Resistance of Building Construction and Materials, 2006 edition.~~

~~NFPA 252, Standard Methods of Fire Tests of Door Assemblies, 2008 edition.~~

~~NFPA 253, Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source, 2011 edition.~~

~~NFPA 255, Standard Method of Test of Surface Burning Characteristics of Building Materials, 2006 edition.~~

~~NFPA 256, Standard Methods of Fire Tests of Roof Covering, 2003 edition.~~

~~NFPA 257, Standard on Fire Test for Window and Glass Block Assemblies, 2007 edition.~~

~~NFPA 259, Standard Test Method for Potential Heat of Building Materials, 2008 edition.~~

~~NFPA 260, Standard Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture, 2009 edition.~~

~~NFPA 261, Standard Method of Test for Determining Resistance of Mock Up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes, 2009 edition.~~

~~NFPA 265, Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile or Expanded Vinyl Wall Coverings on Full Height Panels and Walls, 2011 edition.~~

~~NFPA 271, Standard Method of Test for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter, 2009 edition.~~

~~NFPA 286, Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth, 2011 edition.~~

~~NFPA 288, Standard Methods of Fire Tests of Floor Fire Door Assemblies Installed Horizontally in Fire Resistance Rated Floor Systems, 2007 edition.~~

~~NFPA 289, Standard Method of Fire Test for Individual Fuel Packages, 2009 edition.~~

~~NFPA 302, Fire Protection Standard for Pleasure and Commercial Motor Craft, 2010 edition.~~

~~NFPA 303, Fire Protection Standard for Marinas and Boatyards, 2011 edition.~~

~~NFPA 307, Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves, 2011 edition.~~

~~NFPA 312, Standard for Fire Protection of Vessels During Construction, Conversion, Repair, and Lay Up, 2011 edition.~~

~~NFPA 318, Standard for the Protection of Semiconductor Fabrication Facilities, 2012 edition.~~

~~NFPA 326, Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair, 2010 edition.~~

~~NFPA 385, Standard for Tank Vehicles for Flammable and Combustible Liquids, 2007 edition.~~

~~NFPA 400, Hazardous Materials Code, 2010 edition.~~

~~NFPA 407, Standard for Aircraft Fuel Servicing, 2012 edition. NFPA 408, Standard for Aircraft Hand Portable Fire Extinguishers, 2010 edition.~~

~~NFPA 409, Standard on Aircraft Hangars, 2011 edition. NFPA 410, Standard on Aircraft Maintenance, 2010 edition. NFPA 415, Standard on Airport Terminal Buildings, Fueling Ramp Drainage, and Loading Walkways, 2008 edition.~~

~~NFPA 418, Standard for Heliports, 2011 edition.~~

~~NFPA 430, Code for the Storage of Liquid and Solid Oxidizers, 2004 edition.~~

~~NFPA 432, Code for the Storage of Organic Peroxide Formulations, 2002 edition.~~

~~NFPA 434, Code for the Storage of Pesticides, 2002 edition. NFPA 472, Standard for Competence of Responders to Hazardous~~

~~Materials/Weapons of Mass Destruction Incidents, 2008 edition.~~

~~NFPA 484, Standard for Combustible Metals, 2012 edition. NFPA 490, Code for the Storage of Ammonium Nitrate, 2002 edition.~~

~~NFPA 495, Explosive Materials Code, 2010 edition.~~



~~NFPA 498, Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives, 2010 edition.~~

~~NFPA 501, Standard on Manufactured Housing, 2010 edition. NFPA 501A, Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities, 2009 edition.~~

~~NFPA 505, Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations, 2011 edition.~~

~~NFPA 560, Standard for the Storage, Handling, and Use of Ethylene Oxide for Sterilization and Fumigation, 2007 edition.~~

~~NFPA 601, Standard for Security Services in Fire Loss Prevention, 2010 edition.~~

~~NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, 2006 edition.~~

~~NFPA 655, Standard for Prevention of Sulfur Fires and Explosions, 2007 edition.~~

~~NFPA 664, Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities, 2012 edition.~~

~~NFPA 701, Standard Methods of Fire Tests for Flame Propagation of Textiles and Films, 2010 edition.~~

~~NFPA 703, Standard for Fire Retardant Treated Wood and Fire Retardant Coatings for Building Materials, 2012 edition.~~

~~NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response, 2012 edition.~~

~~NFPA 750, Standard on Water Mist Fire Protection Systems, 2010 edition.~~

~~NFPA 801, Standard for Fire Protection for Facilities Handling Radioactive Materials, 2008 edition.~~

~~NFPA 909, Code for the Protection of Cultural Resource Properties — Museums, Libraries, and Places of Worship, 2010 edition.~~

~~NFPA 914, Code for Fire Protection of Historic Structures, 2010 edition.~~

~~NFPA 1031, Standard for Professional Qualifications for Fire Inspector and Plan Examiner, 2009 edition.~~

~~NFPA 1122, Code for Model Rocketry, 2008 edition. NFPA 1123, Code for Fireworks Display, 2010 edition.~~

~~NFPA 1124, Code for the Manufacture, Transportation, Storage, and Retail Sales of Fireworks and Pyrotechnic Articles, 2006 edition.~~

~~NFPA 1125, Code for the Manufacture of Model Rocket and High Power Rocket Motors, 2012 edition.~~

~~NFPA 1126, Standard for the Use of Pyrotechnics Before a Proximate Audience, 2011 edition.~~

~~NFPA 1127, Code for High Power Rocketry, 2008 edition.~~

~~NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting, 2012 edition.~~

~~NFPA 1144, Standard for Reducing Structure Ignition Hazards from Wildland Fire, 2008 edition.~~

~~NFPA 1192, Standard on Recreational Vehicles, 2011 edition. NFPA 1194, Standard for Recreational Vehicle Parks and Campgrounds, 2011 edition.~~

~~NFPA 1600®, Standard on Disaster/Emergency Management and Business Continuity Programs, 2010 edition.~~

~~NFPA 1963, Standard for Fire Hose Connections, 2009 edition. NFPA 2001, Standard on Clean Agent Fire Extinguishing Systems, 2012 edition.~~

~~NFPA 5000®, Building Construction and Safety Code®, 2012 edition.~~

## ~~2.3 Other Publications.~~

~~2.3.1 ANSI Publications. American National Standards Institute, Inc., 25 West 43rd Street, 4th floor, New York, NY 10036.~~

~~ICC/ANSI A117.1 American National Standard for Accessible and Usable Buildings and Facilities, 2003.~~

~~ANSI/AIHA Z9.7 Recirculation of Air from Industrial Process Exhaust Systems, 2007.~~

~~ANSI B15.1 Mechanical Power Transmission Apparatus. ANSI Z223.1 National Fuel Gas Code.~~

~~2.3.2 API Publications. American Petroleum Institute, 1220~~

~~L Street, NW, Washington, DC 20005-4070.~~

~~API ASME Code for Unfired Pressure Vessels for Petroleum Liquids and Gases, Pre July 1, 1961.~~

~~API 12B Bolted Tanks for Storage of Production Liquids.~~

~~API 12D Field Welded Tanks for Storage of Production Liquids. API 12F Shop Welded Tanks for Storage of Production Liquids.~~

~~API 620 Design and Construction of Large, Welded, Low Pressure Storage Tanks, 2008.~~

~~API 650 Welded Steel Tanks for Oil Storage, 2007.~~

~~API 653 Tank Inspection, Repair, Alteration, and Reconstruction, 2003.~~

~~API 2000 Venting Atmospheric and Low Pressure Storage Tanks. API 2350 Overfill Protection for Storage Tanks in Petroleum Facilities, 2nd ed., 2005.~~

~~API BULL 1529, Aviation Fueling Hose, 1998.~~

~~API 607, Fire Test for Soft Seated Quarter Turn Valves, 1993.~~

~~2.3.3 ASHRAE Publications. American Society of Heating, Refrigerating and Air Conditioning Engineers, Inc., 1791 Tul lie Circle, NE, Atlanta, GA 30329-2305.~~

~~ASHRAE 15, Safety Code for Mechanical Refrigeration, 1994.~~

~~2.3.4 ASME Publications. American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016-5990.~~

~~ASME A13.1, Scheme for the Identification of Piping Systems, 1996. ASME/ANSI A17.1, Safety Code for Elevators and Escalators, 2006.~~

~~ASME/ANSI A17.3, Safety Code for Existing Elevators and Escalators, 2005.~~

~~ASME B31, Code for Pressure Piping, 1998. ANSI/ASME B31.3, Process Piping, 2008.~~

~~ASME B56.1, Safety Standard for Low Lift and High Lift Trucks, 2008.~~

~~ASME Boiler and Pressure Vessel Code, Section VIII, "Rules for the Construction of Unfired Pressure Vessels," 2004.~~

~~ASME Code for Unfired Pressure Vessels, Section VIII, Division 1.~~

~~2.3.5 ASTM Publications. ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.~~

~~ASTM A 395/A 395M, Standard Specification for Ferritic Ductile Iron Pressure Retaining Castings for Use at Elevated Temperatures, 1999 (2004 e1)~~

~~ASTM D 5, Standard Method of Test for Penetration of Bituminous Materials, 2006 e1.~~

~~ASTM D 56, Standard Test Method for Flash Point by Tag Closed Cup Tester, 2005.~~

~~ASTM D 92, Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester, 2005a.~~

~~ASTM D 93, Standard Test Methods for Flash Point by Pensky Martens Closed Cup Tester, 2008.~~

~~ASTM D 323, Standard Method of Test for Vapor Pressure of Petroleum Products (Reid Method), 2008.~~

~~ASTM D 396, Standard Specification for Fuel Oils, 2010.~~

~~ASTM D 635, Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position, 2006.~~

~~ASTM D 1929, Standard Test Method for Determining Ignition Temperature of Plastics, 1996 (2001 e1).~~

~~ASTM D 2843, Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics, 1999 (2004 e1).~~

~~ASTM D 2859, Standard Test Method for Ignition Characteristics of Finished Textile Floor Covering Materials, 2006.~~

~~ASTM D 2898, Standard Test Methods for Accelerated Weathering of Fire Retardant Treated Wood for Fire Testing, 2008 e1.~~

~~ASTM D 3278, Standard Test Methods for Flash Point of Liquids by Small Scale Closed Cup Apparatus, 1996 (2004 e1).~~

~~ASTM D 3699, Standard Specification for Kerosene, 2008. ASTM D 3828, Standard Test Methods for Flash Point by Small Scale Closed Cup Tester, 2007a.~~

~~ASTM D 4359, Standard Test for Determining Whether a Material is a Liquid or a Solid, 1990 (2006).~~

~~ASTM D 5391, Standard Test for Electrical Conductivity and Resistivity of a Flowing High Purity Water Sample, 1999 (2009).~~

~~ASTM D 6448, Industrial Burner Fuels from Used Lube Oils, 2009. ASTM D 6751, Standard Specification for Biodiesel Fuel Blend Stock (B100) for Middle Distillate Fuel, 2010.~~

~~ASTM D 6823, Commercial Burner Fuels from Used Lube Oils, 2008.~~

~~ASTM E 84, Standard Test Method for Surface Burning Characteristics of Building Materials, 2009a.~~

~~ASTM E 108, Standard Test Methods for Fire Tests of Roof Coverings, 2007a.~~

~~ASTM E 119, Standard Test Methods for Fire Tests of Building Construction and Materials, 2008a.~~

~~ASTM E 136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750 Degrees C, 2009.~~

~~ASTM E 648, Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source, 2009a.~~

~~ASTM E 681, Standard Test Method for Concentration Limits of Flammability of Chemicals (Vapors and Gases), 2004.~~

~~ASTM E 814, Standard Test Method for Fire Tests of Through Penetration Fire Stops, 2008b.~~

~~ASTM E 1352, Standard Test Method for Cigarette Ignition Resistance of Mock Up Upholstered Furniture Assemblies, 2008a.~~

~~ASTM E 1353, Standard Test Methods for Cigarette Ignition Resistance of Components of Upholstered Furniture, 2008a.~~

~~ASTM E 1354, Standard Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter, 2009.~~

~~ASTM E 1537, Standard Test Method for Fire Testing of Upholstered Furniture, 2007.~~

~~ASTM E 1590, Standard Test Method for Fire Testing of Mat tresses, 2007.~~

~~ASTM E 1591, Standard Guide for Obtaining Data for Deterministic Fire Models, 2007.~~

~~ASTM E 1966, Standard Test Method for Fire Resistive Joint Systems, 2007.~~

~~ASTM E 2010, Standard Test Method for Positive Pressure Fire Tests of Window Assemblies, 1999~~

~~ASTM E 2074, Standard Test Method for Fire Tests of Door Assemblies, Including Positive Pressure Testing of Side Hinged and Pivoted Swinging Door Assemblies, 2000.~~

~~ASTM E 2174, Standard Practice for On Site Inspection of In stalled Fire Stops, 2010.~~

~~ASTM E 2307, Standard Test Method for Fire Resistance of Perimeter Fire Barrier Systems Using Intermediate Scale, Multi story Test Apparatus, 2004 e1.~~

~~ASTM E 2393, Standard Practice for On Site Inspection of In stalled Fire Resistive Joint Systems and Perimeter Fire Barriers, 2010.~~

~~ASTM E 2652, Standard Test Method for Behavior of Materials in a Tube Furnace with a Cone Shaped Airflow Stabilizer, at 750 Degrees C, 2009.~~

~~ASTM F 852, Standard for Portable Gasoline Containers for Consumer Use, 2008.~~

~~ASTM F 976, Standard for Portable Kerosene Containers for Consumer Use, 2008.~~

~~2.3.6 ATA Publications. American Trucking Association Traffic Department, 950 North Glebe Road, Arlington, VA 22203 4181. National Motor Freight Classification, 2002.~~

~~2.3.7 CGA Publications. Compressed Gas Association, 4221 Walney Road, 5th Floor, Chantilly, VA 20151 2923.~~

~~CGA C 7, Guide to the Preparation of Precautionary Labeling and Marking of Compressed Gas Containers, 2004.~~

~~CGA M 1, Guide for Medical Gas Installations at Consumer Sites, 2007.~~

~~CGA P 1, Safe Handling of Compressed Gases in Containers, 2008. ANSI/CGA P 18, Standard for Bulk Inert Gas Systems at Consumer Sites, 2006.~~

~~CGA P 20, Standard for the Classification of Toxic Gas Mixtures, 2009.~~

~~CGA P 23, Standard for Categorizing Gas Mixtures Containing Flammable and Nonflammable Component, 1995.~~

~~CGA P 32, Safe Storage and Handling of Silane and Silane Mixtures, 2000.~~

~~CGA S 1.1, Pressure Relief Device Standards — Part 1 — Cylinders for Compressed Gases, 2007.~~

~~CGA S 1.2, Pressure Relief Device Standards — Part 2 — Cargo and Portable Tanks for Compressed Gases, 2009.~~

~~CGA S-1.3, Pressure Relief Device Standards — Part 3 — Stationary Storage Containers for Compressed Gases, 2008.~~

~~CGA V1, Standard Compressed Gas Cylinder Valve Outlet and Inlet Connections.~~

~~CGA V6, Standard Cryogenic Liquid Transfer Connection.~~

~~2.3.8 FM Publications. FM Global, 1301 Atwood Avenue, P.O. Box 7500, Johnston, RI 02919.~~

~~FM Global Approval Standard for Safety Containers and Filling, Supply, and Disposal Containers — Class Number 6051 and 6052.~~

~~FM 4880 Approval Standard for Class I Insulated Wall or Wall and Roof/Ceiling Panels; Plastic Interior Finish Materials; Plastic Exterior Building Panels; Wall/Ceiling Coating Systems; Interior or Exterior Finish Systems.~~

~~FM Global Approval Standard for Plastic Plugs for Fusible Closures for Steel Drum, Class Number 6083, October 2006.~~

~~2.3.9 ISO Publications. International Organization for Standardization, 1, ch. de la Voie Creuse, Case postale 56, CH-1211 Geneve 20, Switzerland.~~

~~ISO 10298, Determination of toxicity of a gas or gas mixture, 1995. ISO 10156, Gases and gas mixtures — Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets, 1996.~~

~~2.3.10 NBBPVI Publications. National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Avenue, Columbus, OH 43229. National Board Inspection Code, 2001.~~

~~2.3.11 NRFC Publications. National Railroad Freight Committee, 222 South Riverside Plaza, Chicago, IL 60606-5945. Uniform Freight Classification, 2005.~~

~~2.3.12 RVIA Publications. Recreation Vehicle Industry Association, 1896 Preston White Drive, P.O. Box 2999, Reston, VA 20195-0999.~~

~~RVIA/ANSI A119.5, Standard for Recreational Park Trailers, 1998.~~

~~2.3.13 Scott Specialty Gases Publications. Scott Specialty Gases, 6141 Easton Road, Box 310, Plumsteadville, PA 18949. Design & Safety Handbook, 2004.~~

~~2.3.14 UL Publications. Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.~~

~~ANSI/UL 8, Standard for Water Based Agent Fire Extinguishers, 2005, Revised 2009.~~

~~ANSI/UL 9, Standard for Safety Fire Tests of Window Assemblies, 2009.~~

~~ANSI/UL 10B, Standard for Fire Tests of Door Assemblies, 2008, Revised 2009.~~

~~ANSI/UL 10C, Standard for Positive Pressure Fire Tests of Door Assemblies, 2009.~~

