

## Exhibit C

### Recommended Amendments to the 2018 International Fire Code City of Amarillo, Texas

The following sections, paragraphs, and sentences of the 2018 International Fire Code (IFC) are hereby amended as follows: Standard type is text from the IFC. Underlined type is text inserted. Lined through type is deleted text from IFC. A double asterisk (\*\*) at the beginning of a section identifies an amendment carried over from the 2012 edition of the code and a triple asterisk (\*\*\*) identifies a new or revised amendment with the 2018 code.

Note: It has been suggested certain items to be brought to the attention of cities considering adoption of the code that may be of concern to several jurisdictions. **It is still intended to be discretionary to each city to determine which Chapter 1 amendments to include.** Note that Appendices must be specifically adopted by Ordinance. As per Page vii of the 2018 IFC, note that several sections of the code require jurisdictional specificity as to dollar amounts, geographic limits, etc. and are not addressed in these amendments.

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**\*\*Section 101.1; change to read as follows:**

**101.1 Title.** These regulations shall be known as the Fire Code of the City of Amarillo. Hereinafter referred to as "this code."

*(Reason: Standard insertion point: [insert] to assist with local adoption.)*

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**\*\*\*Section 102.1; change #3 to read as follows:**

- Existing structures, facilities, and conditions when required in Chapter 11 or in specific sections of this code.

*(Reason: To clarify that there are other provisions in the fire code applicable to existing buildings that are not located in Chapter 11, including but not limited to Section 505 Premises Identification.)*

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**\*\*\*Section 102.7; change to read as follows:**

**Section 102.7 Referenced codes and standards.** The codes and standards referenced in this code shall be those listed in Chapter 80, and when specifically adopted, such codes and standards... *{Remainder of text unchanged}*

*(Reason: To be allowed to reference other adopted codes and standards not listed in Chapter 80.)*

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**\*\*\*Section 105.3.3; change to read as follows:**

**105.3.3 Occupancy prohibited before approval.** The building or structure shall not be occupied prior to the Fire Code Official issuing a permit when required and conducting associated inspections indicating the applicable provisions of this code have been met.

*(Reason: For clarity to allow for better understanding in areas not requiring such permits, such as unincorporated areas of counties. This amendment may be struck by a city.)*

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**\*\*\*Section 105.6; add Section 105.6.47.1 to read as follows:**

**105.6.47.1 Cooking tent.** ~~An operational permit is required for the operation of a cooking tent.~~

*(Reason: A permit is required for a cooking tent.)*

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**\*\*\*Section 105.6; add Section 105.6.51 to read as follows:**

**105.6.51 Model rocketry.** ~~An operational permit is required for the demonstration and use of model rockets, in accordance with NFPA 1122.~~

*(Reason: A permit is required to operate a model rocket.)*

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**\*\*\*Section 105.7; add Section 105.7.26 to read as follows:**

**105.7.26 Electronic access control systems.** Construction permits are required for the installation or modification of an electronic access control system, as specified in Chapter 10. A separate construction permit is required for the installation or modification of a fire alarm system that may be connected to the access control system. Maintenance performed in accordance with this code is not considered a modification and does not require a permit.

*(Reason: Adds construction permit requirements for electronic access control systems affecting access and/or egress to ensure proper design and installation of such systems. These changes reflect local practices of municipalities in this region.)*

**\*\*\*Section 105.7; add Section 105.7.27 to read as follows:**

~~**105.7.27 Fire Fighter Air Replenishing System (FARS).** A construction permit is required for installation of or modification to a FARS. The construction application shall include documentation of an acceptance and testing plan as specified in Section L105.~~

~~*(Reason: A permit is required for FARS.)*~~

**\*\*Section 106; Delete this section and subsection in their entirety.**

#### **106 Fees**

*(Reason: Established fees per Chapter 10-2, Article II, Sections 113.1–113.5 of the City of Amarillo Municipal Code)*

**\*\*\*Section 106.5; amend Section 106.5 to read as follows and to add Sections 106.5.1–106.5.4:**

~~**106.5 Refunds.** Any refunds will be in accordance with sections 106.5.1 through section 106.5.4.~~

~~106.5.1 Fee Refunds. Fees collected in accordance with this chapter may be refunded under the following conditions when requested in writing by the person who paid the fee within one hundred eighty (180) days of the collection of the fee.~~

~~106.5.2 Fee collected in error. Any fee under this chapter that was collected in error shall be refunded.~~

~~106.5.3 Fire inspection fees. When an inspection request is withdrawn or cancelled by the requestor prior to any inspection action by the City, then eighty (80) percent of the application fee shall be refunded. If the inspection has begun, then no refund will be granted.~~

~~106.5.4 Permit fees. When a permit is withdrawn or cancelled by the applicant before any work, activity, or operation has begun as authorized by that permit, then eighty (80) percent of the permit fee shall be refunded. If any work, activity or operation has begun in accordance with the permit, then no refund shall be granted.~~

~~*(Reason: To assess when refunds are required.)*~~

**\*\*\*Section 106.5; Delete this section in its entirety.**

#### **106.5 Refunds**

~~*(Reason: Established fees per Chapter 10-2, Article II, Sections 113.1–113.5 of the City of Amarillo Municipal Code)*~~

**\*\*\*Section 106.; add Section 106.6 to read as follows:**

~~**106.6 Inspection fees.** An inspection or re-inspection shall not be scheduled until the applicable fee in Appendix A, "Schedule of Fees," has been paid.~~

~~*(Reason: To add Schedule of Fees for inspections or re-inspections.)*~~

**\*\*Section 109; Delete this section and subsection in their entirety.**

## **109 Board of Appeals**

*(Reason: Established Construction Advisory and Appeals Board procedures. See Chapter 2-6 of the Amarillo Municipal Code)*

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**\*\*\*Section 110.3; add Section 110.3.5 to read as follows:**

**110.3.5 Citations.** It is the intent of this department to achieve compliance by traditional means of inspection, notification, granting of reasonable time to comply and re-inspection. After all reasonable means to gain compliance have failed, or when a condition exists that causes an immediate and/or extreme threat to life, property or safety from fire or explosion, the Fire Code Official or their designee who has the discretionary duty to enforce a code or ordinance may issue a notice to appear (citation) for the violation. Citations shall be issued only by qualified personnel as designated by the Fire Code Official.

*(Reason: To explain when citations will be issued.)*

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**\*\*Section 110.4; amend Section 110.4 to read as follows:**

**110.4 Violation penalties.** Violation of any of the provisions of this code shall constitute an offense punishable by a fine not to exceed two thousand dollars (\$2,000.00) in accordance with City of Amarillo Ordinance No. 5709 and Chapter 1-1, Section 1-1-5 of the City of Amarillo Municipal Code.

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**\*\*\*Section 110.4; add Section 110.4.2 to read as follows:**

**110.4.2 Applicability.** Any person, firm, partnership, corporation, association, or other entity shall be presumed to be the violator if the person, firm, partnership, corporation, association, or other entity is the owner or occupant of the subjected property, exercises actual or apparent control over the subject property, or is listed as the water customer of the city for the subject property.

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**\*\*Section 111; add Section 111.5 to read as follows:**

**111.5 Unsafe structures.** Abandoned and substandard structures shall be subject to the requirements of applicable provisions in accordance with City of Amarillo Ordinance No. 7693, and Chapter 4-3, Article I, Section 4-3-3 of the City of Amarillo Municipal Code and state law.

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**\*\*Section 112.4; amend Section 112.4 to read as follows:**

**112.4 Failure to comply.** Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be liable to a fine as specified in Section 1-1-5 of the City of Amarillo Municipal Code for violations.

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**\*\*\*Section 202; amend and add definitions to read as follows:**

**\*\*AMBULATORY CARE FACILITY.** Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing, or similar care on a less than 24-hour basis to persons who are rendered incapable of self-preservation by the services provided or staff has accepted responsibility for care recipients already incapable. This group may include but not be limited to the following:

- Dialysis centers
- Procedures involving sedation
- Sedation dentistry
- Surgery centers
- Colonic centers
- Psychiatric centers

*(Reason: to clarify the range of uses included in the definition)*

**\*\*\*Analog Intelligent Addressable Fire Detection System.** Any system capable of calculating a change in value by directly measurable quantities (voltage, resistance, etc.) at the sensing point. The physical analog may be conducted at the sensing point or at the main control panel. The system shall be able for compensating for long term changes in sensor response while maintaining a constant sensitivity. The compensation shall have a preset point at which a detector maintenance signal shall be transmitted to the control panel. The sensor shall remain capable of detecting and transmitting an alarm while in maintenance alert.

**\*\*\*ATRIUM.** An opening connecting ~~two~~ three or more stories...*{Remaining text unchanged}*

*(Reason: Accepted practice in the region based on legacy codes. IBC Section 1009 permits unenclosed two story stairways under certain circumstances.)*

**\*\*\*Cooking Tent.** ~~A tent or multiple tents without sidewalls or drops, with an aggregate area of no greater than 200 square feet that is used to cover cooking appliances or devices and is not occupied by the public. Cooking tents shall meet NFPA 701.~~

**\*\*\*DEFEND IN PLACE.** A method of emergency response that engages building components and trained staff to provide occupant safety during an emergency. Emergency response involves remaining in place, relocating within the building, or both, without evacuating the building.

*(Reason: Added from International Building Code (IBC) definitions for consistency in interpretation of the subject requirements pertaining to such occupancies.)*

**\*\*FIRE MARSHAL.** The Fire Code Official of the Department of Fire Prevention City of Amarillo.

**\*\*\*FIRE WATCH.** A temporary measure intended to ensure continuous and systematic surveillance of a building or portion thereof by one or more qualified individuals or standby personnel when required by the Fire Code Official, for the purposes of identifying and controlling fire hazards, detecting early signs of unwanted fire, raising an alarm of fire and notifying the fire department.

*(Reason: Clearly defines options to the fire department for providing a fire watch.)*

**\*\*FIREWORKS.** Any composition or device for the purpose of producing a visible or an audible effect for entertainment purposes by combustion, deflagration, ~~or~~ detonation, and/or activated by ignition with a match or other heat producing device that meets the definition of 1.3G fireworks or 1.4G fireworks. *{Remainder of text unchanged}*

**Fireworks, 1.3G.** *{Remainder of text unchanged}*

**Fireworks, 1.4G.** Small fireworks devices containing restricted amounts of pyrotechnic composition designed primarily to produce visible or audible effects by combustion. Such 1.4G fireworks which comply with the construction, chemical composition and labeling regulations of the DOTn for Fireworks, UN 0336 and requires an external heat source for ignition or activation.

*(Reason: Increased safety from fireworks related injuries.)*

**HIGH-PILED COMBUSTIBLE STORAGE:** ~~add a second paragraph to read as follows:~~

~~Any building classified as a group S Occupancy or Speculative Building exceeding 6,000 sq. ft. that has a clear height in excess of 14 feet, making it possible to be used for storage in excess of 12 feet, shall be considered to be high-piled storage. When a specific product cannot be identified, a fire protection system and life safety features shall be installed as for Class IV commodities, to the maximum pile height.~~

*(Reason: To provide protection for worst-case scenario in flexible or unknown situations.)*

**HIGH-RISE BUILDING.** A building with an occupied floor located more than ~~75~~ 55 feet (~~22,860~~ 16,764 mm) above the lowest level of fire department vehicle access.

*(Reason: Allows for additional construction safety features to be provided, based on firefighting response capabilities.)*

**\*\*NIGHTCLUB.** A place of entertainment open at night, usually serving or allowing the consumption of alcoholic beverages, having a floor show, or providing music and space for dancing.

**\*\*\*REPAIR GARAGE.** A building, structure or portion thereof used for servicing or repairing motor vehicles. This occupancy shall also include garages involved in minor repair, modification and servicing of motor vehicles for items such as lube changes, inspections, windshield repair or replacement, shocks, minor part replacement, and other such minor repairs.

*(Reason: To further clarify types of service work allowed in a repair garage, as well as to correspond with definition in the IBC.)*

**\*\*\*SELF-SERVICE STORAGE FACILITY.** Real property designed and used for the purpose of renting or leasing individual storage spaces to customers for the purpose of storing and removing personal property on a self-service basis.

*(Reason: To provide a definition that does not exist in the code.)*

**\*\*\*STANDBY PERSONNEL.** Qualified fire service personnel, approved by the Fire Chief. When utilized, the number required shall be as directed by the Fire Chief. Charges for utilization shall be as normally calculated by the jurisdiction.

*(Reason: To provide a definition that does not exist in the code for fire watch accommodations as required by the jurisdiction.)*

**\*\*\*UPGRADED OR REPLACED FIRE ALARM SYSTEM.** A fire alarm system that is upgraded or replaced includes, but is not limited to the following:

- Replacing one single board or fire alarm control unit component with a newer model
- Installing a new fire alarm control unit in addition to or in place of an existing one
- Conversion from a horn system to an emergency voice/alarm communication system
- Conversion from a conventional system to one that utilizes addressable or analog devices

The following are not considered an upgrade or replacement:

- Firmware updates
- Software updates
- Replacing boards of the same model with chips utilizing the same or newer firmware

*(Reason: This is referenced in several places, but the wording of “upgraded or replaced” is somewhat ambiguous and open to interpretation. Defining it here allows for consistent application across the region.)*

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**\*\*\*Section 307.1.1; change to read as follows:**

**307.1.1 Prohibited Open Burning.** ~~Open burning shall be prohibited that is offensive or objectionable because of smoke emissions or when atmospheric conditions or local circumstances make such fires hazardous shall be prohibited.~~ No person may cause, suffer, allow or permit any open burning within the city limits of Amarillo.

**Exception:** *{Existing text unchanged}*

*(Reason: To further protect adjacent property owners/occupants from open burning and/or smoke emissions from open burning.)*

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**\*\*\*Section 307.2; change to read as follows:**

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

Examples of state or local law, or regulations referenced elsewhere in this section may include but not be limited to the following:

1. Texas Commission on Environmental Quality (TCEQ) guidelines and/or restrictions.
2. State, County, or Local temporary or permanent bans on open burning.
3. Local written policies as established by the Fire Code Official.

*(Reason: Amendments to 307.2, 307.4, 307.4.3, and 307.5 better explain current requirements and recognize that jurisdictions have local established policies that best fit their environments.)*

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**\*\*\*Section 307.3; change to read as follows:**

**307.3 Extinguishment authority.** When open burning creates or adds to a hazardous situation, or a required permit for open burning has not been obtained, the fire code official is authorized to order the extinguishment of the open burning operation. ~~The Fire Code Official is authorized to order the extinguishment by the permit holder, another person responsible or the fire department of open burning that creates or adds to a hazardous or objectionable situation.~~

*(Reason: Provides direction as to responsible parties relative to extinguishment of the subject open burning.)*

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**\*\*\*Section 307.4; change to read as follows:**

**307.4 Location.** The location for open burning shall not be less than ~~50~~ 300 feet (~~15,240~~ 91,440 mm) from any structure, and provisions shall be made to prevent the fire from spreading to within ~~50~~ 300 feet (~~15,240~~ 91,440 mm) of any structure.

**Exceptions:** ~~{Existing text for Exc. 1 unchanged, Delete Exc. 2}~~

*(Reason: To increase the separation distance thereby increasing the safety to adjacent properties, as per applicable TCEQ rules and regulations regarding outdoor burning.)*

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**\*\*\*Section 307.4.1; change to read as follows:**

**307.4.1, Bonfires.** A bonfire shall not be conducted within the city limits of Amarillo.

**\*\*\*Section 307.4.2; change to read as follows:**

**307.4.2, Recreational fires.** A recreational fire shall not be conducted within the city limits of Amarillo.

**\*\*\*Section 307.4.3, Exceptions; add exception #2 to read as follows:**

**Exceptions:**

~~2. Where buildings, balconies and decks are protected by an approved automatic sprinkler system.~~

*(Reason: To reflect similar allowances for open-flame cooking in these same locations.)*

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~~\*\*\*Section 307.4.4 and 5; add section 307.4.4 \*\*Section 307.4.4 and 307.4.5; change to read as follows:~~

~~**307.4.4 Permanent Outdoor Firepit.** Permanently installed outdoor firepits for recreational fire purposes shall not be installed within 10 feet of a structure or combustible material.~~

~~**Exception:** Permanently installed outdoor fireplaces constructed in accordance with the International Building Code.~~

~~**307.4.5 Trench Burns.** Trench burns shall be conducted in air curtain trenches and in accordance with Section 307.2.~~

~~*(Reason: To provide a greater level of safety for this potentially hazardous fire exposure condition. Decrease in separation distance allowed for outdoor firepits due to permanent nature of construction having substantial securement.)*~~

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**\*\*\*Section 307.5; change to read as follows:**

**307.5 Attendance.** ~~Open burning, trench burns, bonfires, recreational fires, and use of portable outdoor fireplaces shall be constantly attended until the... (Remainder of section unchanged)~~

*(Reason: Adds attendance for trench burns based on previous amendment provision for such.)*

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**\*\*\*Section 308.1.4; change to read as follows:**

**308.1.4 Open-flame Cooking Devices.** ~~Charcoal burners and other~~ Open-flame cooking devices, charcoal grills and other similar devices used for cooking shall not be ~~operated~~ located or used on combustible balconies, decks, or within 10 feet (3,048 mm) of combustible construction.

**Exceptions:**

1. One- and two-family dwellings, ~~except that LP-gas containers are limited to a water capacity not greater than 50 pounds (22.68 kg) [nominal 20 pound (9.08 kg) LP-gas capacity] with an aggregate LP-gas capacity not to exceed 100 pounds (5 containers).~~
2. Where buildings, balconies and decks are protected by an approved automatic sprinkler system, ~~except that and LP-gas containers are limited to a water capacity not greater than 50 pounds (22.68 kg) [nominal 20 pound (9.08 kg) LP-gas capacity], with an aggregate LP-gas capacity not to exceed 40 lbs. (2 containers); LP-gas cooking devices having LP-gas container with a water capacity not greater than 2½ pounds [nominal 1-pound (0.454 kg) LP-gas capacity].~~
3. *{Remaining text unchanged}*

*(Reason: Decrease fire risk in multi-family dwellings and minimizes ignition sources and clarify allowable limits for 1 & 2 family dwellings and allow an expansion for sprinklered multi-family uses. This amendment adds clarification and defines the container size allowed for residences.)*

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**\*\*\*Section 308.1.6.2, Exception #3; change to read as follows:**

**Exceptions:**

3. Torches or flame-producing devices in accordance with Section ~~308.4~~ 308.1.3.

*(Reason: Section identified in published code is inappropriate.)*

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**\*\*\*Section 308.1.6.3; change to read as follows:**

**308.1.6.3 Sky Lanterns.** A person shall not release or cause to be released an ~~untethered~~ unmanned free-floating device containing an open flame or other heat source, such as but not limited to a sky lantern.

*(Reason: Eliminates the potential fire hazard presented by utilization of such devices and the potential accidental release of such devices.)*

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**\*\*\*Section 311.5; change to read as follows:**

**311.5 Placards.** Any ~~The Fire Code Official is authorized to require marking of any~~ vacant or abandoned buildings or structures determined to be unsafe pursuant to Section 110 of this code relating to structural or interior hazards, ~~shall be marked~~ as required by Section 311.5.1 through 311.5.5.

*(Reason: There may be situations where placarding is not desired or necessary; also clarifies intent that it is not the Fire Code Official's responsibility to provide the placard.)*

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**\*\*\*Section ~~321 320~~; add new Section 321 320 to read as follows:**

**321.1 320 EMS Elevator.** Where elevators are provided in buildings, the elevator, or not less than one elevator per bank, shall be provided for fire department emergency access to all floors. A single elevator shall constitute a bank. The elevator car shall be of such size and arrangement to accommodate an ambulance stretcher 24 inches by 84 inches with not less than 5 inch radius corners, in the horizontal, open position ~~and emergency personnel.~~ The elevator ~~and~~ shall be identified by the international symbol for emergency medical services (star of life). The symbol shall not be less than 3 inches in height and shall be

placed inside on both sides of the hoist way door frame. This section for the new construction of elevators and is not applicable to existing elevators in existing buildings.

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**\*\*Section 401; change Section 401.3.1 to read as follows:**

**401.3.1 Fire events.** In the event of an unwanted fire occurs, or the discovery of fire, smoke, or unauthorized release of a hazardous material on a property, the owner or occupant shall immediately report such condition to the fire department.