~~ANSI/UL 30, Standard for Metal Safety Cans, 1995, Revised 2009.~~

~~UL 58, Standard for Steel Underground Tanks for Flammable and Combustible Liquids, 1996, Revised 1998.~~

~~ANSI/UL 80, Standard for Steel Tanks for Oil Burner Fuels and Other Combustible Liquids, 2007, Revised 2009.~~

~~ANSI/UL 142, Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids, 2006, Revised 2010.~~

~~ANSI/UL 147A, Standard for Nonrefillable (Disposable) Type Fuel Gas Cylinder Assemblies, 2005, Revised 2009.~~

~~ANSI/UL 147B, Standard for Nonrefillable (Disposable) Type Metal Container Assemblies for Butane, 2005, Revised 2008.~~

~~ANSI/UL 154, Standard for Carbon Dioxide Fire Extinguishers, 2005, Revised 2009.~~

~~UL 162, Standard for Safety for Foam Equipment and Liquid Concentrates, 1994.~~

~~ANSI/UL 197, Standard for Commercial Electric Cooking Appliances, 2003. Revised 2009.~~

~~ANSI/UL 263, Standard for Fire Tests of Building Construction and Materials, 2003, Revised 2007.~~

~~ANSI/UL 294, Standard for Access Control System Units, 2010.~~

~~ANSI/UL 296A, Standard for Waste Oil Burning Air Heating Appliances, 2010.~~

~~ANSI/UL 299, Standard for Dry Chemical Fire Extinguishers, 2002, Revised 2009.~~

~~ANSI/UL 300, Standard for Fire Testing of Fire Extinguishing Systems for Protection of Restaurant Cooking Areas, 2005.~~

~~ANSI/UL 340, Test for Comparative Flammability of Liquids, 2009. ANSI/UL 555, Standard for Fire Dampers, 2006, Revised 2010. ANSI/UL 555S, Standard for Smoke Dampers, 1999, Revised 2010.~~



~~ANSI/UL 567, Standard for Emergency Breakaway Fittings, Swivel Connectors and Pipe Connection Fittings for Petroleum Products and LP Gas, 2010.~~

~~ANSI/UL 626, Standard for Water Fire Extinguishers, 2007. ANSI/UL 710B, Outline of Investigation for Recirculating Exhaust System.~~

~~ANSI/UL 711, Standard Rating and Testing of Fire Extinguishers, 2004, Revised 2009.~~

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~~ANSI/UL 1313, Nonmetallic Safety Cans for Petroleum Products, 1993, Revised 2007.~~

~~ANSI/UL 1314, Standard for Special Purpose Metal Containers, 2005, Revised 2009.~~

~~UL 1316, Standard for Glass Fiber Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol Gasoline Mixtures, 1994, Revised 2006.~~

~~ANSI/UL 1479, Standard for Fire Tests of Through Penetration Firestops, 2003, Revised 2010.~~

~~UL 1573, Standard for Stage and Studio Luminaires and Connector Strips, 2003, Revised 2010.~~

~~UL 1640, Standard for Portable Power Distribution Equipment, 2000, Revised 2009.~~

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~~NFPA 30, Flammable and Combustible Liquids Code, 2012 edition.~~

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~~NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials, 2011 edition.~~

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~~NFPA 52, Vehicular Gaseous Fuel Systems Code, 2010 edition. NFPA 55, Compressed Gases and Cryogenic Fluids Code, 2010 edition.~~

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~~NFPA 68, Standard on Explosion Protection by Deflagration Venting, 2007 edition.~~

~~NFPA 69, Standard on Explosion Prevention Systems, 2008 edition.~~

~~NFPA 70®, National Electrical Code®, 2011 edition.~~

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2002 edition.~~

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~~Materials/Weapons of Mass Destruction Incidents, 2008 edition.~~

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~~NFPA 805, Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2010 edition.~~

~~NFPA 914, Code for Fire Protection of Historic Structures, 2010 edition.~~

~~NFPA 1031, Standard for Professional Qualifications for Fire Inspector and Plan Examiner, 2009 edition.~~

~~NFPA 1124, Code for the Manufacture, Transportation, Storage, and Retail Sales of Fireworks and Pyrotechnic Articles, 2006 edition.~~

~~NFPA 1141, Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas, 2012 edition.~~

~~NFPA 1144, Standard for Reducing Structure Ignition Hazards from Wildland Fire, 2008 edition.~~

~~NFPA 1600<sup>®</sup>, Standard on Disaster/Emergency Management and Business Continuity Programs, 2010 edition.~~

~~NFPA 5000<sup>®</sup>, Building Construction and Safety Code<sup>®</sup>, 2012 edition.~~

~~ASCE 7, Minimum Design Loads for Buildings and Other Structures, 2005.~~

~~**3.3.30.10\* Special Amusement Building.** A building that is temporary, permanent, or mobile and contains a device or system that conveys passengers or provides a walkway along, around, or over a course in any direction as a form of amusement arranged so that the egress path is not readily apparent due to visual or audio distractions or an intentionally confounded egress path, or is not readily available due to the mode of conveyance through the building or structure. [~~101, 2012~~]~~

3.3.30.10 Special Amusement Building, Haunted House. A temporary or permanent building or structure, or portion thereof, which contains a system that transports passengers or provides a walkway through a course so arranged that the means of egress are not apparent due to any of the following: theatrical distractions; low illumination; are disguised; or are not readily available to the method of transportation through the building or structure.

3.3.30.10.1 Special Amusement Building, Ghost Walk. Similar to a Haunted House; an outdoor area where egress to a public way is similarly not readily identifiable. Ghost Walks shall include crop mazes.

3.3.182.1\* Ambulatory Health Care Occupancy. An occupancy used to provide services or treatment simultaneously to ~~four~~ one or more patients that provides, on an outpatient basis, one or more of the following: (1) treatment for patients that renders the patients incapable of taking action for self-preservation under emergency conditions without the assistance of others; (2) anesthesia that renders the patients incapable of taking action for self-preservation under emergency conditions without the assistance of others; (3) emergency or urgent care for patients who, due to the nature of their injury or illness, are incapable of taking action for self-preservation under emergency conditions without the assistance of others [101, 2012]

3.3.182.11\* Health Care Occupancy. An occupancy used to provide medical or other treatment or care simultaneously to ~~four~~ one or more patients on an inpatient basis, where such patients are mostly incapable of self-preservation due to age, physical or mental disability, or because of security measures not under the occupants' control. [5000, 2012]

3.3.182.16 Lodging or Rooming House. A building or portion thereof that does not qualify as a one- or two-family dwelling, that provides sleeping accommodations for more than six, but not more than a total of 16 or fewer people on a transient or permanent basis, without personal care services, with or without meals, but without separate cooking facilities for individual occupants. [101, 2012]

3.3.182.22 One- and Two-Family Dwelling. One- and two- family dwellings include buildings containing not more than two dwelling units in which each dwelling unit is occupied by members of a single family with not more than ~~three~~ six outsiders, if any, accommodated in rented rooms.

6.1.5.1\* Definition — Health Care Occupancy. An occupancy used to provide medical or other treatment or care simultaneously to ~~four~~ one or more patients on an inpatient basis, where such patients are mostly incapable of self-preservation due to age, physical or mental disability, or because of security measures not under the occupants' control. [101:6.1.5.1]

6.1.6.1\* Definition — Ambulatory Health Care Occupancy. An occupancy used to provide services or treatment simultaneously to ~~four~~ one or more patients that provides, on an outpatient basis, one or more of the following: (1) treatment for patients that renders the patients incapable of taking action for self-preservation under emergency conditions without the assistance of others; (2) anesthesia that renders the patients incapable of taking action for self-preservation under emergency conditions without the assistance of others; (3) emergency

or urgent care for patients who, due to the nature of their injury or illness, are incapable of taking action for self-preservation under emergency conditions without the assistance of others [101, 2012]

6.1.8.1.2 Definition — Lodging or Rooming House. A building or portion thereof that does not qualify as a one- or two-family dwelling, that provides sleeping accommodations for more than six, but not more than a total of 16 or fewer people on a transient or permanent basis, without personal care services, with or without meals, but without separate cooking facilities for individual occupants. [101:6.1.8.1.2]

~~10.1.3 Building Code. Where a building code has been adopted, all new construction shall comply with this Code and the building code.~~

~~10.1.5 Any person who deliberately, or through negligence, sets fire to or causes the burning of any combustible material in such a manner as to endanger the safety of any person or property shall be deemed to be in violation of this Code.~~

~~10.9.3\* Training and Education:~~

~~10.9.3.1\* The entity shall develop and implement a training and education curriculum to support the program. [1600:6.11.1]~~

~~10.9.3.2 The goal of the curriculum shall be to create awareness and enhance the knowledge, skills, and abilities required to implement, support, and maintain the program. [1600:6.11.2]~~

~~10.9.3.3 The scope of the curriculum and frequency of instruction shall be identified. [1600:6.11.3]~~

~~10.9.3.4 Personnel shall be trained in the entity's incident management system (IMS) and other components of the program to the level of their involvement. [1600:6.11.4]~~

~~10.9.3.5 Records of training and education shall be maintained as specified in Section 4.8 of NFPA 1600. [1600:6.11.5]~~

~~10.9.3.6 The curriculum shall comply with applicable regulatory and program requirements. [1600:6.11.6]~~

~~10.9.3.7\* A public education program shall be implemented to communicate the following:~~

~~(1) Potential hazard impacts~~



~~(2) Preparedness information~~

~~(3) Information needed to develop a preparedness plan [1600:6.11.7]~~

~~10.11.1 Permits. Permits, where required, shall comply with Section 1.12.~~

~~10.11.1.1 Permits shall not be required for cooking and recreational fires.~~

~~10.11.1.2 Where burning is conducted on public property or the property of someone other than the permit applicant, the permit applicant shall demonstrate that permission has been obtained by the appropriate government agency, the owner, or the owner's authorized agent.~~

~~10.11.1.3 When limits for atmospheric conditions or hours restrict burning, such limits shall be designated in the permit restrictions.~~

~~10.11.1.4 Instructions or stipulations of permit shall be followed.~~

~~10.11.2 The AHJ shall have the authority to prohibit any or all open flames, candles, and open, recreational, and cooking fires or other sources of ignition, or establish special regulations on the use of any form of fire or smoking material where circumstances make such conditions hazardous.~~

~~10.11.3 Outdoor Fires.~~

~~10.11.3.1\* Outdoor fires shall not be built, ignited, or maintained in or upon hazardous fire areas, except by permit from the AHJ.~~

~~10.11.3.2 Permanent barbecues, portable barbecues, outdoor fireplaces, or grills shall not be used for the disposal of rubbish, trash, or combustible waste material.~~

~~10.11.4 Open Fires.~~

~~10.11.4.1 Permitted open fires shall be located not less than 50 ft (15 m) from any structure.~~

~~10.11.4.2 Burning hours shall be prescribed by the AHJ.~~

~~10.11.4.3 Recreational fires shall not be located within 25 ft (7.6 m) of a structure or combustible material unless contained in an approved manner.~~

~~10.11.4.4 Conditions that could cause a fire to spread to within 25 ft (7.6 m) of a structure shall be eliminated prior to ignition.~~

~~10.11.5 Fire Attendant.~~

~~10.11.5.1 Open, recreational, and cooking fires shall be constantly attended by a competent person until such fire is extinguished.~~

~~10.11.5.2 This person shall have a garden hose connected to the water supply or other fire extinguishing equipment readily available for use.~~

#### ~~10.11.6 Cooking Equipment.~~

~~10.11.6.1 For other than one and two family dwellings, no hibachi, grill, or other similar devices used for cooking, heating, or any other purpose shall be used or kindled on any balcony, under any overhanging portion, or within 10 ft (3 m) of any structure.~~

~~10.11.6.2 For other than one and two family dwellings, no hibachi, grill, or other similar devices used for cooking shall be stored on a balcony.~~

~~10.11.6.3\* Listed equipment permanently installed in accordance with its listing, applicable codes, and manufacturer's instructions shall be permitted~~

~~10.11.8.1 Incinerators, outdoor fireplaces, permanent barbecues, and grills shall not be built, installed, or maintained without prior approval of the AHJ. The requirements of 10.11.8.2 shall not apply to One- and Two-Family Dwellings or Apartment occupancies.~~

~~10.11.8.3 Openings in incinerators, outdoor fireplaces, permanent barbecues, and grills shall be provided with an approved spark arrester, screen, or door.~~

#### ~~10.11.9 Open Flame Devices.~~

~~10.11.9.1\* Welding torches, tar pots, decorative torches, and other devices, machines, or processes liable to start or cause fire shall not be operated or used in or upon any areas, except by permit from the AHJ.~~

~~10.11.9.2 Flame employing devices, such as lanterns or kerosene road flares, and fuses shall not be operated or used as a signal or marker in or upon any areas unless at the scene of emergencies or railroad operations. (See Chapter 16 and Chapter 65 for additional guidance.)~~

~~10.11.10 Discontinuance. The AHJ shall be authorized to require any fire to be immediately discontinued if the fire is determined to constitute a hazardous condition.~~

~~10.13.1 Every person owning or having charge or control of any vacant building, premises, or portion thereof shall remove all combustible storage, waste, refuse, and vegetation and shall lock, barricade, or otherwise secure the building or premises to prohibit entry by unauthorized persons.~~

~~10.13.1.1 The requirement of 10.13.1 shall not apply to buildings used on a seasonal basis, or the temporary vacancy of a building for tenant change or remodeling purposes.~~

~~10.15.1 Permits. Permits, where required, shall comply with Section 1.12.~~

~~10.15.4 Standby Fire Personnel. Where required by the AHJ, standby fire personnel shall be provided and comply with 1.7.16.~~

~~10.15.11.1 Permits. Permits, where required, shall comply with Section 1.12.~~

~~10.16\* Outside Storage.~~

~~10.16.1 Outside storage of combustibles shall not be located within 10 ft (3 m) of a property line.~~

~~10.16.2 The separation distance shall be allowed to be reduced to 3 ft (0.9 m) for storage not exceeding 6 ft (1.8 m) in height.~~

~~10.16.3 The separation distance shall be allowed to be reduced where the AHJ determines that no hazard to the adjoining property exists.~~

~~10.16.4 Combustible material shall not be stored beneath a building or structure unless specifically constructed or protected for this purpose.~~

~~10.16.5 Combustible storage in the open shall not exceed 20 ft (6.1 m) in height.~~

~~10.17 Parade Floats.~~

~~10.17.1 Permits. Permits, where required, shall comply with Section 1.12.~~

~~10.17.2 Fire Protection. Motorized parade floats and towing apparatus shall be provided with a minimum 2 A:10 B:C rated portable fire extinguisher readily accessible to the operator.~~

~~10.19.2 Permits. Permits, where required, shall comply with Section 1.12.~~

10.19.7 Fueled Equipment. Fueled equipment, including but not limited to motorcycles, mopeds, lawn-care equipment, and portable cooking equipment, shall not be stored, operated, or repaired within a building except under one of the following conditions:

(1) The building or room has been constructed for such use. ~~in accordance with the building code.~~

(2) The use is allowed by other provisions of this Code.

~~10.20.1.4 Indoor children's playground structures shall not exceed 300 ft<sup>2</sup> (28 m<sup>2</sup>) in area, unless approved by the AHJ.~~

11.1.7.1 Extension cords shall be plugged directly into an approved receptacle. Extension cords, ~~power tap, or multiplug adapter and shall~~, except for approved multiplug extension cords, shall serve only one portable appliance.

### ~~11.3 Elevators, Escalators and Conveyors~~

#### ~~11.3.1 Fire Fighters' Emergency Operations.~~

~~11.3.1.1 All new elevators shall conform to the Fire Fighters' Emergency Operations requirements of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators. [101:9.4.3.1]~~

~~11.3.1.2 All existing elevators having a travel distance of 25 ft (7620 mm) or more above or below the level that best serves the needs of emergency personnel for fire fighting or rescue purposes shall conform to the Fire Fighters' Emergency Operations requirements of ASME A17.3, Safety Code for Existing Elevators and Escalators. [101:9.4.3.2]~~

~~11.3.2 Number of Cars. The number of elevator cars permitted in a hoistway shall be in accordance with 8.6.8.3 of NFPA 101. [101:9.4.4]~~

~~11.3.3\* Elevator Machine Rooms. Elevator machine rooms that contain solid state equipment for elevators, other than existing elevators, having a travel distance exceeding 50 ft (15 m) above the level of exit discharge or exceeding 30 ft (9150 mm) below the level of exit discharge shall be provided with independent ventilation or air conditioning systems to maintain temperature during fire fighters' emergency operations for elevator operation (see 11.3.1). The operating temperature shall be established by the elevator equipment manufacturer's specifications. When standby power is connected to the elevator, the machine room ventilation or air conditioning shall be connected to standby power. [101:9.4.5]~~

#### ~~11.3.4 Elevator Testing.~~

~~11.3.4.1 Elevators shall be subject to periodic inspections and tests as specified in ASME A17.1/CSA B44, Safety Code for Elevators and Escalators. [101:9.4.6.1]~~

~~11.3.4.2 All elevators equipped with fire fighters' emergency operations in accordance with 11.3.1 shall be subject to a monthly operation with a written record of the findings made and kept on the premises as required by ASME A17.1/CSA B44, Safety Code for Elevators and Escalators. [101:9.4.6.2]~~

~~11.3.4.3~~ The elevator inspections and tests required by 11.3.4.1 shall be performed at frequencies complying with one of the following:

~~(1) Inspection and test frequencies specified in Appendix N of ASME A17.1/CSA B44, Safety Code for Elevators and Escalators~~

~~(2) Inspection and test frequencies specified by the AHJ [101:9.4.6.3]~~

~~**11.3.5 Openings to Exit Enclosures.** Conveyors, elevators, dumbwaiters, and pneumatic conveyors serving various stories of a building shall not open to an exit enclosure. [101:9.4.7]~~

~~11.3.6 Standardized Fire Service Elevator Keys. Elevators equipped with Phase I Emergency Recall, and Phase II emergency in-car operation, and First Responder Use/Fire Service Access Elevators, shall be equipped to operate with a standardized fire service key approved by the AHJ. Existing buildings shall comply with 11.3.6.5.~~

~~11.3.6.1 Requirements for Standardized Fire Service Keys.~~

~~11.3.6.1.1 All fire service elevator keys within the jurisdiction shall be uniform and specific for the jurisdiction. Keys shall be cut to a uniform key code.~~

~~11.3.6.1.2 Fire service elevator keys shall be a patent protected design to prevent unauthorized duplication.~~

~~11.3.6.1.3 Fire service elevator keys shall be factory restricted by the manufacturer to prevent the unauthorized distribution of key blanks. No uncut key blanks shall be permitted to leave the factory.~~

~~11.3.6.1.4 Fire service elevator keys subject to these rules shall be engraved with "DO NOT DUPLICATE."~~

~~11.3.6.2 Access to Standardized Fire Service Keys. Access to standardized fire service elevator keys shall be restricted to the following:~~

~~(1) Elevator owners or their authorized agents~~

~~(2) Elevator contractors~~

~~(3) Elevator inspectors of the jurisdiction~~

~~(4) Fire code officials of the jurisdiction~~

~~(5) The fire department and other emergency response agencies designated by the AHJ~~

~~11.3.6.3 Duplication or Distribution of Keys. No person shall duplicate a standardized fire service elevator key or issue, give, or sell a duplicated key unless in accordance with this Code.~~

~~11.3.6.4 Responsibility to Provide Keys. The building owner shall provide up to three (3) standardized fire service keys if required by the AHJ, upon installation of a standardized fire service key switch or switches in the building.~~

~~11.3.6.5 Existing Buildings. Existing buildings shall be in compliance with this requirement 1 year after adoption by the AHJ.~~

~~11.3.6.5.1 Where a standardized key cylinder cannot be installed in an existing elevator key switch assembly, the building's nonstandardized fire service elevator keys shall be provided in an access box in accordance with 11.3.6.5.1.1 through 11.3.6.5.1.6.~~

~~11.3.6.5.1.1 The access box shall be compatible with an existing rapid entry access box system in use in the jurisdiction and approved by the AHJ.~~

~~11.3.6.5.1.2 The front cover shall be permanently labeled with the words "Fire Department Use Only — Elevator Keys."~~

~~11.3.6.5.1.3 The access box shall be mounted at each elevator bank at the lobby nearest to the lowest level of fire department access.~~

~~11.3.6.5.1.4 The access box shall be mounted at a location approved by the AHJ.~~

~~11.3.6.5.1.5 Contents of the access box shall be limited to the fire service elevator key. Additional elevator access tools, keys, and information pertinent to emergency planning or elevator access shall be permitted when authorized by the AHJ.~~

~~11.3.6.5.1.6 In buildings with two or more elevator banks, a single access box shall be permitted to be used where such elevator banks are separated by not more than 30ft (9140 mm). Additional access boxes shall be provided for each individual elevator or elevator bank separated by more than 30 ft (9140 mm).~~

~~11.3.6.5.1.7 A single access box shall be permitted to be located adjacent to a fire command center, or the nonstandard fire service elevator key shall be secured in an access box used for other purposes and located in accordance with 18.2.2.1 when approved by the AHJ.~~

~~11.5.1.8 Permits. Permits, where required, shall comply with Section 1.12.~~

11.5.3.4 Portable electric heaters shall be equipped with a tip-over safety switch that turns the heater off when overturned.

11.7.3.1 General. New stationary generators for emergency use or for legally required standby power required by this Code, ~~the building code~~, or other codes and standards shall be installed in accordance with NFPA 110, Standard for Emergency and Standby Power Systems.

11.7.4 Stored Electrical Energy Emergency and Legally Required Standby Power System Installation. Stored electrical energy systems required by this Code ~~the building code~~, or other NFPA codes and standards shall be installed in accordance with NFPA 111, Standard on Stored Electrical Energy Emergency and Standby Power Systems, and NFPA 70.

11.7.5.2 Stationary generators required by this Code ~~the building code~~, or other NFPA codes and standards shall be maintained in accordance with NFPA 110.

11.7.5.3 Stored electrical energy systems required by this Code ~~the building code~~, or other NFPA codes and standards shall be maintained in accordance with NFPA 111.

#### ~~11.10\* Two-Way Radio Communication Enhancement Systems.~~

~~11.10.1 In all new and existing buildings, minimum radio signal strength for fire department communications shall be maintained at a level determined by the AHJ.~~

~~11.10.2 Where required by the AHJ, two-way radio communication enhancement systems shall comply with NFPA 72.~~

~~11.10.3 Where a two-way radio communication enhancement system is required and such system, components, or equipment has a negative impact on the normal operations of the facility at which it is installed, the AHJ shall have the authority to accept an automatically activated responder system.~~

#### ~~11.12 Photovoltaic Systems.~~

~~11.12.1 New photovoltaic systems shall be installed in accordance with Section 11.10, Section 11.12 and NFPA 70.~~

~~11.12.2 Building Mounted Photovoltaic Installations.~~

~~11.12.2.1\* Marking. Photovoltaic systems shall be permanently marked as specified in this subsection.~~

~~11.12.2.1.1 Main Service Disconnect Marking. A label shall be permanently affixed to the main service disconnect panel serving alternating current (ac) and direct current (dc) photovoltaic systems. The label shall be red with white capital letters at least 3/4 in. (19 mm) in height and in a nonserif font, to read: "WARNING: PHOTOVOLTAIC POWER SOURCE." The materials used for the label shall be reflective, weather resistant, and suitable for the environment.~~

~~11.12.2.1.2 Circuit Disconnecting Means Marking. A permanent label shall be affixed adjacent to the circuit breaker controlling the inverter or other photovoltaic system electrical controller serving ac and dc photovoltaic systems. The label shall have contrasting color with capital letters at least 3/8 in. (10 mm) in height and in a nonserif font, to read: "PHOTO VOLTAIC DISCONNECT." The label shall be constructed of durable adhesive material or other approved material.~~

~~11.12.2.1.3\* Conduit, Raceway, Enclosure, Cable Assembly, and Junction Box Markings. Marking shall be required on all interior and exterior dc conduits, raceways, enclosures, cable assemblies, and junction boxes.~~

~~11.12.2.1.3.1 Marking Locations. Marking shall be placed on all dc conduits, raceways, enclosures, and cable assemblies every 10 ft (3048 mm), at turns, and above and below penetrations. Marking shall be placed on all dc combiner and junction boxes.~~

~~11.12.2.1.3.2\* Marking Content and Format. Marking for dc conduits, raceways, enclosures, cable assemblies, and junction boxes shall be red with white lettering with minimum 3/8 in. (10 mm) capital letters in a nonserif font, to read: "WARNING: PHOTOVOLTAIC POWER SOURCE." Marking shall be reflective, weather resistant, and suitable for the environment.~~

~~11.12.2.1.4 Secondary Power Source Markings. Where photo-voltaic systems are interconnected to battery systems, generator backup systems, or other secondary power systems, additional signage acceptable to the AHJ shall be required indicating the location of the secondary power source shutoff switch.~~

~~11.12.2.1.5 Installer Information. Signage, acceptable to the AHJ, shall be installed adjacent to the main disconnect indicating the name and emergency telephone number of the installing contractor.~~

~~11.12.2.1.6\* Inverter Marking. Markings shall not be required for inverters.~~

~~11.12.2.2 Access, Pathways, and Smoke Ventilation.~~



~~11.12.2.2.1 General. Access and spacing requirements shall be required to provide emergency access to the roof, provide pathways to specific areas of the roof, provide for smoke ventilation opportunity areas, and to provide emergency egress from the roof.~~

~~11.12.2.2.1.1 Exceptions. The AHJ shall be permitted to grant exceptions where access, pathway, or ventilation requirements are reduced due to any of the following circumstances:~~

~~(1) Proximity and type of adjacent exposures~~

~~(2) Alternative access opportunities, as from adjoining roofs~~

~~(3) Ground level access to the roof~~

~~(4) Adequate ventilation opportunities beneath photovoltaic module arrays~~

~~(5) Adequate ventilation opportunities afforded by module set back from other rooftop equipment~~

~~(6) Automatic ventilation devices~~

~~(7) New technologies, methods, or other innovations that ensure adequate fire department access, pathways, and ventilation opportunities~~

~~11.12.2.2.1.2 Pitch. Designation of ridge, hip, and valley shall not apply to roofs with 2 in 12 or less pitch.~~

~~11.12.2.2.1.3 Roof Access Points. Roof access points shall be defined as areas where fire department ladders are not placed over openings (windows or doors), are located at strong points of building construction, and are in locations where they will not conflict with overhead obstructions (tree limbs, wires, or signs).~~

~~11.12.2.2.2 One and Two Family Dwellings and Townhouses. Photovoltaic systems installed in one and two family dwellings and townhouses shall be in accordance with this section.~~

~~11.12.2.2.2.1 Access and Pathways.~~

~~11.12.2.2.2.1.1 Hip Roof Layouts. Photovoltaic modules shall be located in a manner that provides a 3 ft (914 mm) wide clear access pathway from the eave to the ridge of each roof slope where the photovoltaic modules are located. The access pathway shall be located at a structurally strong location of the building, such as a bearing wall.~~

~~Exception: The requirement of 11.12.2.2.2.1.1 shall not apply where adjoining roof planes provide a 3 ft (914 mm) wide clear access pathway.~~

~~11.12.2.2.2.1.2 Single Ridge Layouts. Photovoltaic modules shall be located in a manner that provides two 3 ft (914 mm) wide access pathways from the eave to the ridge on each roof slope where the modules are located.~~

~~11.12.2.2.2.1.3 Hip and Valley Layouts. Photovoltaic modules shall be located no closer than 11/2 ft (457 mm) to a hip or valley if modules are to be placed on both sides of the hip or valley. Where modules are located on only one side of a hip or valley of equal length, the photovoltaic modules shall be allowed to be placed directly adjacent to the hip or valley.~~

~~11.12.2.2.2.2 Ridge Setback. Photovoltaic modules shall be located not less than 3 ft (914 mm) below the ridge.~~

~~11.12.2.2.3 Buildings Other Than One and Two Family Dwellings and Townhouses. Photovoltaic energy systems installed in any building other than one and two family dwellings and townhouses shall be in accordance with this section. Where the AHJ determines that the roof configuration is similar to a one and two family dwelling or townhouse, the AHJ shall allow the requirements of 11.12.2.2.2.~~

~~11.12.2.2.3.1 Access. A minimum 4 ft (1219 mm) wide clear perimeter shall be provided around the edges of the roof for buildings with a length or width of 250 ft (76.2 m) or less along either axis. A minimum 6 ft (1829 mm) wide clear perimeter shall be provided around the edges of the roof for buildings having length or width greater than 250 ft (76.2 m) along either axis.~~

~~11.12.2.2.3.2 Pathways. Pathways shall be established as follows: (1) Pathways shall be over areas capable of supporting the live load of fire fighters accessing the roof.~~

~~(2) Centerline axis pathways shall be provided in both axes of the roof.~~

~~(3) Centerline axis pathways shall run where the roof structure is capable of supporting the live load of fire fighters accessing the roof.~~

~~(4) Pathways shall be in a straight line not less than 4 ft (1219 mm) clear to skylights, ventilation hatches, and roof standpipes.~~

~~(5) Pathways shall provide not less than 4 ft (1219 mm) clear around roof access hatches with at least one not less than 4 ft (1219 mm) clear pathway to the parapet or roof edge.~~

~~11.12.2.2.3.3 Smoke Ventilation. Ability for fire department smoke ventilation shall be provided in accordance with this section.~~

~~11.12.2.2.3.3.1 Maximum Array. Arrays of photovoltaic modules shall be no greater than 150 ft (45.7 m) x 150 ft (45.7 m) in distance in either axis.~~

~~11.12.2.2.3.3.2 Ventilation Options. Ventilation options between array sections shall be one of the following:~~

~~(1) A pathway 8 ft (2438 mm) or greater in width~~

~~(2) A pathway 4 ft (1219 mm) or greater in width and bordering on existing roof skylights or ventilation hatches~~

~~(3) A pathway 4 ft (1219 mm) or greater in width and bordering 4 ft (1219 mm) x 8 ft (2438 mm) venting cutouts options every 20 ft (6096 mm) on alternating sides of the pathway~~

~~11.12.2.2.4 Location of Direct Current (DC) Conductors.~~

~~11.12.2.2.4.1 Exterior mounted dc conduits, wiring systems, and raceways for photovoltaic circuits shall be located as close as possible to the ridge, hip, or valley and from the hip or valley as directly as possible to an outside wall to reduce trip hazards and maximize ventilation opportunities.~~

~~11.12.2.2.4.2 Conduit runs between subarrays and to dc combiner boxes shall be designed to take the shortest path from the array to the dc combiner box.~~

~~11.12.2.2.4.3 DC combiner boxes shall be located so that conduit runs are minimized in the pathways between arrays.~~

~~11.12.2.2.4.4 DC wiring shall be run in metallic conduit or raceways where located within enclosed spaces in a building.~~

~~11.12.2.2.4.4.1 Where dc wiring is run perpendicular or parallel to load bearing members, a minimum 10 in. (254 mm) space below roof decking or sheathing shall be maintained.~~

~~11.12.3 Ground Mounted Photovoltaic System Installations. Ground mounted photovoltaic systems shall be installed in accordance with 11.12.3.1 through 11.12.3.3.~~

~~11.12.3.1\* Clearances. A clear area of 10 ft (3048 mm) around ground mounted photovoltaic installations shall be provided.~~

~~11.12.3.2\* Noncombustible Base. A gravel base or other non combustible base acceptable to the AHJ shall be installed and maintained under and around the installation.~~

~~11.12.3.3\* Security Barriers. Fencing, skirting, or other suitable security barriers shall be installed when required by the AHJ.~~

### ~~12.3 Fire Resistive Materials and Construction.~~

~~12.3.1 The design and construction of fire walls and fire barrier walls that are required to separate buildings or subdivide a building to prevent the spread of fire shall comply with Section 12.3 and NFPA 221, Standard for High Challenge Fire Walls, Fire Walls, and Fire Barrier Walls.~~

~~12.3.2\* Quality Assurance for Penetrations and Joints. In new buildings three stories or greater in height, a quality assurance program for the installation of devices and systems installed to protect penetration and joints shall be prepared and monitored by the RDP responsible for design. Inspections of firestop systems and fire resistive joint systems shall be in accordance with 12.3.2.1 and 12.3.2.2.~~

~~12.3.2.1 Inspection of firestop systems of the types tested in accordance with ASTM E 814, Standard Test Method for Fire Tests of Through Penetration Fire Stops, or ANSI/UL 1479, Standard for Fire Tests of Through Penetration Firestops, shall be conducted in accordance with ASTM E 2174, Standard Practice for On-Site Inspection of Installed Fire Stops. [5000:40.9.1]~~

~~12.3.2.2 Inspection of fire resistive joint systems of the types tested in accordance with ASTM E 1966, Standard Test Method for Fire Resistive Joint Systems, or ANSI/UL 2079, Standard for Tests for Fire Resistance of Buildings Joint Systems, shall be conducted in accordance with ASTM E 2393, Standard Practice for On-Site Inspection of Installed Fire Resistive Joint Systems and Perimeter Fire Barriers. [5000:40.9.2]~~

### ~~12.3.3\* Maintenance of Fire Resistive Construction.~~

~~12.3.3.1 Required fire resistive construction, including fire barriers, fire walls, exterior walls due to location on property, fire resistive requirements based on type of construction, draft stop partitions, and roof coverings, shall be maintained and shall be properly repaired, restored, or replaced where damaged, altered, breached, penetrated, removed, or improperly installed.~~

~~12.3.3.2 Where required, fire-rated gypsum wallboard walls or ceilings that are damaged to the extent that through openings exist, the damaged gypsum wallboard shall be replaced or returned to the required level of fire resistance using a listed repair system or using materials and methods equivalent to the original construction.~~

~~12.3.3.3 Where readily accessible, required fire resistance rated assemblies in high-rise buildings shall be visually inspected for integrity at least once every 5 years.~~

~~12.3.3.3.1 The person responsible for conducting the visual inspection shall demonstrate appropriate technical knowledge and experience in fire resistance rated design and construction acceptable to the AHJ.~~

~~12.3.3.3.2 A written report prepared by the person responsible for conducting the visual inspection shall be submitted to the AHJ documenting the results of the visual inspection.~~

~~13.1.1.1 Permits. Permits, where required, shall comply with Section 1.12.~~

**13.1.9** When a fire ~~sprinkler protection~~ system is out of service for more than 4 10 hours in a 24-hour period, the AHJ shall be permitted to require the building to be evacuated or an approved fire watch to be provided for all portions left unprotected by the fire protection system shutdown until the fire protection system has been returned to service.