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**\*\*\*Section 403.5; change Section 403.5 to read as follows:**

**403.5 Group E Occupancies.** An approved fire safety and evacuation plan in accordance with Section 404 shall be prepared and maintained for Group E occupancies and for buildings containing both a Group E occupancy and an atrium. A diagram depicting two evacuation routes shall be posted in a conspicuous location in each classroom. Group E occupancies shall also comply with Sections 403.5.1 through 403.5.3.

*(Reason: The diagrams are intended to assist with egress in such occupancies – specifically, the primary teacher is not always present to assist children with egress. Also, such will help reinforce evacuation drill requirements.)*

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**\*\*\*Section 404.2.2; add Number 4.10 to read as follows:**

4.10 Fire extinguishing system controls.

*(Reason: The committee believed this information could be of great help to such plans to facilitate locating sprinkler valves to minimize water damage, for instance.)*

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**\*\*\*Section 405.4; change Section 405.4 to read as follows:**

**405.4 Time.** The Fire Code Official may require an evacuation drill at any time. Drills shall be held at unexpected times and under varying conditions to simulate the unusual conditions that occur in case of fire.

*(Reason: This change clarifies who may require a fire or evacuation drill.)*

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**\*\*\*Section 501.4; change to read as follows:**

**501.4 Timing of Installation.** When fire apparatus access roads or a water supply for fire protection is required to be installed for any structure or development, they shall be installed, tested, and approved prior to the time of which construction has progressed beyond completion of the foundation of any structure. ~~such protection shall be installed and made serviceable prior to and during the time of construction except when approved alternative methods of protection are provided. Temporary street signs shall be installed at each street intersection when construction of new roadways allows passage by vehicles in accordance with Section 505.2.~~

*(Reason: Reflects current practice in the region relative to ensuring fire department and EMS access during construction, which can be a time of increased frequency for emergency incidents.)*

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**\*\*\*Section 503.1.1; add sentence to read as follows:**

Except for one- or two-family dwellings, the path of measurement shall be along a minimum of a ten(10') feet wide unobstructed pathway around the external walls of the structure.

*(Reason: Recognizes that the hose lay provision can only be measured along a pathway that is wide enough for fire fighter access.)*

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**\*\*\*Section 503.1; add Section 503.1.4 to read as follows:**

**503.1.4 Residential subdivision.** The maximum dead-end cul-de-sac length shall not exceed 600 feet (600') as measured from the centerline of the intersecting street to the center point of the radius.

**Exception:** Where an approved automatic fire suppression system is installed per Section 903 is provided.

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**\*\*Section 503.2.1; change to read as follows:**

**503.2.1 Dimensions.** Fire apparatus access roads shall have an unobstructed width of not less than ~~20-24 feet (6,096 mm 7,315 mm)~~, exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than ~~13 feet 6 inches (4,115 mm) 14 feet 6 inches (4,267 4,420 mm)~~.

**Exception:** Vertical clearance may be reduced; provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance when approved.

*(Reason: Amendments to 503.2.1 and 503.2.2 recognize that the equipment now used in firefighting is increasing in size. The code already recognizes that larger dimensions may be required under Section 503.2.2. The amendments are to standardize the dimensions for this area. With the increase in fire apparatus size, this will allow for the passage of two fire apparatus during a fire or EMS emergency.)*

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**\*\*\*Section 503.2.2; change to read as follows:**

**503.2.2 Authority.** The Fire Code Official shall have the authority to require an increase in the minimum access widths and vertical clearances where they are inadequate for fire or rescue operations.

*(Reason: Amendments to 503.2.1 and 503.2.2 recognize that the equipment now used in firefighting is increasing in size. The code already recognizes that larger dimensions may be required under Section 503.2.2. The amendments are to standardize the dimensions for this area. With the increase in fire apparatus size, this will allow for the passage of two fire apparatus during a fire or EMS emergency.)*

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**\*\*\*Section 503.2.3; change Section 503.2.3 to read as follows:**

**503.2.3 Surface.** Fire apparatus access roads shall be designed and maintained to support imposed loads of 80,000 Lbs. for fire apparatus and shall be surfaced so as to provide all-weather driving capabilities- and shall be paved using either asphalt or concrete as defined by this amendment the City of Amarillo's Driveway and Parking Manual.

*(Reason: To address the current size of fire trucks in use – figure derived from DOT requirements for waiver of vehicle exceeding such weight.)*

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**\*\*\*Section 503.2.4; change Section 503.2.4 to read as follows:**

**503.2.4 Turning radius.** The required turning radius of a fire apparatus access road shall be in accordance with this section. Any such fire lane shall either connect both ends to a dedicated public street or fire lane or be provided with an approved turnaround having a minimum outer radius of fifty feet. If two or more interconnection lanes are provided, interior radius for that connection shall be required in accordance with the following:

- 24 foot fire lane – min radius 30 feet
- 26 foot fire lane – min radius 30 feet
- 30 foot fire lane – min radius 20 feet

Intersecting fire lanes of dissimilar widths shall be provided with turn radii based upon the shortest width. Fire lane dimensions established by Appendix D, or other sections of this Code, shall be superseded by the criteria established by this section. The requirements of Section D105 shall remain unchanged.

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**\*\*\*Section 503.2.7; add a sentence to end of paragraph to read as follows:**

**503.2.7 Grade.** *{Existing text unchanged}*...In no case shall the grades along a fire apparatus access road exceed the following:

- Along the fire apparatus access road – 6%
- Cross slope – 5%

**\*\*\*Section 503.2.8; change to read as follows:**

**503.2.8 Angles of approach and departure.** The angles of approach and departure for fire apparatus access roads shall not exceed 6% or as approved by the Fire Code Official.

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**\*\*\*Section 503.3; change to read as follows:**

**503.3 Marking.** Where required by the Fire Code Official, approved signs or other approved notices or markings that include the words NO PARKING FIRE LANE Striping, signs, or other markings, when approved by the Fire Code Official, shall be provided for fire apparatus access roads to identify such roads or prohibit the obstruction thereof. The means by which fire lanes are designated Striping, signs and other markings shall be maintained in a clean and legible condition at all times and be replaced or repaired when necessary to provide adequate visibility.

(1) **Striping** – Fire apparatus access roads shall be continuously marked by painted lines of red traffic paint six inches (6”) in width to show the boundaries of the lane. The words “NO PARKING FIRE LANE” or “FIRE LANE NO PARKING” shall appear in four inch (4”) white letters at 25 feet intervals on the red border markings along both sides of the fire lanes. Where a curb is available, the striping shall be on the vertical face of the curb.

(2) **Signs** – Signs shall read “NO PARKING FIRE LANE” or “FIRE LANE NO PARKING” and shall be 12” wide and 18” high. Signs shall be painted on a white background with letters and borders in red, using not less than 2” lettering. Signs shall be permanently affixed to a stationary post and the bottom of the sign shall be six feet, six inches (6’-6”) above finished grade. Signs shall be spaced not more than fifty feet (50’) apart along both sides of the fire lane. Signs may be installed on permanent buildings or walls or as approved by the Fire Chief Code Official.

**503.3.1 Unauthorized marking.** No person may mark, post or otherwise identify a private passageway or public roadway as a fire lane, fire zone or in such a manner as tends to create confusion as to whether the passageway is a fire lane without obtaining approval by the fire code official.

*(Reason: Establishes a standard method of marking and reflects local long-standing practices.)*

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**\*\*\*Section 503.4; change to read as follows:**

**503.4 Obstruction of Fire Apparatus Access Roads.** Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Section 503.2.1 and any area marked as a fire lane as described in Section 503.3 shall be maintained at all times.

*(Reason: As originally worded, the section implied that vehicles could be parked in the marked fire lane and not be in violation if the minimum width is still maintained. Current accepted enforcement practice is to require the entire marked fire lane to be maintained clear and unobstructed.)*

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**\*\*\*Section 505.1; change to read as follows:**

**505.1 Address Identification.** New and existing buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be Arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches (102 mm) 6 inches (152.4 mm) high with a minimum stroke width of ½ inch (12.7 mm). Where required by the fire code official, address numbers shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road, buildings do not immediately front a street, and/or the building cannot be viewed from the public way, a monument, pole or other sign with approved 6 inch (152.4 mm) height building numerals or addresses and 4 inch (101.6 mm) height suite/apartment numerals of a color contrasting with the background of the building or other approved means shall be used to identify the structure. Numerals or addresses shall be posted on a minimum 20 inch (508 mm) by 30 inch (762 mm) background on border. Address identification shall be maintained.

**Exception:** R-3 Single Family occupancies shall have approved numerals of a minimum 3½ inches (88.9 mm) in height and a color contrasting with the background clearly visible and legible from the street fronting the property and rear alleyway where such alleyway exists.

*(Reason: To increase the minimum addressing requirements for commercial properties and establish a minimum for single-family residential properties, such improves legibility of these signs which are critical to emergency response in a more timely manner.)*

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**\*\*\*Section 506.1; add Section 506.1.3 to read as follows:**

**506.1.3 Knox box locations.** The key box shall be provided at the entrance to the sprinkler riser room and the fire pump room. Additional key boxes shall be placed at the main entrance to a large building when determined by the fire code official that it is necessary due to the size and remoteness from the sprinkler riser room and/or fire pump room.

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**\*\*\*Section 507.4; change to read as follows:**

**507.4 Water Supply Test Date and Information.** The water supply test used for hydraulic calculation of fire protection systems shall be conducted in accordance with NFPA 291 “Recommended Practice for Fire Flow Testing and Marking of Hydrants” and within one year of sprinkler plan submittal. The Fire Code Official shall be notified prior to the water supply test. Water supply tests shall be witnessed by the Fire Code Official, as required or approved documentation of the test shall be provided to the Fire Code Official prior to final approval of the water supply system. The exact location of the static/residual hydrant and the flow hydrant shall be indicated on the design drawings. All fire protection plan submittals shall be accompanied by a hard copy of the waterflow test report, or as approved by the Fire Code Official. The report must indicate the dominant water tank level at the time of the test and the maximum and minimum operating levels of the tank, as well, or identify applicable water supply fluctuation. The licensed contractor must then design the fire protection system based on this fluctuation information, as per the applicable referenced NFPA standard. Reference Section 903.3.5 for additional design requirements.