~~13.3.2.2 Basements exceeding 2500 ft<sup>2</sup> (232 m<sup>2</sup>) in new buildings shall be protected throughout by an approved automatic sprinkler system.~~

~~13.3.2.4 New buildings three or more stories in height above grade shall be protected throughout by an approved automatic sprinkler system in accordance with Section 13.3 unless otherwise permitted by 13.3.2.5.~~

~~13.3.2.7.1 The following assembly occupancies shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with 13.3.1.2:~~

~~(1) Dance halls~~

~~(2) Discotheques~~

~~(3) Nightclubs~~

~~(4) Assembly occupancies with festival seating [101:12.3.5.1]~~

**13.3.2.7.2.1\*** The requirements of 13.3.2.7.2 shall not apply where all of the following are met:

**(1)** Fire barriers having a minimum fire resistance rating of two hours are provided so that the occupant load on each side of the fire barriers does not exceed 300 and;

**(2)** Independent egress is provided from each side of the fire barriers and;

**(3)** All other applicable requirements of the code are met for the combined occupant load of the building.

~~13.3.2.8.1~~ Where the occupant load exceeds 100, the following assembly occupancies shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with NFPA 13:

- ~~(1) Dance halls~~
- ~~(2) Discotheques~~
- ~~(3) Nightclubs~~
- ~~(4) Assembly occupancies with festival seating [101:13.3.5.1]~~

~~13.3.2.20.1~~ All new one and two family dwellings shall be protected throughout by an approved automatic sprinkler system in accordance with 13.3.2.20.2. [101:24.3.5.1]

~~13.3.2.21.2.1\*~~ All facilities, other than those meeting the requirement of 13.3.2.21.2.2, shall be protected throughout by an approved automatic sprinkler system, installed in accordance with 13.3.2.21.2.3, using quick-response or residential sprinklers. [101:32.2.3.5.1]

~~13.3.2.21.2.2\*~~ In conversions, sprinklers shall not be required in small board and care homes serving eight or fewer residents when all occupants have the ability as a group to move reliably to a point of safety within 3 minutes. [101:32.2.3.5.2]

~~13.3.2.23.4.2~~ Hose Connections:

~~13.3.2.23.4.2.1~~ There shall be a hose outlet connected to a system sized to deliver 250 gal/min (946 L/min) at the most hydraulically remote outlet. [5000:27.4.4.7.2.1]

~~13.3.2.23.4.2.2~~ The outlet shall be supplied from the mall zone sprinkler system and shall be hydraulically calculated. [5000:27.4.4.7.2.2]

~~13.3.2.23.4.2.3~~ Hose outlets shall be provided at each of the following locations:

- ~~(1) Within the mall at the entrance to each exit passage or corridor~~
- ~~(2) At each floor level landing within enclosed stairways opening directly onto the mall~~
- ~~(3) At exterior public entrances to the mall. [5000:27.4.4.7.2.3]~~

13.3.2.27.2\* General Storage. An automatic sprinkler system shall be installed throughout all occupancies containing areas greater than ~~12,000 ft<sup>2</sup> (1115m<sup>2</sup>)~~ 100,000 ft<sup>2</sup> for the storage of combustibles, except as modified by 13.3.2.27.3.

13.3.2.27.3 Storage buildings used exclusively for the storage of bulk raw grain shall not be required to have a fire sprinkler system.

~~13.3.2.27.4 Mini Storage Building. An automatic sprinkler system shall be installed throughout all mini-storage buildings greater than 2500 ft<sup>2</sup> (232 m<sup>2</sup>) where any of the individual storage units are separated by less than 1 hour fire resistance-rated barrier. [5000:30.3.5.3]~~

~~13.3.2.27.5 Bulk Storage of Tires. Buildings and structures where the volume for the storage of tires exceeds 20,000 ft<sup>3</sup> (566 m<sup>3</sup>) shall be equipped throughout with an approved automatic fire sprinkler system. [5000:30.3.5.2]~~

~~13.3.2.28 Woodworking Operations. An approved automatic fire sprinkler system shall be installed in buildings containing woodworking operations exceeding 2500 ft<sup>2</sup> (232 m<sup>2</sup>) that use equipment, machinery, or appliances, that generate finely divided combustible waste, or that use finely divided combustible materials. [5000:29.3.5.1.2]~~

~~13.3.2.29 New and Existing Day Care. Buildings with unprotected openings in accordance with 8.6.6 of NFPA 101 shall be protected throughout by an approved, supervised automatic sprinkler system in accordance with Section 13.3. [101:16.3.5.3; 101:17.3.5.3]~~

~~13.4.1.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~13.5.2 Where no adequate and reliable water supply exists for fire fighting purposes, the requirements of NFPA 1142, Standard on Water Supplies for Suburban and Rural Fire Fighting, shall apply.~~

~~13.6.2\* Where Required. Fire extinguishers shall be provided where required by this Code as specified in Table 13.6.2 and the referenced codes and standards listed in Chapter 2.~~

## Table 13.6.2 Portable Fire Extinguishers Required

13.7.2.12.1 Apartment buildings four or more stories in height or with more than ~~11~~ 12 dwelling units, other than those meeting the requirements of 13.7.2.12.2, shall be provided with a fire alarm system in accordance with Section 13.7 and NFPA 101, except as modified by 31.3.4.2 through 31.3.4.5 of NFPA 101. [101:31.3.4.1.1]

~~13.7.3.3.9~~ When fire alarm systems are not monitored, an approved permanent sign shall be installed adjacent to each manual fire alarm box. The sign shall read as follows:

~~Local alarm only:~~

~~(1) Activate alarm~~

~~(2) Exit building~~

~~(3) Call fire department~~

## Chapter 15 — Fire Department Service Delivery

### Concurrency Evaluation

#### 15.1 Application.

~~15.1.1~~ The AHJ shall be permitted to require a proposed development in the jurisdiction undergo a fire department service delivery concurrency evaluation.

~~15.1.1.1~~ Proposed developments that would increase the fire department's service population by less than 1 percent or increase the fire department's total protected building square footage by less than 1 percent shall not be subject to a fire department service delivery concurrency evaluation.

#### 15.2 Level of Service Objectives.

~~15.2.1~~ The fire department shall provide the developer with the current level of service standards for fire protection, emergency medical, prevention, and other operational services provided by the fire department.



~~15.2.2 The level of service for the proposed development shall not be less than the fire department's current level of service for fire protection, emergency medical, prevention, and other operational services.~~

~~15.2.2.1 The AHJ shall be permitted to approve a reduced level of service for the proposed development if a service mitigation plan has been adopted by the jurisdiction.~~

~~15.3 Evaluator Qualifications. The fire department service delivery concurrency evaluation shall be prepared by a person with qualifications acceptable to the AHJ.~~

~~15.4 Fire Department Service Delivery Concurrency Evaluation Documentation.~~

~~15.4.1 The fire department service delivery concurrency evaluation shall include, but not be limited to, the following:~~

~~(1) The current level of service for fire protection, emergency medical, and prevention services~~

~~(2) The post-development level of service for fire protection, emergency medical, and prevention services~~

~~(3) Mitigation recommendations if the level of service in the post-development condition falls below the current level of service~~

~~(4) Short- and long-term funding sources for implementation of the mitigation recommendations~~

~~15.4.2 The fire department service delivery concurrency evaluation shall be provided in a format approved by the AHJ.~~

~~15.4.3 The fire department service delivery concurrency evaluation shall utilize data sources and standards approved by the AHJ.~~

~~15.5 Independent Review. The AHJ shall be permitted to require an approved, independent third-party evaluation of the fire department service delivery concurrency evaluation at the expense of the developer.~~

## ~~15.6 Approval.~~

~~15.6.1 The AHJ shall make the final determination as to whether the level of service objectives have been met for the proposed development and, if applicable, the mitigation strategies are funded and appropriate.~~

~~15.6.2 If a fire department service delivery concurrency evaluation is required by the AHJ, development shall not proceed until the report has been accepted by the AHJ.~~

~~16.6.1 Permits. Permits, where required, shall comply with Section 1.12.~~

## ~~16.8 Asbestos Removal.~~

~~16.8.1 Notification. The AHJ and the fire department shall be notified 24 hours prior to the commencement and closure of asbestos removal operations.~~

~~16.8.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~16.8.3 Signs. Approved signs shall be posted at the entrance, exit and exit access door, decontamination areas, and waste disposal areas for asbestos removal operations.~~

~~16.8.3.1 The signs shall state that asbestos is being removed from the area, that asbestos is a suspected carcinogen, and that proper respiratory protection is required.~~

~~16.8.3.2 Signs shall have a reflective surface, and lettering shall be a minimum of 2 in. (51 mm) high.~~

## Chapter 17—Wildland Urban Interface

~~17.1 General. The planning, construction, maintenance, education, and management elements for the protection of life and property from wildfire shall meet the requirements of this chapter and NFPA 1144, Standard for Reducing Structure Ignition Hazards from Wildland Fire.~~

~~17.1.1 In cases in which the local jurisdiction declares that an area within the jurisdiction is a wildland urban interface as determined by an assessment tool based upon accepted fire services practices, or where new structures will be located in a wildland/urban interface or intermix area, the AHJ shall per form, or cause to be performed, a wildland fire hazard assessment of each structure ignition zone in the development to determine relative risk, the extent of wildland fire hazard, and applicable mitigation measures.~~

~~17.1.2\* The structure assessment shall, as a minimum, include the following:~~

~~(1) Identification and documentation of the wildland fire hazards in the ignition zone(s) for each structure within wildland fire hazard areas, according to the elements and conditions in 17.1.4~~

~~(2) Determination of mitigation measures for vegetation, other combustibles, and the structure, including the periodic maintenance associated with such measures~~

~~(3) Establishment of priorities relative to mitigating the risks from wildland fire [1144:4.1.2]~~

~~17.1.3 The wildland fire hazard assessment shall be the basis for recommended mitigation measures relative to the vegetation, other combustibles, and structures on the site. [1144:4.1.3]~~

~~17.1.4\* Structure Assessment Elements and Conditions. As a minimum, the structure assessment shall cover elements and conditions indicated in 17.1.5 through 17.1.9. [1144:4.2]~~

~~17.1.5 Overview of the Surrounding Environment. The structure assessment shall document the conditions of 17.1.5.1 through 17.1.5.5 in the assessment of the surrounding environment, as they will place the structure in the most risk from ignition by a wildland fire. [1144:4.2.1]~~

~~17.1.5.1\* The structure assessment shall document the location of the structure in relation to predominant topographical features, such as flat open areas, ridges, saddles, steep slopes, natural chimneys like steep narrow draws, or small canyons, that will increase the ignition potential of the structure. [1144:4.2.1.1]~~

~~17.1.5.2\* The structure assessment shall document local weather conditions, including wind, relative humidity, temperature, and fine fuel moisture content. [1144:4.2.1.2]~~

~~17.1.5.3\* The structure assessment shall document nearby structures using the same criteria as the primary structure. [1144:4.2.1.3]~~

~~17.1.5.4\* The structure assessment shall document any neighboring properties that could impact the ignition zone of the property being assessed. [1144:4.2.1.4]~~

~~17.1.5.5\* The structure assessment shall document the structure's location on the slope relative to the structure's potential exposure to heat from a wildland fire. [1144:4.2.1.5]~~

~~17.1.6 From Chimney to Eaves. The structure assessment shall document the conditions of 17.1.6.1 through 17.1.6.6 to observe construction and vegetation as they place the structure in the most risk from ignition by a wildland fire. [1144:4.2.2]~~

~~17.1.6.1\* The structure assessment shall document the type and construction of roofing materials. [1144:4.2.2.1]~~

~~17.1.6.2\* The structure assessment shall document the condition of roofing materials and assemblies. [1144:4.2.2.2]~~

~~17.1.6.3\* The structure assessment shall document all sky lights in roof assemblies. [1144:4.2.2.3]~~

~~17.1.6.4\* The structure assessment shall document the potential of roof gutters and areas where exterior walls meet roof or deck surfaces to collect litter on surfaces or in crevices. [1144:4.2.2.4]~~

~~17.1.6.5\* The structure assessment shall document the construction materials of gutters, downspouts, and connectors. [1144:4.2.2.5]~~

~~17.1.6.6\* The structure assessment shall document the materials and construction used in eaves of roof overhangs. [1144:4.2.2.6]~~

~~17.1.7 From Top of Exterior Wall to Foundation. The structure assessment shall document the conditions of 17.1.7.1 through 17.1.7.6 to observe construction and vegetation as they place the structure in the most risk from ignition by a wildland fire. [1144:4.2.3]~~

~~17.1.7.1\* The structure assessment shall document the materials and construction used in exterior walls and exterior siding. [1144:4.2.3.1]~~

~~17.1.7.2 The structure assessment shall document the materials used for gutter downspouts and connectors on exterior walls. [1144:4.2.3.2]~~

~~17.1.7.3\* The structure assessment shall document the materials used in windows and other openings in vertical surfaces. [1144:4.2.3.3]~~

~~17.1.7.4\* The structure assessment shall document the location, size, and screening of ventilation openings. [1144:4.2.3.4]~~

~~17.1.7.5\* The structure assessment shall document all attached accessory structures as part of the primary structure. [1144:4.2.3.5]~~

~~17.1.7.6\* The structure assessment shall document areas next to or under a structure where combustible materials that present a source of flame exposure to the structure might collect. [1144:4.2.3.6]~~

~~17.1.8\* From Foundation to the Immediate Landscaped Area. The structure assessment shall document the conditions of 17.1.8.1 through 17.1.8.5 to observe construction and vegetation, as they place the structure in the most risk from ignition by a wildland fire. [1144:4.2.4]~~

~~17.1.8.1\* The structure assessment shall document all vegetative fuels and other combustible materials adjacent to and within 30 ft (9 m) of the structure for their potential to contribute to the intensity and spread of wildland fire. [1144:4.2.4.1]~~

~~17.1.8.2\* The structure assessment shall document the presence and location of all heat and flame sources within 30 ft (9 m) of the primary structure. [1144:4.2.4.2]~~

~~17.1.8.3\* The structure assessment shall document all projections attached to the primary structure. [1144:4.2.4.3]~~

~~17.1.8.4\* The structure assessment shall document detached structures within 30 ft (9 m) of the primary structure that might be ignited by flames, radiant heat, or firebrands from wildland fires. [1144:4.2.4.4]~~

~~17.1.8.5\* The structure assessment shall document vehicle parking areas within 30 ft (9 m) of any surface of the structure. [1144:4.2.4.5]~~

~~17.1.9 From the Immediate Landscaped Area to the Extent of the Structure Ignition Zone. The structure assessment shall document the conditions of 17.1.9.1 through 17.1.9.8 to observe construction and vegetation, as they place the structure in the most risk from ignition by a wildland fire. [1144:4.2.5]~~

~~17.1.9.1\* The structure assessment shall document vegetation within the area between the outer edge of the immediate landscaped area and the extent of the structure ignition zone as potential fuel that can convey the fire to the structure. [1144:4.2.5.1]~~

~~17.1.9.2\* The structure assessment shall document the species and location of trees and the separation of tree crowns within the area between the outer edge of the immediate landscaped area and the extent of the structure ignition zone. [1144:4.2.5.2]~~

~~17.1.9.3\* The structure assessment shall document the presence and location of all heat and flame sources within the area between the outer edge of the immediate landscaped area and the extent of the structure ignition zone. [1144:4.2.5.3]~~

~~17.1.9.4\* The structure assessment shall document detached structures within the area between the outer edge of the immediate landscaped area and the extent of the structure ignition zone that might be ignited by flames, radiant heat, or firebrands from wildland fires. [1144:4.2.5.4]~~

~~17.1.9.5\* The structure assessment shall document vehicle parking areas within the area between the outer edges of the immediate landscaped area and the extent of the structure ignition zone. [1144:4.2.5.5]~~

~~17.1.9.6\* The structure assessment shall document all projections attached to the primary structure that extend beyond the immediate landscaped area. [1144:4.2.5.6]~~

~~17.1.9.7 The structure assessment shall document all other factors that can affect the risk of ignition or the spread of wildland fire on improved property within the structure ignition zone, including the risk of structure fires spreading to vegetation. [1144:4.2.5.7]~~

~~17.1.9.8 Any structure that fails to comply with the requirements of Chapter 5 of NFPA 1144 shall be deemed to increase the risk of the spread of wildland fire to improved property and the risk of fires on improved property spreading to wild land fuels. [1144:4.2.5.8]~~

#### ~~17.1.10 Development of Wildland Fire Hazard Mitigation Plan.~~

~~17.1.10.1 From the information gathered in each structure assessment, the AHJ shall require or cause to be developed a wildland fire hazard mitigation plan and schedule to address the wildland fire hazards identified in the specific structure ignition zone assessment. [1144:4.3.1]~~

~~17.1.10.2 The AHJ shall work with applicable agencies and organizations to resolve any conflicts between recommended wildland fire hazard mitigation measures and mitigation measures or objectives of other hazards. [1144:4.3.2]~~

~~17.1.10.3\* This plan shall include, but not be limited to, the following:~~

~~(1) Specific mitigation recommendations based on the hazard assessment to reduce the ignition potential around and including the structure~~

~~(2) Construction modification or retrofit necessary to reduce the identified hazards as a minimum or to comply with the provisions of Chapter 5 of NFPA 1144~~

~~(3) Fuel modification recommendations as specified in Chapter 6 of NFPA 1144~~

~~(4) A hazard mitigation implementation and maintenance schedule approved by the AHJ [1144:4.3.3]~~

~~17.1.10.4\* The history of wildland fire in the area under assessment shall be considered in determining required hazard mitigation plan. [1144:4.3.4]~~

~~17.1.10.5\* The AHJ shall approve the mitigating measures relative to access, water supply, and construction based upon the structure assessment established in 17.1.2. [1144:4.3.5]~~

~~17.1.10.6 From the information gathered in each structure assessment, the AHJ shall require or cause to be developed a wildland fire hazard severity map of each residential development area addressed. [1144:4.3.6]~~

~~17.1.10.7 The map shall include, but not be limited to, the following data elements:~~

~~(1) Lot designations~~

~~(2) Structure locations on each lot~~

~~(3) Locations of wildland fire evacuation centers or safety zones~~

~~(4) Hazard severity for each lot~~

~~(5) Overlapping ignition zones [1144:4.3.7]~~

~~17.1.11 Mitigation Implementation and Enforcement.~~

~~17.1.11.1 The AHJ shall require the property owner to develop and comply with the approved wildland fire hazard mitigation plan and schedule according to 17.1.10.1. [1144:4.4.1]~~

~~17.1.11.2 No permit associated with construction shall be issued if the provisions of this standard are not addressed. [1144:4.4.2]~~

~~17.1.11.3 No permit associated with occupancy shall be issued until the provisions of this standard are satisfied. [1144:4.4.3]~~

~~17.2 Plans. The plans for construction and development within the wildland urban interface shall be submitted to the AHJ for review and approval.~~

~~17.3 Wildland Fire Prone Areas.~~

~~17.3.1\* Safeguards. Safeguards to prevent the occurrence of fires and to provide adequate fire protection and mitigation measures in hazardous fire areas shall be provided and maintained in accordance with Section 17.3.~~

~~17.3.2\* Permits and Approvals. Permits for use of hazardous areas shall not be issued when public safety would be at risk, as determined by the AHJ. (See Section 1.12 for additional requirements for permits.)~~

### ~~17.3.3 Restricted Entry.~~

~~17.3.3.1 The AHJ shall determine and publicly announce when hazardous fire areas shall be closed to entry, and when such areas shall again be opened to entry.~~

~~17.3.3.2 Unauthorized persons shall not be permitted to enter or remain in closed hazardous fire areas.~~

~~17.3.3.3 Signs. Approved signs prohibiting entry by unauthorized persons shall be placed on every closed area and access point.~~

### ~~17.3.4 Use of Flammable Materials and Procedures.~~

~~17.3.4.1 Smoking. Lighting, igniting, or otherwise setting fire to any smoking material shall be prohibited unless within structures or smoking areas approved by the AHJ. (See Section 10.10 for additional requirements on smoking.)~~

#### ~~17.3.4.2 Tracer Bullets, Tracer Charges, Rockets, and Model Aircraft.~~

~~17.3.4.2.1 Tracer bullets and tracer charges shall not be possessed, fired, or caused to be fired into or across hazardous fire areas.~~

~~17.3.4.2.2 Rockets, model planes, gliders, and balloons powered with an engine, propellant, or other feature liable to start or cause fire shall not be fired or projected into or across hazardous fire areas.~~

~~17.3.4.3 Explosives and Blasting. Explosives shall not be possessed, kept, stored, sold, offered for sale, given away, used, discharged, transported, or disposed of within hazardous fire areas except as permitted by the AHJ. (See Chapter 65 for additional guidance.)~~

~~17.3.4.4 Fireworks. Fireworks shall not be used or possessed in hazardous fire areas unless permitted by the AHJ. (See Chapter 65 for additional guidance.)~~

~~17.3.4.5 Apiaries. Lighted and smoldering material used in connection with smoking bees shall not be allowed in or upon hazardous fire areas except as permitted by the AHJ.~~

### ~~17.3.5 Clearance of Brush and Vegetative Growth.~~

#### ~~17.3.5.1 Electrical Transmission Lines.~~



~~17.3.5.1.1 Clearance of brush and vegetative growth from electrical transmission and distribution line(s) shall be provided and maintained in accordance with 17.3.5.1.~~

~~17.3.5.1.2 A combustible free space around poles and towers shall consist of a clearing of not less than 10 ft (3.05 m) in each direction from the outer circumference of the pole or tower during such periods of time as designated by the AHJ.~~

~~17.3.5.1.3 Trimming Clearance.~~

~~17.3.5.1.3.1 At the time of trimming, clearances not less than those established by Table 17.3.5.1.3.1 shall be provided.~~

#### **Table 17.3.5.1.3.1 Minimum Clearances Between Vegetation and Electrical Lines at Time of Trimming**

~~17.3.5.1.4.1 The site specific clearance achieved, at the time of pruning, shall vary based on species' growth rates, the utility company specific trim cycle, the potential line sway due to wind, line sway due to electrical loading and ambient temperature, and the tree's location in proximity to the high voltage lines.~~

~~17.3.5.1.4.2 The AHJ shall establish minimum clearances different than those specified by Table 17.3.5.1.4 when evidence substantiating such other clearances is submitted to the AHJ and approved.~~

~~17.3.5.1.5\* Electrical Power Line Emergencies. During emergencies, the utility company shall perform the required work to the extent necessary to clear the hazard.~~

~~17.3.5.2 Structures.~~

~~17.3.5.2.1 Persons owning, leasing, controlling, operating, or maintaining buildings or structures in, upon, or adjoining hazardous fire areas, and persons owning, leasing, or controlling land adjacent to such buildings or structures, shall maintain an effective defensible space in accordance with 17.3.5.2.1.1 through 17.3.5.2.1.11.5.~~

~~17.3.5.2.1.1\* Ground fuels, including native vegetation and plants used for landscaping within the defined landscaping zones, shall be treated or removed. [1144:6.2.1]~~

~~17.3.5.2.1.2 Live vegetation within the fuel modification area shall have dead material removed and shall be thinned and pruned in conformance with the wildland fire mitigation plan, as approved by the AHJ. [1144:6.2.2]~~

~~17.3.5.2.1.3 Dead and downed fuels within 30 ft (9 m) of all buildings shall be removed or treated to maintain the fuel modification area in conformance with the wildland fire mitigation plan, as approved by the AHJ. [1144:6.2.3]~~

~~17.3.5.2.1.4 Vegetation under trees within the fuel modification area shall be maintained at a height that will preclude ground fire from spreading in the tree crown. [1144:6.2.4]~~

~~17.3.5.2.1.5\* Tree crowns within the structure ignition zone shall be spaced to prevent structure ignition from radiant heat. [1144:6.2.5]~~

~~17.3.5.2.1.6 The fuel modification plan shall include a maintenance element identifying and defining the responsibility for continued and periodic maintenance. [1144:6.2.6]~~

~~17.3.5.2.1.7 Chimneys and Flues.~~

~~17.3.5.2.1.7.1 Every fireplace and wood stove chimney and flue shall be provided with an approved spark arrester constructed of a minimum 12 gauge welded wire or woven wire mesh, with openings not exceeding 1/2 in. (12.7 mm). [1144:5.7.1]~~

~~17.3.5.2.1.7.2 Vegetation shall not be allowed within 10 ft (3 m) of a chimney outlet. [1144:5.7.2]~~

~~17.3.5.2.1.8\* Accessory Structure(s). Accessory structures shall be constructed to meet the requirements of this chapter or shall be separated from the main structure by a minimum of 30 ft (9 m). [1144:5.8]~~

~~17.3.5.2.1.9 Mobile and Manufactured Homes.~~

~~17.3.5.2.1.9.1 Permanently located mobile and manufactured homes with an open space beneath shall have a skirt of noncombustible material or material that has a minimum fire-resistive rating of 20 minutes. [1144:5.9.1]~~

~~17.3.5.2.1.9.2 Any enclosed space beneath the mobile or manufactured home shall be vented according to 5.2.2 of NFPA 1144. [1144:5.9.2]~~

~~17.3.5.2.1.10 Vehicle Parking Areas. Vehicle parking areas within the immediate landscaped zone shall be maintained free of dry grasses and fine fuels that could be ignited by hot exhaust systems or firebrands. [1144:5.10]~~

~~17.3.5.2.1.11 Exterior Exposure Hazards.~~

~~17.3.5.2.1.11.1\* Heat and flame sources that are unprotected or unsupervised shall not be permitted within 30 ft (9 m) of the primary structure. [1144:5.11.1]~~

~~17.3.5.2.1.11.2 Incinerators, outdoor fireplaces, permanent barbecues, and grills shall not be built, installed, or maintained in hazardous fire areas without prior approval of the AHJ. [1144:5.11.2]~~

~~17.3.5.2.1.11.3 Openings in incinerators, outdoor fireplaces, permanent barbecues, and grills shall be provided with an approved spark arrester, screen, or door. [1144:5.11.3]~~

~~17.3.5.2.1.11.4 Propane tanks and other flammable or combustible liquids storage shall conform to NFPA 58, Liquefied Petroleum Gas Code, and the wildland fire hazard mitigation plan required in 17.1.10. [1144:5.11.4]~~

~~17.3.5.2.1.11.5 Other combustible materials within 30 ft (9 m) of any structure shall be removed or stored in conformance with the wildland fire hazard mitigation plan as approved by the AHJ. [1144:5.11.5]~~

~~17.3.5.2.2 Where required by the AHJ because of extra hazardous conditions, additional areas shall be maintained to include additional defensible space from buildings or structures, trees adjacent to or overhanging a building shall be maintained free of deadwood, and the roof of a structure shall be free of leaves, needles, or other dead vegetative growth.~~

~~17.3.5.3 Roadways. Areas within 10 ft (3 m) on each side of portions of highways and private streets shall be cleared of combustible vegetation and other combustible growth. Single specimens of trees, shrubbery, or cultivated ground cover such as green grass, ivy, succulents, or similar plants used as ground covers shall be permitted to be exempt provided that they do not form a means of readily transmitting fire.~~

~~17.3.6 Unusual Circumstances. The AHJ shall determine that difficult terrain, danger of erosion, or other unusual circumstances could require additional safeguards.~~

~~17.3.7 Fire Roads, Firebreaks, and Emergency Access.~~

~~17.3.7.1 The provisions of 17.3.7 and Section 18.2 shall be used to determine the design, clearances, and provisions for emergency access (ingress and egress).~~

~~17.3.7.2 Unauthorized vehicles shall not be driven upon fire roads or firebreaks. Vehicles shall not be parked in a manner that obstructs the entrance to a fire road or firebreak.~~

~~17.3.7.3 Radio and television aerials, guy wires, and other obstructions shall not be installed or maintained on fire roads or firebreaks unless the vertical clearance is sufficient to allow the movement of fire and emergency apparatus.~~

~~17.3.7.4 Motorcycles, motor scooters, and motor vehicles shall not be operated within hazardous fire areas, except upon clearly established public or private roads.~~

~~17.3.8 Tampering with Fire Safety Equipment. See Section 10.8 for requirements on tampering with fire safety equipment.~~

~~17.3.9 Maintenance. See Section 10.4 for requirements on maintenance.~~

~~18.1.1.2 This chapter shall apply to public and privately owned fire hydrant systems.~~

~~18.1.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~18.1.3.1 Fire Apparatus Access. Plans for fire apparatus access roads shall be submitted to the fire department authority having jurisdiction for review and approval prior to construction.~~

~~18.1.3.2 Fire Hydrant Systems. Plans and specifications for fire hydrant systems shall be submitted to the fire department for review and approval prior to construction.~~

~~18.2.2.3 Access Maintenance. The owner or occupant of a structure or area, with required fire department access as specified in 18.2.2.1 or 18.2.2.2, shall notify the AHJ when the access is modified in a manner that could prevent fire department access.~~

~~18.2.3.1.3\* The provisions of 18.2.3.1 through 18.2.3.2.2.1 18.2.3 through 18.2.3.5.2 shall be permitted to be modified by the AHJ where any of the following conditions exists: when the local fire chief provides written acceptance.~~

~~(1) One and two family dwellings protected by an approved automatic sprinkler system in accordance with Section 13.1~~

~~(2) Existing one and two family dwellings~~

~~(3) Private garages having an area not exceeding 400 ft<sup>2</sup>~~

~~(4) Carports having an area not exceeding 400 ft<sup>2</sup>~~

~~(5) Agricultural buildings having an area not exceeding 400 ft<sup>2</sup>~~

~~(6) Sheds and other detached buildings having an area not exceeding 400 ft<sup>2</sup>~~

~~18.2.3.4.7 Traffic Calming Devices. The design and use of traffic calming devices shall be approved by the AHJ.~~

~~18.2.4\* Obstruction and Control of Fire Department Access Road.~~

~~18.2.4.1 General.~~

~~18.2.4.1.1 The required width of a fire department access road shall not be obstructed in any manner, including by the parking of vehicles.~~

~~18.2.4.1.2 Minimum required widths and clearances established under 18.2.3.4 shall be maintained at all times.~~

~~18.2.4.1.3\* Facilities and structures shall be maintained in a manner that does not impair or impede accessibility for fire department operations.~~

~~18.2.4.1.4 Entrances to fire department access roads that have been closed with gates and barriers in accordance with 18.2.4.2.1 shall not be obstructed by parked vehicles.~~

~~18.2.4.2 Closure of Accessways.~~

~~18.2.4.2.1 The AHJ shall be authorized to require the installation and maintenance of gates or other approved barricades across roads, trails, or other accessways not including public streets, alleys, or highways.~~

~~18.2.4.2.2 Where required, gates and barricades shall be secured in an approved manner.~~

~~18.2.4.2.3 Roads, trails, and other accessways that have been closed and obstructed in the manner prescribed by 18.2.4.2.1 shall not be trespassed upon or used unless authorized by the owner and the AHJ.~~

~~18.2.4.2.4 Public officers acting within their scope of duty shall be permitted to access restricted property identified in 18.2.4.2.1.~~

~~18.2.4.2.5 Locks, gates, doors, barricades, chains, enclosures, signs, tags, or seals that have been installed by the fire department or by its order or under its control shall not be removed, unlocked, destroyed, tampered with, or otherwise vandalized in any manner.~~

~~18.2.4.2.6 When authorized by the AHJ, public officers acting within their scope of duty shall be permitted to obtain access through secured means identified in 18.2.4.2.1.~~

~~18.3 Water Supplies.~~

~~18.3.1\* An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings, or portions of buildings are hereafter constructed or moved into the jurisdiction. The approved water supply shall be in accordance with Section 18.4.~~

~~18.3.1.1\* Where no adequate or reliable water distribution system exists, approved reservoirs, pressure tanks, elevated tanks, fire department tanker shuttles, or other approved systems capable of providing the required fire flow shall be permitted.~~

#### ~~18.4 Fire Flow Requirements for Buildings.~~

##### ~~18.4.1\* Scope.~~

~~18.4.1.1\* The procedure determining fire flow requirements for buildings hereafter constructed or moved into the jurisdiction shall be in accordance with Section 18.4.~~

~~18.4.1.2 Section 18.4 shall not apply to structures other than buildings.~~

~~18.4.2 Definitions. See definitions 3.3.14.5, Fire Flow Area, and 3.3.120, Fire Flow.~~

##### ~~18.4.3 Modifications.~~

~~18.4.3.1 Decreases. Fire flow requirements shall be permitted to be decreased by the AHJ for isolated buildings or a group of buildings in rural areas or suburban areas where the development of full fire flow requirements is impractical as determined by the AHJ.~~

~~18.4.3.1.1 The AHJ shall be authorized to establish conditions on fire flow reductions approved in accordance with 18.4.3.1 including, but not limited to, fire sprinkler protection, type of construction of the building, occupancy, and setbacks.~~

~~18.4.3.2 Increases. Fire flow shall be permitted to be increased by the AHJ where conditions indicate an unusual susceptibility to group fires or conflagrations. An upward modification shall not be more than twice that required for the building under consideration.~~

##### ~~18.4.4 Fire Flow Area.~~

~~18.4.4.1 General. The fire flow area shall be the total floor area of all floor levels of a building except as modified in 18.4.4.1.1.~~

~~18.4.4.1.1 Type I (443), Type I (332), and Type II (222) Construction. The fire flow area of a building constructed of Type I (443), Type I (332), and Type II (222) construction shall be the area of the three largest successive floors.~~

~~18.4.5 Fire Flow Requirements for Buildings.~~

~~18.4.5.1 One and Two Family Dwellings.~~

~~18.4.5.1.1 The minimum fire flow and flow duration requirements for one and two family dwellings having a fire flow area that does not exceed 5000 ft<sup>2</sup> (334.5 m<sup>2</sup>) shall be 1000 gpm (3785 L/min) for 1 hour.~~