*(Reason: Clarifies intent of the test to ensure contractor accounts for water supply fluctuations.)*

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**\*\*\*Section 507.5.4; change to read as follows:**

**507.5.4 Obstruction.** Unobstructed access to fire hydrants shall be maintained at all times. Posts, fences, vehicles, growth, trash, storage and other materials or objects shall not be placed or kept near fire hydrants, fire department inlet connections or fire protection system control valves in a manner that would prevent such equipment or fire hydrants from being immediately discernible. The fire department shall not be deterred or hindered from gaining immediate access to fire protection equipment or fire hydrants.

*(Reason: Additional guidance based on legacy language to ensure these critical devices are available in an emergency incident.)*

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**\*\*\*Section 509.1.2; add new Section 509.1.2 to read as follows:**

**509.1.2 Sign Requirements.** Unless more stringent requirements apply, lettering for signs required by this section shall have a minimum height of 2 inches (50.8 mm) when located inside a building and 4 inches (101.6 mm) when located outside, or as approved by the Fire Code Official. The letters shall be of a color that contrasts with the background.

*(Reason: Provides direction as to appropriate sign criteria to develop local and regional consistency in this regard.)*

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**\*\*\*Section 603.3.2 and 603.3.2.1; change to read as follows:**

**603.3.1 Fuel oil storage in outside, above-ground tanks.** Where connected to a fuel-oil piping system, the maximum amount of fuel oil storage allowed outside above ground without additional protection shall be 660 gallons (2,498 L). The storage of fuel oil above ground in quantities exceeding 660 gallons (2,498 L) shall comply with NFPA 31 and Chapter 57.

**603.3.2 Fuel oil storage inside buildings.** Fuel oil storage inside buildings shall comply with Sections 603.3.2.1 through 603.3.2.5 ~~or~~ and Chapter 57.

**603.3.2.1 Quantity limits.** One or more fuel oil storage tanks containing Class II or III combustible liquid shall be permitted in a building. The aggregate capacity of all tanks shall not exceed the following:

1. 660 gallons (2,498 L) in unsprinklered buildings, where stored in a tank complying with UL 80, UL 142 or UL 2085; for Class III liquids, and also listed as a double-wall/secondary containment tank for Class II liquids.
2. 1,320 gallons (4,996 L) in buildings equipped with an automatic sprinkler system in accordance with Section 903.3.1.1, where stored in a tank complying with UL 142; or UL 2085 as a double-wall/secondary containment tank.
3. 3,000 gallons (11,356 L) where stored in protected above-ground tanks complying with UL 2085 and Section 5704.2.9.7 and the room is protected by an automatic sprinkler system in accordance with Section 903.3.1.1.

*(Reason: Issues addressed by Chapter 57, such as venting to outside of buildings, remote fill to outside of building, overfill protection, physical protection, etc., are not included in Section 603.3, so compliance with Chapter 57 is also required. The Board determined that fuel storage in such tanks inside of buildings is commonly in double-wall tanks, and that this inherent leak protection was prudent in order to allow these quantities of combustible liquids to be stored inside a building for such purpose.)*

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**\*\*\*Section 807.5.2.2 and 807.5.2.3; change to read as follows:**

**807.5.2.2 Artwork in Corridors.** Artwork and teaching materials shall be limited on the walls of corridors to not more than 20 percent of the wall area. Such materials shall not be continuous from floor to ceiling or wall to wall. Curtains, draperies, wall hangings, and other decorative material suspended from the walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 807 or be noncombustible.

**Exception:** Corridors protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 shall be limited to 50 percent of the wall area.

**807.5.2.3 Artwork in Classrooms.** Artwork and teaching materials shall be limited on walls of classrooms to not more than 50 percent of the specific wall area to which they are attached. Curtains, draperies, wall hangings and other decorative material suspended from the walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 807 or be noncombustible.

*(Reason: This change allows an increase in wall coverage due to the presence of sprinklers. Also provides additional guidance relative to fire resistance requirements in these areas.)*

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**\*\*\*Section 807.5.5.2 and 807.5.5.3; change to read as follows:**

~~**807.5.5.2 Artwork in Corridors.** Artwork and teaching materials shall be limited on the walls of corridors to not more than 20 percent of the wall area. Such materials shall not be continuous from floor to ceiling or wall to wall. Curtains, draperies, wall hangings and other decorative material suspended from the walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 807 or be noncombustible.~~

~~**Exception:** Corridors protected by an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 shall be limited to 50 percent of the wall area.~~

~~**807.5.5.3 Artwork in Classrooms.** Artwork and teaching materials shall be limited on walls of classrooms to not more than 50 percent of the specific wall area to which they are attached. Curtains, draperies, wall hangings and other decorative material suspended from the walls or ceilings shall meet the flame propagation performance criteria of NFPA 701 in accordance with Section 807 or be noncombustible.~~

~~*(Reason: This change allows an increase in wall coverage due to the presence of sprinklers. Also provides additional guidance relative to fire resistance requirements in these areas.)*~~

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**\*\*\*Section 901.4.6; add sentence at end of paragraph to read as follows:**

**901.4.6 Pump and riser room size.** *{Existing text to remain}* ... Minimum riser room size shall be 36 sq ft, with the minimum dimension being 6 feet.

**\*\*\*Section 901.4; add Section 901.4.6.5 to read as follows:**

**901.4.6.5 Fire protection equipment only.** Fire pump and automatic sprinkler system riser rooms shall be limited to equipment that is intended for fire protection and operations.

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**\*\*\*Section 901.6.1; add Section 901.6.1.1 to read as follows:**

**901.6.1.1 Standpipe Testing.** Building owners/managers must maintain and test standpipe systems as per NFPA 25 requirements. The following additional requirements shall be applied to the testing that is required every 5 years:

1. The piping between the Fire Department Connection (FDC) and the standpipe shall be backflushed or inspected by approved camera when foreign material is present or when caps are missing, and also hydrostatically tested for all FDC's on any type of standpipe system. Hydrostatic testing shall also be conducted in accordance with NFPA 25 requirements for the different types of standpipe systems.
2. For any manual (dry or wet) standpipe system not having an automatic water supply capable of flowing water through the standpipe, the tester shall connect hose from a fire hydrant or portable pumping system (as approved by the Fire Code Official) to each FDC, and flow water through the standpipe system to the roof outlet to verify that each inlet connection functions properly. Confirm that there are no open hose valves prior to introducing water into a dry standpipe. There is no required pressure criteria at the outlet. Verify that check valves function properly and that there are no closed control valves on the system.
3. Any pressure relief, reducing, or control valves shall be tested in accordance with the requirements of NFPA 25. All hose valves shall be exercised.
4. If the FDC is not already provided with approved caps, the contractor shall install such caps for all FDC's as required by the Fire Code Official.
5. Upon successful completion of standpipe test, place a blue tag (as per Texas Administrative Code, Fire Sprinkler Rules for Inspection, Test and Maintenance Service (ITM) Tag) at the bottom of each standpipe riser in the building. The tag shall be check-marked as "Fifth Year" for Type of ITM, and the note on the back of the tag shall read "5 Year Standpipe Test" at a minimum.
6. The procedures required by Texas Administrative Code Fire Sprinkler Rules with regard to Yellow Tags and Red Tags or any deficiencies noted during the testing, including the required notification of the local Authority Having Jurisdiction (Fire Code Official) shall be followed.
7. Additionally, records of the testing shall be maintained by the owner and contractor, if applicable, as required by the State Rules mentioned above and NFPA 25.
8. Standpipe system tests where water will be flowed external to the building shall not be conducted during freezing conditions or during the day prior to expected night time freezing conditions.
9. Contact the Fire Code Official for requests to remove existing fire hose from Class II and III standpipe systems where employees are not trained in the utilization of this firefighting equipment. All standpipe hose valves must remain in place and be provided with an approved cap and chain when approval is given to remove hose by the Fire Code Official.

*(Reason: Increases the reliability of the fire protection system and re-emphasizes the requirements of NFPA 25 relative to standpipe systems, as well as ensuring that FDC connections are similarly tested/maintained to ensure operation in an emergency incident.)*

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**\*\*\*Section 901.6.4; add Section 901.6.4 to read as follows:**

**901.6.4 False Alarms and Nuisance Alarms.** False alarms and nuisance alarms shall not be given, signaled or transmitted or caused or permitted to be given, signaled or transmitted in any manner.

*(Reason: Places the responsibility on the business or property owner to maintain their fire alarm systems in approved condition. Allows the enforcement of "prohibition of false alarms". Replaces text lost from the legacy codes that helps to ensure the maintenance of life safety systems.)*

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**\*\*\*Section 901.7; change to read as follows:**

**901.7 Systems Out of Service.** Where a required fire protection system is out of service or in the event of an excessive number of activations, the fire department and the Fire Code Official shall be notified immediately and, where required by the Fire Code Official, the building shall either be evacuated or an approved fire watch shall be provided for all occupants left unprotected by the shut down until the fire protection system has been returned to service....{Remaining text unchanged}

*(Reason: Gives Fire Code Official more discretion with regards to enforcement of facilities experiencing nuisance alarm or fire protection system activations necessitating correction/repair/replacement. The intent of the amendment is to allow local jurisdictions to enforce fire watches, etc., where needed to ensure safety of occupants where fire protection systems are experiencing multiple nuisance activations.)*

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**\*\*\*Section 903.1.1; change to read as follows:**

~~**903.1.1 Alternative Protection.** Alternative automatic fire extinguishing systems complying with Section 904 shall be permitted instead of in addition to automatic sprinkler protection where recognized by the applicable standard and, or as approved by the Fire Code Official.~~

~~*(Reason: Such alternative systems do not provide the reliability of automatic sprinkler protection. Most gaseous type systems are highly susceptible to open doors, ceiling or floor tile removal, etc. However, an applicant could pursue an Alternate Method request to help mitigate the reliability issues with these alternative systems with the Fire Code Official if so desired, or there may be circumstances in which the fire code official is acceptable to allowing an alternate system in lieu of sprinklers, such as kitchen hoods or paint booths.)*~~

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**\*\*\*Section 903.2; add paragraph to read as follows and delete the exception:**

**903.2 Where required.** *{Existing text unchanged}*

*Automatic Sprinklers shall not be installed in elevator machine rooms, elevator machine spaces, and elevator hoistways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances. Storage shall not be allowed within the elevator machine room. Signage shall be provided at the entry doors to the elevator machine room indicating "ELEVATOR MACHINERY – NO STORAGE ALLOWED."*

*(Reason: Firefighter and public safety. This amendment eliminates the shunt trip requirement of the International Building Code Section 3005.5 for the purpose of elevator passenger and firefighter safety. This amendment is contingent on the Building Code amendment eliminating the Exceptions to Section 3005.4, such that passive fire barriers for these areas are maintained. The exception deletion is due to the fact that such telecom areas pose an undue fire risk to the structural integrity of the building.)*

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**\*\*\*Section 903.2.8; add Section 903.2.8.5 to read as follows:**

**903.2.9.3 Storage rooms.** Within Group R occupancies, storage areas that are leased or rented shall comply with Section 903.2.9.3.1.