~~18.4.5.1.1.1 A reduction in required fire flow of 50 percent shall be permitted when the building is provided with an approved automatic sprinkler system.~~

~~18.4.5.1.1.2 A reduction in the required fire flow of 25 percent shall be permitted when the building is separated from other buildings by a minimum of 30 ft (9.1 m).~~

~~18.4.5.1.1.3 The reduction in 18.4.5.1.1.1 and 18.4.5.1.1.2 shall not reduce the required fire flow to less than 500 gpm (1900 L/min).~~

~~18.4.5.1.2 Fire flow and flow duration for dwellings having a fire flow area in excess of 5000 ft<sup>2</sup> (334.5 m<sup>2</sup>) shall not be less than that specified in Table 18.4.5.1.2.~~

~~18.4.5.1.2.1 Required fire flow shall be reduced by 50 percent when the building is provided with an approved automatic sprinkler system.~~

~~18.4.5.2 Buildings Other Than One and Two Family Dwellings. The minimum fire flow and flow duration for buildings other than one and two family dwellings shall be as specified in Table 18.4.5.1.2.~~

~~18.4.5.2.1 Required fire flow shall be reduced by 75 percent when the building is protected throughout by an approved automatic sprinkler system. The resulting fire flow shall not be less than 1000 gpm (3785 L/min).~~



~~18.4.5.2.2 Required fire flow shall be reduced by 75 percent when the building is protected throughout by an approved automatic sprinkler system, which utilizes quick response sprinklers throughout. The resulting fire flow shall not be less than 600 gpm (2270 L/min).~~

~~18.4.5.3\* For a building with an approved fire sprinkler system, the fire flow demand and the fire sprinkler system demand shall not be required to be added together. The water supply shall be capable of delivering the larger of the individual demands.~~

~~18.5.1\* The number and type of fire hydrants and connections to other approved water supplies shall be capable of delivering the required fire flow and shall be provided at approved locations.~~

~~18.5.6 Where water supplies or fire hydrants are out of service for maintenance or repairs, a visible indicator acceptable to the AHJ shall be used to indicate that the hydrant is out of service.~~

~~18.5.7 Marking of Hydrants.~~

~~18.5.7.1 Fire hydrants shall be marked with an approved reflector affixed to the roadway surface where required by the AHJ.~~

~~18.5.7.2 Fire hydrants shall be marked with an approved flag or other device affixed to or proximate to the fire hydrant where required by the AHJ.~~

~~18.5.7.3\* Where required by the AHJ, fire hydrants shall be color coded or otherwise marked with an approved system indicating the available flow capacity.~~

## ~~Chapter 19—Combustible Waste and Refuse~~

### ~~19.1 General.~~

~~19.1.1 Permits. Permits, where required, shall comply with Section 1.12.~~

~~19.1.2 Persons owning or having control of any property shall not allow any combustible waste material to accumulate in any area or in any manner that creates a fire hazard to life or property.~~

~~19.1.3 Combustible waste or refuse shall be properly stored or disposed of to prevent unsafe conditions.~~

~~19.1.4 Fire extinguishing capabilities approved by the AHJ including, but not limited to, fire extinguishers, water supply and hose, and earth moving equipment shall be provided at waste disposal sites.~~

~~19.1.5 Burning debris shall not be dumped at a waste disposal site except at a remote location on the site where fire extinguishment can be accomplished before compacting, covering, or other disposal activity is carried out. (See Section 10.11 for additional guidance.)~~

### ~~19.1.6 Electrical Wiring.~~

~~19.1.6.1 Electrical wiring and equipment in any combustible fiber storage room or building shall be installed in accordance with the requirements of Section 11.1 and NFPA 70, National Electrical Code, for Class III hazardous locations.~~

~~19.1.6.2 The AHJ shall be responsible for designating the areas that require hazardous location electrical classifications and shall classify the areas in accordance with the classification system set forth in NFPA 70.~~

### ~~19.1.7 No Smoking.~~

~~19.1.7.1 No smoking or open flame shall be permitted in any area where combustible fibers are handled or stored or within 50 ft (15 m) of any uncovered pile of such fibers.~~

~~19.1.7.2 "No Smoking" signs shall be posted.~~

~~19.1.8 Vehicles or Conveyances Used to Transport Combustible Waste or Refuse.~~

~~19.1.8.1 Vehicles or conveyances used to transport combustible waste or refuse over public thoroughfares shall have all cargo space covered and maintained tight enough to ensure against ignition from external fire sources and the scattering of burning and combustible debris that can come in contact with ignition sources.~~

~~19.1.8.2 Transporting burning waste or refuse shall be prohibited.~~

~~19.1.8.3 Trucks or automobiles, other than mechanical handling equipment and approved industrial trucks as listed in NFPA 505, Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance and Operations, shall not enter any fiber storage room or building but shall be permitted to be used at loading platforms.~~

~~19.2 Combustible Waste and Refuse.~~

~~19.2.1 Rubbish Containers.~~

~~19.2.1.1 General. Rubbish containers kept outside of rooms or vaults shall not exceed 40.5 ft<sup>3</sup> (1.15 m<sup>3</sup>) capacity.~~

~~19.2.1.1.1 Containers exceeding a capacity of 5 1/3 ft<sup>3</sup> [40 gal (0.15 m<sup>3</sup>)] shall be provided with lids.~~

~~19.2.1.1.2 Such containers and lids as described in 19.2.1.1.1 shall be constructed of noncombustible materials or nonmetallic materials complying with 19.2.1.2.~~

~~19.2.1.2 Nonmetallic Containers.~~

~~19.2.1.2.1\* Nonmetallic rubbish containers exceeding a capacity of 5 1/3 ft<sup>3</sup> [40 gal (0.15 m<sup>3</sup>)] shall be manufactured of materials having a peak rate of heat release not exceeding 300 kW/m<sup>2</sup> at a flux of 50 kW/m<sup>2</sup> when tested in the horizontal orientation, at a thickness as used in the container but not less than of 0.25 in. (6 mm), in accordance with ASTM E 1354, Test Method for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter, or NFPA 271, Standard Method of Test for Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter.~~

~~19.2.1.2.2 Such containers shall be permanently labeled indicating capacity and peak rate of heat release.~~

~~19.2.1.3 Removal. Combustible rubbish stored in containers outside of noncombustible vaults or rooms shall be removed from buildings at least once each working day.~~

~~19.2.1.4 Rubbish Within Dumpsters. Dumpsters and containers with an individual capacity of 1.5 yd<sup>3</sup> [40.5 ft<sup>3</sup> (1.15 m<sup>3</sup>)] or more shall not be stored in buildings or placed within 10 ft (3 m) of combustible walls, openings, or combustible roof eave lines.~~

~~19.2.1.4.1 Areas containing dumpsters or containers shall be protected by an approved automatic sprinkler system and enclosed with a fire resistance rating of 1 hour.~~

~~19.2.1.4.2 Structures of Types I and II fire resistive construction used for dumpster or container storage shall be located not less than 10 ft (3 m) from openings and other buildings.~~

~~19.2.1.5 Commercial Rubbish Handling Operations. Occupancies exclusively performing commercial rubbish handling or recycling shall maintain rubbish or product to be processed or recycled in one of the following ways:~~

~~(1) In approved vaults~~

~~(2) In covered metal or metal lined receptacles or bins~~

~~(3) Completely baled and stacked in an orderly manner in an approved location~~

~~19.2.1.6 Approved metal receptacles with self-closing covers shall be provided for the storage or disposal of oil-soaked waste or cloths.~~

~~20.1.1.1 Permits. Permits, where required, shall comply with Section 1.12.~~

20.1.4.1.1 In Haunted Houses, two exits shall be provided from the building or structure and from each room with an occupant load of 50 or more.

20.1.4.1.2 Required exit doors in Haunted Houses shall swing in the direction of egress travel.

20.1.4.1.3 Exit doors in Haunted Houses shall not be provided with a latch or lock unless it is panic hardware.

20.1.4.1.4 Means of egress in Haunted Houses shall provide a minimum ceiling height of 84 inches.

20.1.4.2.1 Fire Sprinklers for Haunted Houses. Every Haunted House, other than buildings or structures not exceeding 1,000 square feet and having a travel distance to an exit from any point

of 50 feet or less shall be protected throughout by an approved, supervised automatic sprinkler system installed and maintained in accordance with Section 13.3

20.1.4.2.2 Portable fire extinguishers meeting the requirements of 13.6 shall be provided for Haunted Houses as follows:

- (1) Fire extinguishers shall have a minimum rating of 2A:10B:C.
- (2) Fire extinguishers shall be visible and accessible at all times, and shall be clearly illuminated or marked with reflective tape.
- (3) Fire extinguishers shall be mounted so the top of the extinguisher is between 3 feet and 5 feet of the floor.
- (4) Fire extinguishers shall be located at all exit doors and the travel distance to an extinguisher shall not exceed 50 feet from anywhere in the building.
- (5) Fire extinguishers shall have a current inspection tag.

20.1.4.5.1 Fire Alarm Systems for Haunted Houses. Haunted Houses shall be protected by a fire alarm system and shall include the following systems or functions in accordance with Section 13.7:

- (1) Manual fire alarm signal initiation,
- (2) Automatic fire alarm and supervisory signal initiation.
- (3) Monitoring of abnormal conditions in fire suppression systems.
- (4) Activation of fire suppression systems.
- (5) Activation of fire safety functions.
- (6) Activation of fire alarm notification appliances.
- (7) In-building fire emergency voice/alarm communications.
- (8) Guard's tour supervisory service.
- (9) Process monitoring supervisory systems.
- (10) Activation of off-premises signals.
- (11) Combination systems.
- (12) Smoke detection throughout.

20.1.4.5.1.1 Where a haunted house does not exceed 1,000 square feet and the travel distance to an exit from any point does not exceed 50 feet, the requirements of 20.1.4.5.1 shall not be required to be met when an initiating system including manually activated devices and audible notification appliances suitable for sounding an alarm as approved by the Authority Having Jurisdiction are provided. The alarm shall be distinctive in tone and shall be capable of being heard throughout the haunted house.

20.1.4.6.1 In Haunted Houses, emergency lighting meeting the requirements of Section 14.13 shall be provided in exit access pathways, and in all rooms, areas or spaces where the occupant load exceeds 50 persons.

20.1.4.7.1\* Exit marking shall be in accordance with Section 14.14, except as provided in 20.1.4.7.1.1 for Haunted Houses.[101:12.4.7.7.1; 101:13.4.7.7.1]

20.1.4.7.1.1 In Haunted Houses, illuminated exit signs shall be provided at each exit serving the building or structure and from each room with an occupant load of 50 or more.

20.1.4.9 Electrical. Haunted Houses shall meet the requirements of Section 11.1 and 20.1.4.9.1 through 20.1.4.9.5, as applicable.

20.1.4.9.1 Extension cords in Haunted Houses shall be of heavy commercial type, UL listed, in good condition, and shall be appropriate for the intended use.

20.1.4.9.2 In Haunted houses, only UL listed power strips with over-current protection shall be used when the number of outlets provided is inadequate. Power strips shall be plugged directly into provided outlets, and shall not be plugged into one another in series or plugged into extension cords.

20.1.4.9.3 All extension cords and power strips in Haunted houses shall be adequately protected from damage, including foot traffic ("Bridged") if paths of travel cannot be avoided.

20.1.4.9.4 In Haunted houses, temporary electrical wiring, except flexible cords, shall be securely fastened to the top of walls or ceilings and all splices shall terminate within covered electrical boxes.

20.1.4.9.5 A means to illuminate the entire area to facilitate any rescue or evacuation shall be provided in Haunted houses.

20.1.4.10\* Emergency Procedure Plan. An emergency procedure plan for Haunted houses shall be provided and shall be available for review by the Authority Having Jurisdiction (AHJ) and shall include training of staff and familiarization with the fire alarm tone. Where an approved fire alarm system is not provided, specific personnel shall be designated to turn off all distracting noises (i.e.: sound system) and turn on lights when alerted of an emergency condition.

20.1.4.10.1 In Haunted houses, all staff shall carry flashlights and know the location of all exits, fire extinguishers, light switches, electrical panels. Telephone communication shall be readily available for the purpose of calling 911 in the event of an emergency.

20.1.4.10.2 The emergency procedure plan for Haunted houses shall include provisions for moving patrons through the event to include time spacing between groups, maximum number of patrons per group, and total number of patrons in the event at any given time.

20.1.4.11 Decorative Materials. All decorative materials including decorations, drapes, backdrops, and props in Haunted houses shall be either inherently flame retardant and labeled as such, or shall be treated with an approved flame retardant meeting the requirements of NFPA 701, Standard Methods of Fire Tests for Flame Propagation of Textiles and Films.

20.1.4.11.1 Where decorative material is treated by the user, all of the following shall be required for proof of compliance.

1. The original container for the product,
2. Documentation showing the date of treatment and person who treated the material.

20.1.4.12 Operating Features.

20.1.4.12.1 Approved "NO SMOKING OR OPEN FLAME" signs shall be provided at main entrance and throughout the Haunted house.

20.1.4.12.2 Storage or use of flammable or combustible liquids, gasses and solids within Haunted houses is prohibited.

20.1.4.12.3 Candles, other open-flame devices, and carbon monoxide producing equipment are prohibited in Haunted houses.

20.1.4.12.4 Good housekeeping shall be maintained throughout Haunted houses at all times.

20.1.4.12.5 Guides, if provided, shall be experienced in walking through the Haunted house or maze and shall be familiar with the locations of emergency exits and fire extinguishers. They shall also be knowledgeable in the use of portable fire extinguishers.

20.1.4.12.6 Portable space heaters are prohibited in Haunted houses.

20.1.4.12.7 A sign stating the maximum occupant capacity shall be posted in a visible location near the entrance to a Haunted house, and staff shall control the flow of patrons so as not to exceed this limit.

20.1.4.12.8\* Exhibits, decorative materials and devices such as smoke machines in Haunted houses shall not obstruct, confuse, or obscure exits, exit pathways, exit signs, emergency lighting units, fire sprinklers, fire extinguishers, or any other fire protection equipment.

~~20.1.5.2.4.1 Permits. Permits, where required, shall comply with Section 1.12.~~

~~20.1.5.3.1 Permits. Permits, where required, shall comply with Section 1.12.~~

~~20.1.5.5.1 Permits. Permits, where required, shall comply with Section 1.12.~~

20.7.2.2 Combustible Personal Property. Books, clothing, and other combustible personal property allowed in sleeping rooms shall be stored in closable metal lockers or an approved fire-resistant container. [101:22.7.2; 101:23.7.2] meet one of the following:

(1) Be stored in closable metal lockers,

(2) Be stored in an approved fire-resistant container.

(3) The quantity of books, clothing, and combustible personal property does not exceed a maximum of 4 cubic feet per sleeping room and the building is protected by an approved automatic sprinkler system

**20.7.2.4.5.1** The requirements of 20.7.2.4.5 are not required to be met when both of the following are met:

(1) There are sleeping facilities for not more than 20 residents.

(2) The entire building is fire sprinkler protected.

~~20.11 One and Two Family Dwellings and Manufactured Housing.~~

~~20.11.1 Application. New and existing one and two family dwellings shall comply with Section 20.11 and NFPA 101.~~

~~20.11.2 Fuel Fired Heaters. Unvented fuel fired heaters shall not be used, unless they are listed and approved. [101:24.5.1.2]~~



~~20.11.3 Interior Finish.~~

~~20.11.3.1 General. Interior finish shall be in accordance with Section 12.5. [101:24.3.3.1]~~

~~20.11.3.2 Interior Wall and Ceiling Finish. Interior wall and ceiling finish materials complying with Section 12.5 shall be Class A, Class B, or Class C. [101:24.3.3.2]~~

~~20.11.3.3 Interior Floor Finish. (No requirements.) [101:24.3.3.3]~~

~~20.11.4 Fire Protection of Floors. In new construction, floor assemblies shall be provided with a continuous membrane of gypsum wallboard having a nominal thickness of not less than 1/2 in. (13 mm), or equivalent, to protect the floor framing members from a fire exposure from below.~~

~~20.11.4.1 Protection in accordance with 20.11.4 shall not be required where the building is protected by an approved automatic sprinkler system installed in accordance with 13.3.1.2.~~

~~20.11.4.2 Protection in accordance with 20.11.4 shall not be required for floor assemblies located directly over a crawl space not intended for storage or fuel fired equipment.~~

~~20.11.4.3 Portions of floor assemblies shall be permitted to be unprotected where the aggregate area of the unprotected portions does not exceed 80 ft<sup>2</sup> (7.4 m<sup>2</sup>) per story and where fire blocking is installed along the perimeter of the unprotected portion to separate the unprotected portion from the remainder of the floor assembly.~~

~~20.11.4.4\* Protection in accordance with 20.11.4 shall not be required in floor assemblies using wood joists with nominal dimensions not less than 2 in. (51 mm) in thickness by 10 in. (254 mm) in width, or other approved floor assemblies providing equivalent performance.~~

~~20.11.4.5 Protection in accordance with 20.11.4 shall not be required in floor assemblies using wood joist structural composite lumber that are compliant with ASTM D 5456 and that have dimensions not less than 1 1/2 in. (38 mm) in thickness by 9 1/4 in. (235 mm) in width.~~

~~20.11.4.6 Penetrations by mechanical, plumbing, fire protection, and electrical systems through the membrane protection required by 20.11.4 shall not be required to be protected.~~

~~20.11.5 Manufactured Housing. New manufactured housing shall comply with Section 20.11 and NFPA 501, Standard on Manufactured Housing.~~

~~20.14.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~20.15.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~20.15.7.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~20.15.8.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~20.17 Historic Buildings and Cultural Resources.~~

~~20.17.1 Historic buildings shall comply with this Code or with the provisions of NFPA 914, Code for Fire Protection of Historic Structures.~~

~~20.17.2 Buildings that store or display cultural resources, including museum or library collections, or spaces within other buildings used for such culturally significant purposes, shall comply with this Code or with the provisions of NFPA 909, Code for the Protection of Cultural Resource Properties — Museums, Libraries, and Places of Worship.~~

~~20.17.3 The provisions of this Code relating to the construction, repair, alteration, enlargement, restoration, and moving of buildings or structures shall not be mandatory for the following:~~

~~(1) Existing buildings or structures identified and classified by the state or local government authority as historic buildings where such buildings comply with NFPA 914~~

~~(2)\*Buildings or spaces within buildings that store or display cultural resources and comply with the provisions of NFPA 909~~

~~21.1.1 Permits. Permits, where required, shall comply with Section 1.12.~~

~~21.2.2.1 Permits. Permits, where required, shall comply with Section 1.12.~~

~~21.3.2.1 Permits. Permits, where required, shall comply with Section 1.12~~

~~22.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~23.3 Permits. Permits, where required, shall comply with Section 1.12.~~

~~24.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~25.1.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~26.3 Permits. Permits, where required, shall comply with Section 1.12.~~

~~30.1.1.3 Permits. Permits, where required, shall comply with Section 1.12.~~

~~30.2.1.1 Permits. Permits, where required, shall comply with Section 1.12.~~

30.2.7 Fixed Fire Protection. Automatic sprinkler protection installed in accordance with the requirements of Section 13.3 NFPA 13, Standard for the Installation of Sprinkler Systems, shall be provided in major repair garages, as herein defined, when any of the following conditions exist:

(1) The major repair garage is two or more stories in height, including basements, and any one of the floors exceeds 10,000 ft<sup>2</sup> (930 m<sup>2</sup>).

(2) The major repair garage is one story and exceeds 12,000 ft<sup>2</sup> (1115 m<sup>2</sup>).

(3) The major repair garage is servicing vehicles parked in the basement of the building.

[30A:7.4.6]

(4) The requirements of 30.2.7(1) and 30.2.7(2) shall not apply when fire barriers having a minimum fire resistance rating of two hours are provided so that the area used as a major repair garage does not exceed the square footage limits listed in 30.2.7(1) or (2) on either side of the fire barriers.

~~31.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~32.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~33.1.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~34.1.2 Permits. Permits, where required, shall comply with Section 1.12.~~

## ~~Chapter 35—Animal Housing Facilities~~

~~35.1 General. Animal housing facilities shall comply with NFPA 150, Standard on Fire and Life Safety in Animal Housing Facilities, and this chapter.~~

~~35.2 Permits. Permits, where required, shall comply with Section 1.12.~~

## ~~Chapter 36—Telecommunication Facilities and Information Technology Equipment~~

~~36.1 General.~~

~~36.1.1 Telecommunication facilities shall comply with NFPA 76, Standard for the Fire Protection of Telecommunications Facilities.~~

~~36.1.2 Information technology equipment and information technology equipment areas shall comply with NFPA 75, Standard for the Protection of Information Technology Equipment.~~

## ~~Chapter 37 Fixed Guideway Transit and Passenger Rail Systems~~

~~37.1 General. Fixed guideway transit and passenger rail system facilities shall comply with NFPA 130, Standard for Fixed Guideway Transit and Passenger Rail Systems.~~

~~40.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~41.1.5.1 Permits, where required, shall comply with Section 1.12.~~

~~42.2.2.1 Permits. Permits, where required, shall comply with Section 1.12.~~

~~42.9.1.4 Permits. Permits, where required, shall comply with Section 1.12.~~

~~42.10.1.2 Permits. Permits, where required, shall comply with Section 1.12.~~

**42.5.3.6.1\* Exterior Inspection.** A visual inspection of the fuel dispenser and its associated hanging hardware (hose nozzle valve, hose, breakaway valve, and hose swivel) shall be conducted at least ~~weekly~~ monthly and shall be documented. Documentation shall be available for review by the authority having jurisdiction upon request. [30A:6.3.6.1]

**42.5.4.2** For new fuel dispensing systems, ~~Each~~ pump shall have installed on the discharge side a listed leak detection device that will provide an audible or visible indication if the piping or a dispenser is leaking. Each leak-detecting device shall be checked and tested at least annually according to the manufacturers' specifications to ensure proper installation and operation. *Exception: A leak detection device shall not be required if all piping is visible.* [30A:6.4.2]

~~42.10.5.5.1 Fuel servicing shall not be performed on a fixed wing aircraft while an onboard engine is operating. (See 42.10.5.21.) Exception: In an emergency resulting from the failure of an onboard auxiliary power unit on a jet aircraft and in the absence of suitable ground support equipment, a jet engine mounted at the rear of the aircraft or on the wing on the side opposite the fueling point shall be permitted to be operated during fueling to provide power, provided that the operation follows written procedures approved by the AHJ. [407:5.5.1]~~

**42.10.5.5.1** Fuel servicing shall not be performed on a fixed wing aircraft while an onboard engine is operating, except as permitted by 42.10.5.1.1 or 42.10.5.5.1.2.1 through 42.10.5.5.1.2.4

42.10.5.5.1.1 Aircraft auxiliary power units (APUs) that direct exhaust away from the fueling operation shall be permitted to operate during fuel servicing.

#### 42.10.5.5.1.2 Rapid Refueling

42.10.5.5.1.2.1 Rapid refueling of aircraft shall be limited to the following aircraft types:

(1) Helicopters

(2) Agricultural aircraft actively engaged in aerial application duties.

(3) Medical aircraft actively engaged in the transport of medical patients.

(4) Fire-fighting and search-and-rescue aircraft actively engaged in emergency operations.

42.10.5.5.1.2.2 Only turbine engine aircraft fueled with JET A or JET A-1 fuels shall be permitted to be fueled while an onboard engine is operating.

42.10.5.5.1.2.3 Aircraft permitted to be fueled while an onboard engine is operating shall have all sources of ignition of potential fuel spills located above the fuel inlet port(s) and above the vents or tank openings, including but not limited to the following:

(1) Engines

(2) Exhausts

(3) Auxiliary power units (APUs).

(4) Combustion-type cabin heater

42.10.5.5.1.2.4 Aircraft fueling while onboard engines are operating shall be permitted only under the following conditions:

(1) A pilot licensed by the appropriate governmental body shall be at the aircraft controls during the entire fueling operation.

(2) All passengers shall be deboarded to a safe location prior to rapid refueling operations, except as permitted in 4.2.14.4(3).

(3) Patients on board medical transport aircraft shall be permitted to remain onboard the aircraft with medical personnel during rapid refueling operations if, in the opinion of the medical provider, removal from the aircraft would be detrimental to the patient's condition.

(4) Passengers shall not board or deboard during rapid refueling operations.

(5) Only designated personnel, properly trained in rapid refueling operations, shall operate the equipment. Written procedures shall include the safe handling of the fuel and equipment.

(6) All doors, windows, and access points allowing entry to the interior of the aircraft that are adjacent to, or in the immediate vicinity of, the fuel inlet ports shall be closed and shall remain closed during the refueling operations.

(7) Fuel shall be permitted to be dispensed by one of the following methods:

(a) Into an open port from approved deadman-type nozzles with a flow rate not to exceed 227L/min (60 gpm).

(b) Through close-coupled pressure fueling ports.

(8) Where fuel is dispensed from fixed piping systems, the hose cabinet shall not extend into the rotor space.

(9) Clearance between aircraft fuel servicing vehicles and rotating components shall be maintained by one of the following methods.

(a) A curb or other approved barrier shall be provided to restrict the fuel servicing vehicle from coming within 3m (10ft) of any aircraft rotating components.

(b) Fuel servicing vehicles shall be kept 6m (20ft) away from any aircraft rotating components, and a trained person shall direct fuel servicing vehicle approach and departure.

~~43.1.1.4 Permits. Permits, where required, shall comply with Section 1.12.~~

~~44.3 Permits. Permits, where required, shall comply with Section 1.12.~~

~~45.1.3 Permits. Permits, where required, shall comply with Section 1.12.~~

50.1.5 Where limited commercial cooking operations are conducted utilizing residential cooking equipment that does not include deep fat frying, a fire suppression system tested and meeting the requirements of UL 300A, *Extinguishing System Units for Residential Range Top Cooking Surfaces* shall be permitted to be used.

~~50.4.2 Permits. Permits, where required, shall comply with Section 1.12.~~

## Chapter 51—Industrial Ovens and Furnaces

### 51.1 General.

51.1.1 Application. Industrial ovens and furnaces shall comply with this chapter and the applicable provisions of NFPA 86, *Standard for Ovens and Furnaces*.

~~51.1.2 Permits.~~

~~51.1.2.1 Permits, where required, shall comply with Section 1.12.~~

~~51.1.2.2 Applications for a permit shall be accompanied by plans for safe operation showing all essential details and calculations.~~

~~51.2 Location. Special consideration shall be given to the location of equipment using flammable liquids or when using gas fuels with a vapor density greater than air.~~

~~51.3 Safety Controls. Safety controls, as specified in NFPA 86, shall be sufficient in number and substantially constructed and arranged to maintain the required conditions of safety and prevent the development of fire and explosion hazards.~~

~~52.2 Permits.~~

~~52.2.1 Permits, where required, shall comply with Section 1.12.~~

~~52.2.2 Prior to installation, plans shall be submitted and approved by the AHJ.~~

~~Chapter 53 Mechanical Refrigeration~~

~~53.1\* General.~~

~~53.1.1 Applicability.~~

~~53.1.1.1 Refrigeration unit and system installations having a refrigerant circuit containing more than 220 lbs. (100 kg) of Group A1 or 30 lbs. (13.6 kg) of any other group refrigerant shall be in accordance with Chapter 53 and the mechanical code.~~

~~53.1.1.2 Temporary and portable installations shall be exempt from the requirements of this chapter when approved.~~

~~53.1.2 Definitions and Classification of Refrigerant Groups. Definitions and classifications of refrigerant groups shall be defined according to the mechanical code and Chapter 3. (For general definitions, see Chapter 3.)~~

~~53.1.3 Permits and Plans.~~

~~53.1.3.1 Permits, where required, shall comply with Section 1.12.~~

~~53.1.3.2 Plans and specifications for devices and systems required by this chapter shall be submitted to the AHJ for review and approval prior to installation.~~

~~53.1.4 System Installation. Refrigeration systems shall be installed in accordance with ASHRAE 15 and the mechanical code.~~

## ~~53.2 Safety Features.~~

~~53.2.1 Emergency Pressure Control System. Refrigeration systems containing more than 6.6 lb (3 kg) of flammable, toxic, or highly toxic refrigerant or ammonia shall be provided with an emergency pressure control system in accordance with 53.2.1.1 and 53.2.1.2.~~

~~53.2.1.1 High and Intermediate Pressure Zones. Each high and intermediate pressure zone in a refrigeration system shall be provided with a single automatic valve providing a crossover connection to a lower pressure zone. Automatic crossover valves shall comply with 53.2.1.1.1 through 53.2.1.1.4.~~

~~53.2.1.1.1 Overpressure Limit Set Point for Crossover Valves. Automatic crossover valves shall be provided to automatically relieve excess system pressure to a lower pressure zone if the pressure in a high or intermediate pressure zone rises to within 90 percent of the set point for emergency pressure relief devices.~~

~~53.2.1.1.2 Manual Operation. Where required by the code official, automatic crossover valves shall be capable of manual operation.~~

~~53.2.1.1.3 System Design Pressure. Refrigeration system zones that are connected to a higher pressure zone by an automatic crossover valve shall be designed to safely contain the maximum pressure that can be achieved by interconnection of the two zones.~~

~~53.2.1.1.4 Automatic Emergency Stop. Operation of an automatic crossover valve shall cause all compressors on the affected system to immediately stop in accordance with the following:~~

~~(1) Dedicated pressure sensing devices located immediately adjacent to crossover valves shall be permitted as a means for determining operation of a valve.~~

~~(2) To ensure that the automatic crossover valve system provides a redundant means of stopping compressors in an overpressure condition, high pressure cutout sensors associated with compressors shall not be used as a basis for determining operation of a crossover valve.~~

~~53.2.1.2 Low Pressure Zone.~~



~~53.2.1.2.1 Overpressure Limit Set Point for Emergency Stop. The lowest pressure zone in a refrigeration system shall be provided with a dedicated means of determining a rise in system pressure to within 90 percent of the set point for emergency pressure relief devices.~~

~~53.2.1.2.2 Automatic Emergency Stop. Activation of the over-pressure sensing device shall cause all compressors on the affected system to immediately stop.~~

### ~~53.2.2 Treatment, Flaring, and Diffusion Systems for Refrigerant Discharge.~~

~~53.2.2.1 Required Systems. Unless the AHJ determines, upon review of an engineering analysis prepared at the expense of the owner, that a significant fire, health, or environmental hazard would not result from an atmospheric release, refrigeration systems that are designed to discharge refrigerant vapor to the atmosphere shall be provided with an approved treatment, flaring, or diffusion system where required by 53.2.2.1.1 through 53.2.2.1.3.~~

~~53.2.2.1.1 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 Chapter 63 or flaring system in accordance with 53.2.2.2.~~

~~53.2.2.1.2 Flammable Refrigerants. Systems containing flammable refrigerants shall discharge vapor to the atmosphere in accordance with the following:~~

~~(1) For refrigerants having a density equal to or greater than the density of air, discharge shall be through an approved treatment system in accordance with or flaring system in accordance with 53.2.2.2.~~

~~(2) For refrigerants having a density less than the density of air, discharge to the atmosphere shall be permitted, provided that the point of discharge is located outside of the structure at not less than 15 ft (4.6 m) above the adjoining grade level and not less than 20 ft (6.1 m) from any window, ventilation opening, or exit.~~

~~53.2.2.1.3 Ammonia Refrigerant. Systems containing ammonia refrigerant shall discharge vapor to the atmosphere through a treatment system in accordance with 53.2.2.1, through a flaring system in accordance with 53.2.2.2, through an approved ammonia diffusion system in accordance with 53.2.2.3, or by other approved means except as follows:~~

~~(1) Discharge through a treatment, flaring, or diffusion system shall not be required for ammonia-water absorption unit systems installed outdoors serving a dwelling unit, provided that the discharge is shielded and dispersed.~~

~~(2) Discharge through a treatment, flaring, or diffusion system shall not be required for ammonia-water absorption unit systems containing less than 22 lb (10 kg) of ammonia and for which the ammonia circuit is located entirely outdoors.~~

#### ~~53.2.2.2 Design of Flaring Systems.~~

~~53.2.2.2.1 Flaring systems for incineration of flammable, toxic, or highly toxic refrigerants or ammonia shall be designed to incinerate the entire discharge.~~

~~53.2.2.2.2 The products of refrigerant incineration shall not pose health or environmental hazards.~~

~~53.2.2.2.3 Incineration shall be automatic upon initiation of discharge, shall be designed to prevent blowback, and shall not expose structures or materials to threat of fire.~~

~~53.2.2.2.4 Standby fuel, such as LP Gas, and standby power shall have the capacity to operate for one and one half the required time for complete incineration of refrigerant in the system.~~

#### ~~53.2.2.3 Design of Ammonia Diffusion Systems.~~

~~53.2.2.3.1 Ammonia diffusion systems shall include a tank containing 1 gal of water for each pound of ammonia (4 L of water for each kg of ammonia) that will be released in 1 hour from the largest relief device connected to the discharge pipe.~~

~~53.2.2.3.2 The water used shall be prevented from freezing without the use of salt or chemicals by burial of the discharge pipe below frost depth or other approved means.~~

~~53.2.2.3.3 The discharge pipe from the pressure relief device shall distribute ammonia in the bottom of the tank, but no lower than 33 ft (10 m) below the maximum liquid level.~~

~~53.2.2.3.4 The tank shall contain the volume of water and ammonia, described in 53.2.2.3.1, without overflowing.~~

~~53.2.2.3.5 The tank shall be substantially constructed of not less than 1/8 in. (2.51 mm) (10 gauge) steel.~~

~~53.2.2.3.6 The horizontal dimensions of the tank shall be equal to or less than one half of the height.~~

~~53.2.2.3.7 The tank shall have a hinged cover or, if of the enclosed type, shall have a vent hole at the top.~~

~~53.2.2.3.8 Pipe connections shall be through the top of the tank.~~

~~53.2.3 Refrigeration Machinery Rooms. Where required by the mechanical code, refrigeration systems shall be provided with a refrigeration machinery room, which shall comply with 53.2.3.1 through 53.2.3.4.~~