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**\*\*\*Section 903.2.9; add Section 903.2.9.3 and 903.2.9.3.1 to read as follows:**

~~**903.2.9.3 Self-Service Storage Facility.** An automatic sprinkler system shall be installed throughout all self-service storage facilities.~~

~~**903.2.9.3.1 Vertical storage limits.** A screen shall be installed at eighteen (18) inches below the level of the sprinkler heads to restrict storage above that level. This screen shall be a mesh of not less than one (1) inch nor greater than six (6) inches in size. The screen and its supports shall be installed such that all elements are at least eighteen (18) inches below any sprinkler heads, measured from the level of the sprinkler deflector.~~

~~*(Reason: Fire departments are unable to inspect these commercial occupancies and are unaware of the contents being stored. Previous allowance to separate units by fire barriers is difficult to enforce maintenance after opening.)*~~



**\*\*\*Section 903.2.11; change 903.2.11.3 and add 903.2.11.7 and 903.2.11.8, and 903.2.11.9 as follows:**

**903.2.11.3 Buildings 55 Feet or more in Height.** An automatic sprinkler system shall be installed throughout buildings that have one or more stories ~~with an occupant load of 30 or more, other than penthouses in compliance with Section 1510 of the International Building Code,~~ located 55 feet (16 764 mm) or more above the lowest level of fire department vehicle access, measured to the finished floor.

**Exceptions:**

- 1- Open parking structures in compliance with Section 406.5 of the International Building Code, having no other occupancies above the subject garage.
- 2- ~~Occupancies in Group F-2.~~

**903.2.11.7 High-Piled Combustible Storage.** For any building with a clear height exceeding 12 feet (4,572 mm), see Chapter 32 to determine if those provisions apply.

**903.2.11.8 Spray Booths and Spray Rooms.** New and existing spray booths and spraying rooms shall be protected by an approved automatic fire-extinguishing system. Existing spray booths or spray rooms that are not already equipped with an approved automatic fire suppression system will be required to come into compliance by January 1, 2023.

~~**903.2.11.9 Buildings Over 6,000 sq. ft.** An automatic sprinkler system shall be installed throughout all buildings with a building area 6,000 sq. ft. or greater and in all existing buildings that are enlarged to be 6,000 sq. ft. or greater. For the purpose of this provision, fire walls shall not define separate buildings.~~

**Exception:** Open parking garages in compliance with Section 406.5 of the International Building Code.

*(Reason: Provides jurisdictions options as to their desired level of sprinkler protection based on multiple factors including firefighting philosophies/capabilities.)*

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**\*\*\*Section 903.3.1.1.1; change Section 903.3.1.1.1 and add Section 903.3.1.1.3 to read as follows:**

**903.3.1.1.1 Exempt Locations.** When approved by the Fire Code Official, automatic sprinklers shall not be required in the following rooms or areas where such...{Existing text unchanged}...because it is damp, of fire-resistance-rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the Code Official.
3. Generator and transformer rooms, under the direct control of a public utility, separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire-resistance rating of not less than 2 hours.
- 4- ~~In rooms or areas that are of noncombustible construction with wholly noncombustible contents.~~
5. Fire service access—Elevator machine rooms, and machinery spaces, and hoistways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances.
6. ~~{Delete}~~

**903.3.1.1.3 Residential systems.** In Group R occupancies, an NFPA 13 fire sprinkler system installed in accordance with 903.1.1 shall be required where the building is designed to exceed the maximum allowable factors of Tables 504.3, 504.4, or 506.2 of the 2018 International Building Code for the occupancy classification and construction type. For the purposes of this provision, fire walls shall not define separate buildings.

*(Reason: Gives more direction to code official. Exception 4 deleted to provide protection where fire risks are poorly addressed. Amendment 903.2 addresses Exception 5 above relative to the elimination of sprinkler protection in these areas to avoid the shunt trip requirement.)*

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~~\*\*\*Section 903.3.1.2.3; delete section and replace as follows:~~

~~Section 903.3.1.2.3 Attached Garages and Attics. Sprinkler protection is required in attached garages, and in the following attic spaces:~~

- ~~1. Attics that are used or intended for living purposes or storage shall be protected by an automatic sprinkler system.~~
- ~~2. Where fuel-fired equipment is installed in an unsprinklered attic, not fewer than one quick-response intermediate temperature sprinkler shall be installed above the equipment.~~
- ~~3. Attic spaces of buildings that are two or more stories in height above grade plane or above the lowest level of fire department vehicle access.~~
- ~~4. Group R-4, Condition 2 occupancy attics not required by Item 1 or 3 to have sprinklers shall comply with one of the following:~~
  - ~~4.1. Provide automatic sprinkler system protection.~~
  - ~~4.2. Provide a heat detection system throughout the attic that is arranged to activate the building fire alarm system.~~
  - ~~4.3. Construct the attic using noncombustible materials.~~
  - ~~4.4. Construct the attic using fire-retardant-treated wood complying with Section 2303.2 of the International Building Code.~~
  - ~~4.5. Fill the attic with noncombustible insulation.~~

~~(Reason: Attic protection is required due to issues with fire exposure via soffit vents, as well as firefighter safety. Several jurisdictions indicated experience with un-protected attic fires resulting in displacement of all building occupants. NFPA 13 provides for applicable attic sprinkler protection requirements, as well as exemptions to such, based on noncombustible construction, etc. Attached garages already require sprinklers via NFPA 13R — this amendment just re-emphasizes the requirement.)~~

~~\*\*\*Section 903.3.1.3; change to read as follows:~~

~~**903.3.1.3 NFPA 13D Sprinkler Systems.** Automatic sprinkler systems installed in one- and two-family dwellings; Group R-3; Group R-4, Condition 1; and townhouses shall be permitted to be installed throughout in accordance with NFPA 13D or in accordance with state law.~~

~~(Reason: To allow the use of the Plumbing section of the International Residential Code (IRC) and recognize current state stipulations in this regard.)~~

~~\*\*\*Section 903.3.1.4; add to read as follows:~~

~~**[F] 903.3.1.4 Freeze protection.** Freeze protection systems for automatic fire sprinkler systems shall be in accordance with the requirements of the applicable referenced NFPA standard and this section.~~

~~**903.3.1.4.1 Attics.** Only dry-pipe, preaction, or listed antifreeze automatic fire sprinkler systems shall be allowed to protect attic spaces.~~

~~**Exception:** Wet-pipe fire sprinkler systems shall be allowed to protect non-ventilated attic spaces where:~~

- ~~1. The attic sprinklers are supplied by a separate floor control valve assembly to allow ease of draining the attic system without impairing sprinklers throughout the rest of the building, and~~
- ~~2. Adequate heat shall be provided for freeze protection as per the applicable referenced NFPA standard, and~~
- ~~3. The attic space is a part of the building's thermal, or heat, envelope, such that insulation is provided at the roof deck, rather than at the ceiling level.~~

~~**903.3.1.4.2 Heat trace/insulation.** Heat trace/insulation shall only be allowed where approved by the fire code official for small sections of large diameter water-filled pipe.~~

~~(Reason: In the last few years, severe winters brought to light several issues with current practices for sprinkling attics, not the least of which was wet-pipe sprinklers in ventilated attics provided with space heaters, etc. for freeze protection of such piping. This practice is not acceptable for the protection of water-filled piping in a ventilated attic space as it does not provide a reliable means of maintaining the minimum~~

40 degrees required by NFPA, wastes energy, and presents a potential ignition source to the attic space. Listed antifreeze is specifically included because NFPA currently allows such even though there is no currently listed antifreeze at the time of development of these amendments. The intent of this amendment is to help reduce the large number of freeze breaks that have occurred in the past with water-filled wet-pipe sprinkler systems in the future, most specifically in attic spaces.)

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**\*\*\*Section 903.3.5; add a second paragraph to read as follows:**

Water supply as required for such systems shall be provided in conformance with the supply requirements of the respective standards; however, every water-based fire protection system shall be designed with a 10 psi safety factor. Reference Section 507.4 for additional design requirements.

*(Reason: To define uniform safety factor for the region.)*

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**\*\*\*Section 903.4; add a second paragraph after the exceptions to read as follows:**

Sprinkler and standpipe system water-flow detectors shall be provided for each floor tap to the sprinkler system and shall cause an alarm upon detection of water flow for more than 45 seconds. All control valves in the sprinkler and standpipe systems except for fire department hose connection valves shall be electrically supervised to initiate a supervisory signal at the central station upon tampering.

*(Reason: To avoid significant water losses. Consistent with amendment to IFC 905.9.)*

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**\*\*\*Section 903.4.2; add second paragraph to read as follows:**

The alarm device required on the exterior of the building shall be a weatherproof horn/strobe notification appliance with a minimum 75 candela strobe rating, installed as close as practicable to the fire department connection.

*(Reason: Fire department connections are not always located at the riser; this allows the fire department faster access.)*

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**\*\*\*Section 905.2; change to read as follows:**

**905.2 Installation Standard.** Standpipe systems shall be installed in accordance with this section and NFPA 14. Fire department connections for standpipe systems shall be in accordance with Section 912. Manual dry standpipe systems shall be supervised with a minimum of 10 psig and a maximum of 40 psig air pressure with a high/low alarm.

*(Reason: To define manual dry standpipe supervision requirements. Helps ensure the integrity of the standpipe system via supervision, such that open hose valves will result in a supervisory low air alarm.)*

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**\*\*\*Section 905.3; add Section 905.3.9 and exception to read as follows:**

**905.3.9 Buildings Exceeding ~~40,000~~ 12,000 sq. ft.** In buildings exceeding ~~40,000~~ 12,000 square feet in (1,115 m<sup>2</sup>) area per story and where any portion of the building's interior area is more than 200 feet (60,960 mm) of travel, vertically and horizontally, from the nearest point of fire department vehicle access, Class I automatic wet or manual wet standpipes shall be provided.