~~53.2.3.1 Refrigerant Vapor Detection, Monitoring, Alarm, and Electrical Systems. Refrigeration machinery rooms shall have an approved refrigerant vapor detection, monitoring, and alarm system in accordance with 53.2.3.1.1 through 53.2.3.1.7 and the mechanical code.~~

~~53.2.3.1.1 Alarm Threshold. The refrigerant vapor detector shall activate approved visual and audible alarm signaling devices at one of the following refrigerant thresholds:~~

~~(1) At a value not greater than the corresponding TLV TWA (or toxicity measure consistent therewith); not to exceed 25 percent of the lower flammable limit (LFL)~~

~~(2) For ammonia, at a concentration not exceeding 1000 parts per million~~

~~53.2.3.1.2 Location of Signaling Devices. Audible and visual alarm signaling devices shall be located inside the refrigeration machinery room and outside the room at each entrance into the room.~~

~~53.2.3.1.3 Audibility. Audible alarm signaling devices shall provide a sound level of at least 15 dB above the operating ambient noise sound pressure level of the space in which they are installed and shall provide approved, distinctive audible and visual alarms.~~

~~53.2.3.1.4 Emergency Shutoff Interface. Where the quantity of a Group A2, B2, A3, or B3 refrigerant in an independent circuit would exceed 25 percent of the LFL if released to the surrounding room, either of the following shall apply:~~

~~(1) Electrical equipment shall comply with the requirements of NFPA 70 for Class I, Division 2.~~

~~(2) The refrigerant vapor detection system required by 53.2.3.1 shall automatically de-energize all electrical power within the space at vapor concentrations at or above 25 percent of the LFL.~~

~~53.2.3.1.5 Power and Supervision. Refrigerant vapor detection and alarm systems shall be powered and supervised as required for fire alarm systems in accordance with NFPA 72.~~

~~53.2.3.1.6 Monitoring and Annunciation. Refrigerant vapor detection and alarm systems shall transmit a signal to an approved location.~~

~~53.2.3.1.7 Installation and Maintenance. Detection and alarm systems shall be installed and maintained in accordance with the equipment manufacturers' specifications. (Also see 53.3.2.1.)~~

~~53.2.3.2 Prohibited Sources of Ignition. Open flames or devices having an exposed surface temperature exceeding 800°F (427°C) shall be prohibited in refrigeration machinery rooms except as follows:~~

~~(1) Momentary temperature excursions such as electrical contacts in Group A1 and B1 systems shall be permitted.~~

~~(2) Open flames or devices having an exposed surface temperature exceeding 800°F (427°C) shall be permitted in refrigeration machinery rooms used exclusively for direct-fired absorption equipment.~~

~~(3) Existing nonconforming installations shall be permitted where approved by the AHJ, where the combustion system is interlocked with the refrigerant detection system to shut off at the permissible exposure limit (PEL).~~

~~(4) Direct-vented combustion equipment shall be permitted in accordance with the mechanical code.~~

~~53.2.3.3 Ventilation Systems.~~

~~53.2.3.3.1 Fans providing emergency purge ventilation for refrigerant escape from a refrigeration room shall have a clearly identified switch of the break-glass type providing on-only control immediately adjacent to, and outside of, each refrigerant machinery room means of egress.~~

~~53.2.3.3.2 An emergency purge control shall be provided with a manual reset only.~~

~~53.2.3.3.3 Purge fans shall also respond automatically to the refrigerant concentration detection system set to activate the ventilation system at the threshold levels set forth in 53.2.3.1.1.~~

~~53.2.3.3.4 Mechanical ventilation systems serving refrigeration rooms shall have switches to control the power to each fan.~~

~~53.2.3.3.5 The switches shall be key-operated or within a locked glass-covered or tamper-resistant enclosure at an approved location adjacent to and outside of the principal entrance to the refrigeration machinery room.~~

~~53.2.3.3.6 Keys necessary for operation of ventilation systems shall be located in a single approved location.~~

~~53.2.3.3.7 Switches controlling fans providing continuous ventilation shall be of the two position, on/off type.~~

~~53.2.3.3.8 Switches controlling fans providing intermittent or emergency ventilation shall be of the three position, automatic on/off type.~~

~~53.2.3.3.9 Switches shall be labeled identifying both the function and the specific fan being controlled.~~

~~53.2.3.3.10 Two colored and labeled indicator lamps responding to the differential pressure created by airflow shall be provided for each switch.~~

~~53.2.3.3.11 One lamp shall indicate flow, and the other shall indicate no flow.~~

~~53.2.3.3.12 Exhaust from mechanical ventilation systems in refrigeration rooms shall be discharged 20 ft (6.1 m) or more from a property line or openings into buildings.~~

~~53.2.3.3.13 Discharges capable of exceeding 25 percent of the LFL or 50 percent of the immediately dangerous to life and health (IDLH) value shall be equipped with approved treatment systems to reduce the discharge concentrations to these values or lower, except as provided in 53.2.3.3.13.1 and 53.2.3.3.13.2. (Also see 53.2.2.1.)~~

~~53.2.3.3.13.1 A treatment system shall not be required when an approved engineering analysis of plume dispersion demonstrates that the limiting value will not be exceeded at the property line.~~

~~53.2.3.3.13.2 A treatment system shall not be required for ventilation provided for an ammonia refrigeration system.~~

#### ~~53.2.3.4 Electrical.~~

~~53.2.3.4.1 The refrigeration machinery room shall not be required to be classified as a hazardous location for electrical equipment except as provided in the mechanical code or NFPA 70.~~

~~53.2.3.4.2 Refrigeration machinery rooms used exclusively for direct fired absorption equipment shall be permitted not to be classified as a hazardous location for electrical equipment in accordance with NFPA 70.~~

~~53.2.3.4.3 Electrical equipment and electrical installations in refrigeration machinery rooms shall comply with Section 11.1.~~

~~53.2.3.4.4~~ Where treatment, detection, or alarm systems are required, such systems shall be connected to a secondary source of power to automatically supply electrical power in the event of loss of power from the primary source.

~~53.2.3.4.5~~ A clearly identified switch of the break glass type or with an approved tamper-resistant cover shall provide off-only control of refrigerant compressors, refrigerant pumps, and normally closed, automatic refrigerant valves located in the machinery room. In addition, this equipment shall be automatically shut off whenever the refrigerant vapor concentration in the machinery room exceeds the vapor detector's upper detection limit or 25 percent of the LFL, whichever is lower.

~~53.2.3.4.5.1~~ In machinery rooms where only nonflammable refrigerants are used, only compressors shall be required to be stopped by vapor detection or the cut-off switch. (Also see ~~53.2.3.1.4.~~)

#### ~~53.2.4~~ Signs and Labels.

~~53.2.4.1~~ General. Refrigeration units or systems shall be provided with approved hazard identification signs in accordance with NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response; emergency operational signs, charts, and labels in accordance with the mechanical code, and the following:

- ~~(1)~~ Name and address of the manufacturer or installer
- ~~(2)~~ Type and total number of pounds of refrigerant contained in the system
- ~~(3)~~ Field test pressure applied

~~53.2.4.2~~ Systems with More Than 110 lb (50 kg) of Refrigerant. Systems containing more than 110 lb (50 kg) of refrigerant shall be provided with signs having letters not less than 1/2 in. (12.7 mm) high, designating the following:

- ~~(1)~~ Main shutoff valves to each vessel
- ~~(2)~~ Mainstream or electrical controls
- ~~(3)~~ Remote control switch
- ~~(4)~~ Pressure limiting device

### ~~53.3 Operations, Maintenance, and Testing.~~

#### ~~53.3.1 Operations and Maintenance.~~

~~53.3.1.1 General. Refrigeration systems shall be operated and maintained in a safe and operable condition, free from accumulations of oil, dirt, waste, excessive corrosion, other debris, or leaks, and in accordance with ASHRAE 15 and the mechanical code.~~

~~53.3.1.2 Access to System. Refrigeration systems shall be maintained accessible to the fire department as required by the AHJ.~~

#### ~~53.3.1.3 Storage in Machinery Rooms.~~

~~53.3.1.3.1 Flammable and combustible materials shall not be stored in refrigeration machinery rooms except for incidental materials necessary for the safe and proper operation and maintenance of the system.~~

~~53.3.1.3.2 Storage of materials in a refrigeration machinery room, including reserve supplies of refrigerants or refrigerant oils, shall be in accordance with other applicable chapters of this Code.~~

~~53.3.1.4 Changing of Refrigerant Type. Refrigerant types shall not be changed without prior notification and approval of the AHJ.~~

~~53.3.1.5 Records of Refrigerant Quantities. The person in charge of the premises on which a refrigeration unit or system subject to these regulations is installed or maintained shall keep a written record of refrigerant quantities brought onto and removed from the premises, which shall be made available to the AHJ upon request.~~

~~53.3.1.6 Permissible Refrigerant Discharges. Refrigerant shall be only permitted to be released to atmosphere in the following circumstances:~~

~~(1) Refrigeration systems operating at pressures below atmospheric and incorporating automatic purge cycles~~

~~(2) Incidental operation of automatic pressure relief valves resulting in minor release of the refrigerant charge~~

~~(3) Incidental minor releases associated with service operations after system pumpdown has been accomplished~~

~~(4) In an emergency~~

~~53.3.1.7 Notification of Fugitive Releases. Where required by the fire department, the fire department shall be notified upon discharges of refrigerant that are not in accordance with 53.3.1.6(1), (2), or (3).~~

### ~~53.3.2 Testing of Equipment.~~

~~53.3.2.1 Acceptance Testing. The following emergency devices or systems shall be tested to demonstrate their safety and effectiveness upon completion of the installation or alteration:~~

~~(1) Treatment and flaring systems~~

~~(2) Ammonia diffusion systems~~

~~(3) Fans and associated equipment intended to operate emergency purge ventilation systems~~

~~(4) Refrigerant vapor detection and alarm systems~~

~~53.3.2.2 Periodic Testing. The following emergency devices or systems shall be tested in accordance with the manufacturers' specifications and as required by the AHJ:~~

~~(1) Treatment and flaring systems~~

~~(2) Fans and associated equipment intended to operate emergency purge ventilation systems~~

~~(3) Refrigerant vapor detection and alarm systems~~

~~53.3.2.3 Frequency of Required Testing. Unless otherwise required by the AHJ, testing frequency shall be in accordance with 53.3.2.2.~~

~~53.3.2.4 Records of Required Testing. A written record of required testing shall be maintained on the premises.~~

~~53.3.2.5 Testing Personnel Qualifications. Tests of emergency devices or systems required by Chapter 53 shall be conducted by persons trained in such testing.~~



~~61.1.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~63.1.2 Permits. Permits, where required, shall comply with Section 1.12.~~

~~63.1.2.1 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.~~

~~63.1.2.2 Such application shall include any change or alteration of the facility closure plan filed pursuant to 60.1.4.4.~~

~~63.1.2.3 This 30 day period shall be permitted to be waived by the AHJ if special circumstances require such waiver.~~

~~63.1.2.3.1 Permits shall not be required for routine maintenance.~~

~~63.1.2.3.2 For repair work performed on an emergency basis, application for permit shall be made within 2 working days of commencement of work.~~

~~63.11 Liquid Oxygen in Home Care.~~

~~63.11.1 General. The storage and use of liquid oxygen (LOX) in home care shall comply with Sections 63.4 and 63.11.~~

~~63.11.1.1 Gas equipment used in the home for healthcare shall conform to applicable requirements of NFPA 99, Health Care Facilities Code.~~

~~63.11.2 Information and Instructions. The seller of liquid oxygen shall provide the user with information in written form that includes, but is not limited to, the following:~~

~~(1) Manufacturer's instructions and labeling for storage and use of the containers~~

~~(2) Locating containers away from ignition sources, exits, electrical hazards, and high temperature devices in accordance with 63.11.3.2~~

~~(3) Restraint of containers to prevent falling in accordance with 63.11.3.3~~

~~(4) Requirements for handling containers in accordance with 63.11.3.4~~

~~(5) Safeguards for refilling of containers in accordance with 63.11.3.5~~

~~63.11.3 Containers. Containers of liquid oxygen in home care shall be in accordance with 63.11.3.1 through 63.11.3.5.~~

~~63.11.3.1\* Containers shall be stored, used, and operated in accordance with the manufacturer's instructions and labeling.~~

~~63.11.3.2 Containers shall not be located in areas as follows:~~

- ~~(1) Where they can be overturned due to operation of a door~~
- ~~(2) Where they are in the direct path of egress~~
- ~~(3) Where they are subject to damage from falling objects~~
- ~~(4) Where they can become part of an electrical circuit~~
- ~~(5) Where open flames and high temperature devices could cause a hazard~~

~~63.11.3.3\* Liquid oxygen home care containers shall be restrained by one of the following methods while in storage or use to prevent falling caused by contact, vibration, or seismic activity:~~

- ~~(1) Restraining containers to a fixed object with one or more restraints~~
- ~~(2) Restraining containers within a framework, stand, or assembly designed to resist container movement~~
- ~~(3) Restraining containers by locating a container against two points of contact~~

~~63.11.3.4 Containers shall be transported by use of a cart or hand truck designed for such use.~~

~~63.11.3.4.1 Liquid oxygen home care containers equipped with a roller base shall not be required to be transported by use of a cart or truck.~~

~~63.11.3.4.2 Liquid oxygen ambulatory containers shall be permitted to be hand carried.~~

~~63.11.3.5 The filling of containers shall be in accordance with 63.11.3.5.1 through 63.11.3.5.2:~~

~~63.11.3.5.1 Liquid oxygen home care containers shall be filled outdoors.~~

~~63.11.3.5.1.1\* A drip pan compatible with liquid oxygen shall be provided under home care container filling and vent connections used during the filling process.~~

~~63.11.3.5.2 Liquid oxygen ambulatory containers shall be allowed to be filled indoors when the supply container is designed for filling such containers and written instructions are provided by the container manufacturer.~~

~~63.11.3.5.3\* The use of open flames and high temperature devices shall be in accordance with the adopted fire prevention code.~~

~~63.11.4 Maximum Quantity. The maximum aggregate quantity of liquid oxygen allowed in storage and in use in a single dwelling unit shall be 31.6 gal (120 L).~~

~~63.11.4.1 The maximum aggregate quantity of liquid oxygen allowed in day care occupancies shall be limited by the maximum allowable quantity set forth in the adopted fire prevention code or building code.~~

~~63.11.4.2~~ Where individual sleeping rooms are separated from the remainder of the dwelling unit by fire barriers and horizontal assemblies having a minimum fire resistance rating of 1 hour in accordance with the adopted building code, the maximum aggregate quantity per dwelling unit shall be allowed to be increased to a maximum of 31.6 gal (120 L) of liquid oxygen per sleeping room.

~~63.11.5~~ Smoking. Smoking shall be prohibited in rooms or areas where liquid oxygen is in use.

~~63.11.5.1\*~~ A sign stating "OXYGEN — NO SMOKING" shall be posted in the room or area where the liquid oxygen containers are stored or used.

**65.2.3** Permits. Permits, where required, shall comply with the requirements of the State Fire Marshal Agency NAC Title 157, other state/federal authorities, and local Authorities Having Jurisdiction Section 1.12.

~~65.3.3~~ Permits. Permits, where required, shall comply with Section 1.12.

~~65.4.2~~ Permits. Permits, where required, shall comply with Section 1.12.

~~65.5.2~~ Permits. Permits, where required, shall comply with Section 1.12.

~~65.7.2~~ Permits. Permits, where required, shall comply with Section 1.12.

~~65.8.2~~ Permits. Permits, where required, shall comply with Section 1.12.

~~65.9.2~~ Permits.

~~65.9.2.1~~ Permits, where required, shall comply with Section 1.12.

~~65.9.2.2~~ A separate permit shall be required to conduct blasting operations.

~~66.1.5~~ Permits. Permits, where required, shall comply with Section 1.12.

~~69.1.2~~ Permits. Permits, where required, shall comply with Section 1.12.

**69.1.3** Qualifications of Personnel

**69.1.3.1** Persons whose primary duties fall within the scope of this code shall be provided with training that is consistent with the scope of their job activities and that includes proper handling and emergency response procedures.

**69.1.3.2** Persons whose primary duties include transporting LP-Gas, transferring LP-Gas into or out of stationary installations shall complete training that includes the following components:

1. Safe work practices.
2. The health and safety hazards of LP-Gas.
3. Emergency response procedures.
4. Supervised on-the-job training.
5. An assessment of the person's ability to perform the job duties assigned.

69.1.3.3 Refresher training shall be completed at least every three years.

69.1.3.4 Initial and subsequent refresher training shall be documented.

A.13.3.2.7.2.1 Two-hour fire barriers are used for the purpose of creating separate "buildings", thereby limiting the occupant load on each side of the barrier below the threshold to require a fire sprinkler system.

A20.1.4.7.1 Additional pathway markings, including low level marking and signs may be required at time of inspection.

A20.1.4.10 For Haunted houses, a fire drill demonstrating the implementation of the emergency plan may be required at the time of inspection.

A20.1.4.12.8 Care and consideration should be used with respect to smoke generator and smoke alarm locations. Use of smoke generator may be restricted if determined to be incompatible with smoke alarm(s).

A.30.2.7 Two-hour fire barriers are used for the purpose of creating separate "buildings", thereby limiting the area on each side of the barrier below the threshold to require a fire sprinkler system.