**Exceptions:**

1. Automatic dry, semi-automatic dry, and manual dry standpipes are allowed as provided for in NFPA 14 where approved by the Fire Code Official.
2. R-2 occupancies of four stories or less in height having no interior corridors.

*(Reason: Allows for the rapid deployment of hose lines to the body of the fire. Manual dry option added this edition.)*

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**\*\*\*Section 905.4, change Item 1, 3, and 5, and add Item 7 to read as follows:**

1. In every required interior exit stairway, a hose connection shall be provided for each story above and below grade plane. Hose connections shall be located at an intermediate landing between stories, unless otherwise approved by the Fire Code Official.
2. {Existing text unchanged}
3. In every exit passageway, at the entrance from the exit passageway to other areas of a building.

**Exception:** Where floor areas adjacent to an exit passageway are reachable from an ~~interior~~ exit stairway hose connection by a *{Remainder of text unchanged}*

4. *{Existing text unchanged}*
5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3-percent slope), each standpipe shall be provided with a two-way a-hose connection shall be located to serve the roof or at the highest landing of an ~~interior~~ exit stairway with stair access to the roof provided in accordance with Section 1011.12.
6. *{Existing text unchanged}*
7. When required by this Chapter, standpipe connections shall be placed adjacent to all required exits to the structure and at two hundred feet (200') intervals along major corridors thereafter, or as otherwise approved by the Fire Code Official.

*(Reason: Item 1, 3, and 5 amendments to remove 'interior' will help to clarify that such connections are required for all 'exit' stairways, to ensure firefighter capabilities are not diminished in these tall buildings, simply because the stair is on the exterior of the building. Item 5 reduces the amount of pressure required to facilitate testing, and provides backup protection for fire fighter safety. Item 7 allows for the rapid deployment of hose lines to the body of the fire.)*

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**\*\*\*Section 905.9; add a second paragraph after the exceptions to read as follows:**

Sprinkler and standpipe system water-flow detectors shall be provided for each floor tap to the sprinkler system and shall cause an alarm upon detection of water flow for more than 45 seconds. All control valves in the sprinkler and standpipe systems except for fire department hose connection valves shall be electrically supervised to initiate a supervisory signal at the central station upon tampering.

*(Reason: To avoid significant water losses. Consistent with amendment to IFC 903.4.)*

---

**\*\*\*Section 907.1; add Section 907.1.4 and 907.1.4.1 to read as follows:**

**907.1.4 Design Standards.** ~~Where a new fire alarm system is installed, the devices shall be addressable. Fire alarm systems utilizing more than 20 smoke detectors shall have analog initiating devices. Where a new fire alarm system is installed with more than 20 initiating devices, the devices shall be addressable type devices.~~

*(Reason: Provides for the ability of descriptive identification of alarms, and reduces need for panel replacement in the future. Updated wording to match the language of the new requirement at 907.5.2.3. Change of terminology allows for reference back to definitions of NFPA 72.*

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**\*\*\*Section 907.2.1; change to read as follows and add Section 907.2.1.3:**

**907.2.1 Group A.** A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group A occupancies ~~where the having an~~ occupant load ~~due to the assembly occupancy is of~~ 300 or more persons, or where the Group A occupant load is more than 100 persons above or below the lowest level of exit discharge. Group A occupancies not separated from one another in accordance with Section 707.3.-10 of the International Building Code shall be considered as a single occupancy for the purposes of applying this section. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy.

**Exception:** *{Existing text unchanged}*

Activation of fire alarm notification appliances shall:

1. Cause illumination of the means of egress with light of not less than 1 foot-candle (11 lux) at the walking surface level, and
2. Stop any conflicting or confusing sounds and visual distractions.
3. Activation of a pre-recorded message clearly audible throughout the building when occupant load is over 1,000 people.

*(Reason: Increases the requirement to be consistent with Group B requirement. Also addresses issue found in Group A occupancies of reduced lighting levels and other A/V equipment that distracts from fire alarm notification devices or reduces ability of fire alarm system to notify occupants of the emergency condition.)*

**\*\*\*Section 907.2.3; change to read as follows:**

**907.2.3 Group E.** A manual fire alarm system that initiates the occupant notification signal utilizing an emergency voice/alarm communication system meeting the requirements of Section 907.5.2.2 and installed in accordance with Section 907.6 shall be installed in Group E educational occupancies. When automatic sprinkler systems or smoke detectors are installed, such systems or detectors shall be connected to the building fire alarm system. An approved smoke detection system shall be installed in Group E day care occupancies. Unless separated by a minimum of 100' open space, all buildings, whether portable buildings or the main building, will be considered one building for alarm occupant load consideration and interconnection of alarm systems.

**Exceptions:**

1. *{Existing text unchanged}*
  - 1.1. Residential In-Home day care with not more than 12 children may use interconnected single station detectors in all habitable rooms. (For care of more than five children 2 1/2 or less years of age, see Section 907.2.6.) *{No change to remainder of exceptions}*

*(Reason: To distinguish educational from day care occupancy minimum protection requirements. Further, to define threshold at which portable buildings are considered a separate building for the purposes of alarm systems. Exceptions provide consistency with State law concerning such occupancies.)*

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**\*\*\*Section 907.2.12, Exception 3; change to read as follows:**

3. Open air portions of buildings with an occupancy in Group A-5 in accordance with Section 303.1 of the International Building Code; however, this exception does not apply to accessory uses including but not limited to sky boxes, restaurants, and similarly enclosed areas.

*(Reason: To indicate that enclosed areas within open air seating type occupancies are not exempted from automatic fire alarm system requirements.)*

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**\*\*\*Section 907.4.2; add Section 907.4.2.7 to read as follows:**

**907.4.2.7 Type.** Manual alarm initiating devices shall be an approved double action type.

*(Reason: Helps to reduce false alarms.)*

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**\*\*\*Section 907.5.3; add Section 907.5.3 to read as follows:**

**907.5.3 Occupant notification.** Occupant notification in accordance with this section and 907.5 shall be required for all new construction, or existing construction complying with the International Building Code, for renovations to existing buildings, tenant spaces, changes in occupancy, replacement or modification of the existing fire alarm system, or as required by the Fire Code Official, for all buildings or spaces provided with an approved automatic fire sprinkler system.

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**\*\*\*Section 907.6.1; add Section 907.6.1.1 to read as follows:**

**907.6.1.1 Wiring Installation.** ~~All fire alarm systems shall be installed in such a manner that a failure of any single initiating device or single open in an initiating circuit conductor will not interfere with the normal operation of other such devices. All signaling line circuits (SLC) shall be installed in such a way that a single open will not interfere with the operation of any addressable devices (Class A). Outgoing and return SLC conductors shall be installed in accordance with NFPA 72 requirements for Class A circuits and shall have a minimum of four feet separation horizontal and one foot vertical between supply and return circuit conductors. The initiating device circuit (IDC) from a signaling line circuit interface device may be wired Class B, provided the distance from the interface device to the initiating device is ten feet or less.~~

~~*(Reason: To provide uniformity in system specifications and guidance to design engineers. Improves reliability of fire alarm devices and systems.)*~~

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**\*\*\*Section 907.6.3; delete all four Exceptions.**

~~*(Reason: To assist responding personnel in locating the emergency event for all fire alarm systems. This is moved from 907.6.5.3 in the 2012 IFC and reworded to match new code language and sections.)*~~

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**\*\*\*Section 907.6.6; – add sentence at end of paragraph to read as follows:**

See 907.6.3 for the required information transmitted to the supervising station.

*(Reason: To assist responding personnel in locating the emergency event for all fire alarm systems. This is moved from 907.6.5.3 in the 2012 IFC and reworded to match new code language and sections.)*

**\*\*\*Section 909.22; add to read as follows:**

**909.22 Stairway or Ramp Pressurization Alternative.** Where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and the stair pressurization alternative is chosen for compliance with Building Code requirements for a smokeproof enclosure, interior exit stairways or ramps shall be pressurized to a minimum of 0.10 inches of water (25 Pa) and a maximum of 0.35 inches of water (87 Pa) in the shaft relative to the building measured with all interior exit stairway and ramp doors closed under maximum anticipated conditions of stack effect and wind effect. Such systems shall comply with Section 909, including the installation of a separate fire-fighter's smoke control panel as per Section 909.16, and a Smoke Control Permit shall be required from the fire department as per Section 105.7.

**909.22.1 Ventilating equipment.** The activation of ventilating equipment for the stair or ramp pressurization system shall be by smoke detectors installed at each floor level at an approved location at the entrance to the smokeproof enclosure. When the closing device for the stairway or ramp shaft and vestibule doors is activated by smoke detection or power failure, the mechanical equipment shall activate and operate at the required performance levels. Smoke detectors shall be installed in accordance with Section 907.3.

**909.22.1.1 Ventilation Systems.** Smokeproof enclosure ventilation systems shall be independent of other building ventilation systems. The equipment, control wiring, power wiring and ductwork shall comply with one of the following:

1. Equipment, control wiring, power wiring and ductwork shall be located exterior to the building and directly connected to the smokeproof enclosure or connected to the smokeproof enclosure by ductwork enclosed by not less than 2-hour fire barriers constructed in accordance with Section 707 of the Building Code or horizontal assemblies constructed in accordance with Section 711 of the Building Code, or both.
2. Equipment, control wiring, power wiring and ductwork shall be located within the smokeproof enclosure with intake or exhaust directly from and to the outside or through ductwork enclosed by not less than 2-hour barriers constructed in accordance with Section 707 of the Building Code or horizontal assemblies constructed in accordance with Section 711 of the Building Code, or both.
3. Equipment, control wiring, power wiring and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical equipment, by not less than 2-hour fire barriers constructed in accordance with Section 707 of the Building Code or horizontal assemblies constructed in accordance with Section 711 of the Building Code, or both.

**Exceptions:**

1. Control wiring and power wiring utilizing a 2-hour rated cable or cable system.
2. Where encased with not less than 2 inches (51 mm) of concrete.
3. Control wiring and power wiring protected by a listed electrical circuit protective systems with a fire-resistance rating of not less than 2 hours.

**909.21.1.2 Standby Power.** Mechanical vestibule and stairway and ramp shaft ventilation systems and automatic fire detection systems shall be provided with standby power in accordance with Section 2702 of the Building Code.

**909.22.1.3 Acceptance and Testing.** Before the mechanical equipment is approved, the system shall be tested in the presence of the Fire Code Official to confirm that the system is operating in compliance with these requirements.



*(Reason: To assist with enforcement of such as a smoke control system, as per Section 909.6.3, especially since a permit is now specifically required for such systems in the Fire Code. Also ensures that a firefighter's override panel is provided as per 909.16 for such systems. The above amendment copies the applicable requirements for such systems from Section 909.20 of the Building Code into the Fire Code. Although the published code did copy the elevator pressurization requirements into the Fire Code, it did not copy over the stair pressurization requirements.)*

**\*\*\*Section 910.2; change Exception 2. and 3.to read as follows:**

2. Only manual smoke and heat removal shall not be required in areas of buildings equipped with early suppression fast-response (ESFR) sprinklers. Automatic smoke and heat removal is prohibited.
3. Only manual smoke and heat removal shall not be required in areas of buildings equipped with control mode special application sprinklers with a response time index of  $50(m^*S)^{1/2}$  or less that are listed to control a fire in stored commodities with 12 or fewer sprinklers. Automatic smoke and heat removal is prohibited.

*(Reason: Allows the fire department to control the smoke and heat during and after a fire event, while still prohibiting such systems from being automatically activated, which is a potential detriment to the particular sprinkler systems indicated.)*

**\*\*\*Section 910.2; add subsections 910.2.3 with exceptions to read as follows:**

**910.2.3 Group H.** Buildings and portions thereof used as a Group H occupancy as follows:

1. In occupancies classified as Group H-2 or H-3, any of which are more than 45,000 12,000 square feet (4,394 1,115 m<sup>2</sup>) in single floor area.

Exception: Buildings of noncombustible construction containing only noncombustible materials.

2. In areas of buildings in Group H used for storing Class 2, 3, and 4 liquid and solid oxidizers, Class 1 and unclassified detonable organic peroxides, Class 3 and 4 unstable (reactive) materials, or Class 2 or 3 water-reactive materials as required for a high-hazard commodity classification.

Exception: Buildings of noncombustible construction containing only noncombustible materials.

*(Reason: Maintains a fire protection device utilized in such occupancies where it is sometimes necessary to allow chemicals to burn out, rather than extinguish.)*

**\*\*\*Section 910.3; add section 910.3.4 to read as follows:**

**910.3.4 Vent Operation.** Smoke and heat vents shall be capable of being operated by approved automatic and manual means. Automatic operation of smoke and heat vents shall conform to the provisions of Sections 910.3.2.1 through 910.3.2.3.

**910.3.4.1 Sprinklered buildings.** Where installed in buildings equipped with an approved automatic sprinkler system, smoke and heat vents shall be designed to operate automatically. The automatic operating mechanism of the smoke and heat vents shall operate at a temperature rating at least 100 degrees F (approximately 38 degrees Celsius) greater than the temperature rating of the sprinklers installed.

Exception: Manual only systems per Section 910.2.

**910.3.4.2 Nonsprinklered Buildings.** Where installed in buildings not equipped with an approved automatic sprinkler system, smoke and heat vents shall operate automatically by actuation of a heat-responsive device rated at between 100°F (56°C) and 220°F (122°C) above ambient.

Exception: Listed gravity-operated drop out vents.

*(Reason: Amendment continues to keep applicable wording from prior to the 2012 edition of the IFC. Specifically, automatic activation criteria is no longer specifically required in the published code. Specifying a temperature range at which smoke and heat vents should activate in sprinklered buildings helps to ensure that the sprinkler system has an opportunity to activate and control the fire prior to vent operation.)*

**\*\*\*Section 910.4.3.1; change to read as follows:**

**910.4.3.1 Makeup Air.** Makeup air openings shall be provided within 6 feet (1,829 mm) of the floor level. Operation of makeup air openings shall be ~~manual or~~ automatic. The minimum gross area of makeup air inlets shall be 8 square feet per 1,000 cubic feet per minute (0.74 m<sup>2</sup> per 0.4719 m<sup>3</sup>/s) of smoke exhaust.

*(Reason: Makeup air has been required to be automatic for several years now in this region when mechanical smoke exhaust systems are proposed. This allows such systems to be activated from the smoke control panel by first responders without having to physically go around the exterior of the building opening doors manually. Such requires a significant number of first responders on scene to conduct this operation and significantly delays activation and/or capability of the smoke exhaust system.)*

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**\*\*\*Section 912.2; add Section 912.2.3 to read as follows:**

**912.2.3 Hydrant Distance.** ~~An approved fire hydrant shall be located within 100 feet of the fire department connection as the fire hose lays along an unobstructed path. The fire department connection shall be located within 100 feet of an approved fire hydrant as the fire hose lays along an approved unobstructed path.~~

*(Reason: To accommodate limited hose lengths, improve response times where the FDC is needed to achieve fire control, and improve ease of locating a fire hydrant in those situations also. Also, consistent with NFPA 14 criteria.)*

---

**\*\*\*Section 913.2.1; add second paragraph and exception to read as follows:**

**913.2.1.1 Fire Pump Room Access.** ~~When located on the ground level at an exterior wall, the fire pump room shall be provided with an exterior fire department access door that is not less than 3 ft. in width and 6 ft. – 8 in. in height, regardless of any interior doors that are provided. A key box shall be provided at this door, as required by IFC Section 506.1.~~

**Exception:** ~~When it is necessary to locate the fire pump room on other levels or not at an exterior wall, the corridor leading to the fire pump room access from the exterior of the building shall be provided with equivalent fire resistance as that required for the pump room, or as approved by the Fire Code Official. Access keys shall be provided in the key box as required by IFC Section 506.1.~~

*(Reason: This requirement allows fire fighters safer access to the fire pump room. The requirement allows access without being required to enter the building and locate the fire pump room interior access door during a fire event. The exception recognizes that this will not always be a feasible design scenario for some buildings, and as such, provides an acceptable alternative to protect the pathway to the fire pump room.)*

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**\*\*\*Section 914.3.1.2; change to read as follows:**

**914.3.1.2 Water Supply to required Fire Pumps.** In buildings that are more than ~~420~~ 120 feet (37 m) in building height, required fire pumps shall be supplied by connections to no fewer than two water mains located in different streets. Separate supply piping shall be provided between each connection to the water main and the pumps. Each connection and the supply piping between the connection and the pumps shall be sized to supply the flow and pressure required for the pumps to operate.

**Exception:** {No change to exception}

*(Reason: The 2009 edition of the IFC added this requirement based on a need for redundancy of the water supply similar to the redundancy of the power supply to the fire pumps required for such tall buildings, partially due to the fact that these buildings are rarely fully evacuated in a fire event. More commonly, the alarm activates on the floor of the event, the floor above and the floor below. Back-up power to the fire pump becomes critical for this reason. Certainly, the power is pointless if the water supply is impaired for any reason, so a similar requirement is provided here for redundant water supplies. The 2015 edition changes the requirement to only apply to very tall buildings over 420 ft. This amendment modifies/lowers the requirement to 120 ft., based on this same height requirement for fire service access elevators. Again,*

the language from the 2009 and 2012 editions of the code applied to any high-rise building. This compromise at 120 ft. is based on the above technical justification of defend-in-place scenarios in fire incidents in such tall structures.)

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**\*\*\*Section 1006.2.2.7; Add Section 1006.2.2.7 as follows:**

**1006.2.2.7 Electrical Rooms.** For electrical rooms, special exiting requirements may apply. Reference the electrical code as adopted.

*(Reason: Cross reference necessary for coordination with the NEC which has exiting requirements as well.)*

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**\*\*\*Section 1009.8; add the following Exception 7:**

**1009.8 Two Way Communication.** A two-way communication system complying with Sections 1009.8.1 and 1009.8.2 shall be provided at the landing serving each elevator required to be accessible on each accessible floor that is one or more stories above or below the level of exit discharge.

**Exceptions:**

7. Buildings regulated under State Law and built in accordance with State registered plans, including variances or waivers granted by the State, shall be deemed to be in compliance with the requirements of Section 1009 and chapter 11.

*(Reason: To accommodate buildings regulated under Texas State Law and to be consistent with amendments in Chapter 11.)*

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**\*\*\*Section 1010.1.9.5 Bolt Locks; amend exceptions 3 and 4 as follows:**

**Exceptions:**

3. Where a pair of doors serves an occupant load of less than 50 persons in a Group B, F, M or S occupancy. (Remainder unchanged)
4. Where a pair of doors serves a Group A, B, F, M or S occupancy {Remainder of text unchanged}

*(Reason: Application to M occupancies reflects regional practice; No. 4 expanded to Group A due to it being a similar scenario to other uses; No. 4 was regional practice.)*

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**\*\*\*Section 1010.1.9.9; Add item 8 to read as follows:**

8. If a full building smoke detection is not provided, approved smoke detectors shall be provided on both the access and egress sides of doors and in a location approved by the authority having jurisdiction of NFPA 72. Actuation of a smoke detector shall automatically unlock the door.

---

**\*\*\*Section 1015.8; Amend item 1 to read as follows:**

1. Operable windows where the top of the sill of the opening is located more than 55 (75) feet above the finished grade or other surface below and that are provided with the window fall prevention device that comply with ASTM F 2006.

---

**\*\*\*Section 1020.1 Construction; add exception 6 to read as follows:**

6. In group B occupancies, corridor walls and ceilings need not be of fire-resistive construction within a single tenant space when the space is equipped with approved automatic smoke-detection within the corridor. The actuation of any detector must activate self-annunciating alarms audible in all areas within the corridor. Smoke detectors must be connected to an approved automatic fire alarm system where such system is provided.

*(Reason: Regionally accepted alternate method.)*

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**\*\*\*Section 1029.1.1.1 Spaces under grandstands and bleachers; delete this section.**

*(Reason: Unenforceable.)*

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**\*\*\*Section 1031.2; change to read as follows:**

**1031.2 Reliability.** Required exit accesses, exits and exit discharges shall be continuously maintained free from obstructions or impediments to full instant use in the case of fire or other emergency. ~~where the building area served by the means of egress is occupied.~~ An exit or exit passageway shall not be used for any purpose that interferes with a means of egress.

*(Reason: Maintain legacy levels of protection and long-standing regional practice, and provide firefighter safety.)*

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**\*\*\*Section 1103.3; add sentence to end of paragraph as follows:**

Provide emergency signage as required by Section 606.3.

*(Reason: Coordinates requirements of previous amendment.)*

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**\*\*\*Section 1103.5.1; add sentence to read as follows:**

~~Fire sprinkler system installation shall be completed within 24 months from date of notification by the Fire Code Official.~~

*(Reason: Regional consistency of this retroactive requirement to allow business owners adequate time to budget to accommodate the cost of the fire sprinkler system.)*

---

**\*\*\*Section 1103.5; add Section 1103.5.5 to read as follows:**

**1103.5.5 Spray Booths and Spray Rooms.** New and existing spray booths and spraying rooms shall be protected by an approved automatic fire-extinguishing system. Existing spray booths or spray rooms that are not already equipped with an approved automatic fire suppression system will be required to come into compliance by January 1, 2023.

*(Reason: Consistent with amendment to IFC 2404, and long-standing regional requirement to protect this hazardous operation.)*

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**\*\*\*Section 1103.7; add Section 1103.7.7 and 1103.7.7.1 to read as follows:**

**1103.7.7 Fire Alarm System Design Standards.** ~~Where an existing fire alarm system is upgraded or replaced, the devices shall be addressable. Fire alarm systems utilizing more than 20 smoke and/or heat detectors shall have analog initiating devices. Where 20 or more devices of an existing fire alarm are upgraded or replaced, the devices shall be addressable type devices.~~

**Exception:** Existing systems need not comply unless the total building, or fire alarm system, remodel or expansion exceeds 30% of the building. When cumulative building, or fire alarm system, remodel or expansion initiated after the date of original fire alarm panel installation exceeds 50% of the building, or fire alarm system, the fire alarm system must comply within 18 months of permit application.

**1103.7.7.1 Communication requirements.** Refer to Section 907.6.6 for applicable requirements.

*(Reason: To assist responding personnel in locating the emergency event and provide clarity as to percentages of work that results in a requirement to upgrade the entire fire alarm system.)*

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**\*\*\*Section 1203; change and add to read as follows:**

**1203.1.1** *{Existing text unchanged}*

**1203.1.2** *{Existing text unchanged}*

**1203.1.3** Emergency power systems and standby power systems shall be installed in accordance with the International Building Code, NFPA 70, NFPA 110 and NFPA 111. Existing installations shall be maintained in accordance with the original approval, except as specified in Chapter 11.

**1203.1.4 through 1203.1.9** *{No changes to these sections.}*

**1203.1.10 Critical Operations Power Systems (COPS).** For Critical Operations Power Systems necessary to maintain continuous power supply to facilities or parts of facilities that require continuous operation for the reasons of public safety, emergency management, national security, or business continuity, see NFPA 70.

**1203.2 Where Required.** Emergency and standby power systems shall be provided where required by Sections 1203.2.1 through 1203.2.4~~826~~ or elsewhere identified in this code or any other referenced code.

**1203.2.1 through 1203.2.3** *{Existing text unchanged}*

**1203.2.4 Emergency Voice/Alarm Communications Systems.** Emergency power shall be provided for emergency voice/alarm communications systems in the following occupancies, or as specified elsewhere in this code, as required in Section 907.5.2.2.5. The system shall be capable of powering the required load for a duration of not less than 24 hours, as required in NFPA 72.

1. Covered and Open Malls, Section 907.2.19 and 914.2.3
2. Group A Occupancies, Sections 907.2.1 and 907.5.2.2.4.
3. Special Amusement Buildings, Section 907.2.11
4. High-rise Buildings, Section 907.2.12
5. Atriums, Section 907.2.13
6. Deep Underground Buildings, Section 907.2.18

**1203.2.5 through 1203.2.13** *{Existing text unchanged}*

**1203.2.14 Means of Egress Illumination.** Emergency power shall be provided for means of egress illumination in accordance with Sections 1008.3 and 1104.5.1. **(90 minutes)**

**1203.2.15 Membrane Structures.** Emergency power shall be provided for exit signs in temporary tents and membrane structures in accordance with Section 3103.12.6. **(90 minutes)** Standby power shall be provided for auxiliary inflation systems in permanent membrane structures in accordance with Section 2702 of the International Building Code. **(4 hours)** Auxiliary inflation systems shall be provided in temporary air-supported and air-inflated membrane structures in accordance with section 3103.10.4.

**1203.2.16** *{Existing text unchanged}*

**1203.2.17 Smoke Control Systems.** Standby power shall be provided for smoke control systems in the following occupancies, or as specified elsewhere in this code, as required in Section 909.11:

1. Covered Mall Building, International Building Code, Section 402.7
2. Atriums, International Building Code, Section 404.7
3. Underground Buildings, International Building Code, Section 405.8
4. Group I-3, International Building Code, Section 408.4.2
5. Stages, International Building Code, Section 410.2.5
6. Special Amusement Buildings (as applicable to Group A's), International Building Code, Section 411.1
7. Smoke Protected Seating, Section 1029.6.2.

**1203.2.18** *{Existing text unchanged}*

**1203.2.19 Covered and Open Mall Buildings.** Emergency power shall be provided in accordance with Section 907.2.19 and 914.2.3.

**1203.2.20 Airport Traffic Control Towers.** A standby power system shall be provided in airport traffic control towers more than 65 ft. in height. Power shall be provided to the following equipment:

1. Pressurization equipment, mechanical equipment and lighting.
2. Elevator operating equipment.
3. Fire alarm and smoke detection systems.

**1203.2.21 Smokeproof Enclosures and Stair Pressurization Alternative.** Standby power shall be provided for smokeproof enclosures, stair pressurization alternative and associated automatic fire detection systems as required by the International Building Code, Section 909.20.6.2.

**1203.2.22 Elevator Pressurization.** Standby power shall be provided for elevator pressurization system as required by the International Building Code, Section 909.21.5.

**1203.2.23 Elimination of Smoke Dampers in Shaft Penetrations.** Standby power shall be provided when eliminating the smoke dampers in ducts penetrating shafts in accordance with the International Building Code, Section 717.5.3, exception 2.3.

**1203.2.24 Common Exhaust Systems for Clothes Dryers.** Standby power shall be provided for common exhaust systems for clothes dryers located in multistory structures in accordance with the International Mechanical Code, Section 504.10, Item 7.

**1203.2.25 Hydrogen Cutoff Rooms.** Standby power shall be provided for mechanical ventilation and gas detection systems of Hydrogen Cutoff Rooms in accordance with the International Building Code, Section 421.



**1203.2.26 Means of Egress Illumination in Existing Buildings.** Emergency power shall be provided for means of egress illumination in accordance with Section 1104.5 when required by the fire code official. (90 minutes in I-2, 60 minutes elsewhere.)

**1203.3 through 1203.6** {Existing text unchanged}

**1203.7 Energy Time Duration.** Unless a time limit is specified by the Fire Code Official, in this chapter or elsewhere in this code, or in any other referenced code or standard, the emergency and standby power system shall be supplied with enough fuel or energy storage capacity for not less than 2-hour full-demand operation of the system.

**Exception:** Where the system is supplied with natural gas from a utility provider and is approved.

*(Reason: These amendments were moved from Chapter 6, due to relocation of the published sections to this new Chapter 12. These provisions provide a list to complete and match that throughout the codes. The only additional requirements are the reference to COPS in NFPA 70, and the specified Energy time duration. Other changes are a reference to a code provision that already exists.)*

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**\*\*\*Section 2304.1; change to read as follows:**

**2304.1 Supervision of Dispensing.** The dispensing of fuel at motor fuel-dispensing facilities shall be conducted by a qualified attendant or shall be under the supervision of a qualified attendant at all times or shall be in accordance with Section 2204.3. the following:

1. Conducted by a qualified attendant; and/or,
2. Shall be under the supervision of a qualified attendant; and/or
3. Shall be an unattended self-service facility in accordance with Section 2304.3.

At any time the qualified attendant of item Number 1 or 2 above is not present, such operations shall be considered as an unattended self-service facility and shall also comply with Section 2304.3.

*(Reason: Allows a facility to apply the attended and unattended requirements of the code when both are potentially applicable.)*

---

**\*\*\*Section 2401.2; delete this section.**

*(Reason: This section eliminates such booths from all compliance with Chapter 15 including, but not limited to: size, ventilation, fire protection, construction, etc. If the product utilized is changed to a more flammable substance, the lack of compliance with Chapter 15 could result in significant fire or deflagration and subsequent life safety hazard.)*

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**\*\*\*Section 3103.3.1; delete this section.**

*(Reason: This new section of the Fire Code requires a fire sprinkler system to be installed in temporary tents and membrane structures, which is not a reasonable or enforceable requirement for a temporary use. A fire watch or fire alarm system is a more advisable approach for such occupancies that are only temporary.)*

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**\*\*\*Table 3206.2, footnote h; change text to read as follows:**

- h. ~~Not required~~ Where storage areas are protected by either early suppression fast response (ESFR) sprinkler systems or control mode special application sprinklers with a response time index of 50  $(m \cdot s)^{1/2}$  or less that are listed to control a fire in the stored commodities with 12 or fewer sprinklers, installed in accordance with NFPA 13, manual smoke and heat vents or manually activated engineered mechanical smoke exhaust systems shall be required within these areas.

*(Reason: Allows the fire department to control the smoke and heat during and after a fire event, while ensuring proper operation of the sprinkler protection provided. Also, gives an alternative to smoke and heat vents.)*

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**\*\*\*Table 3206.2, footnote j; add footnote j to row titled 'High Hazard' and 'Greater than 300,000' to read as follows:**

- j. High hazard high-piled storage areas shall not exceed 500,000 square feet. A 2-hour fire wall constructed in accordance with Section 706 of the International Building Code shall be used to divide high-piled storage exceeding 500,000 square feet in area.



(Reason: This is a long-standing legacy requirement and provides passive protection for extremely large buildings where it would be otherwise impossible to control the spread of fire without the fire wall in place in an uncontrolled fire event, which is much more likely in high hazard commodities, such as tires, flammable liquids, expanded plastics, etc.)

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**\*\*\*Section 3310.1; add sentence to end of paragraph to read as follows:**

When fire apparatus access roads are required to be installed for any structure or development, they shall be approved prior to the time at which construction has progressed beyond completion of the foundation of any structure.

(Reason: Reference requirement of Section 501.4.)

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**\*\*\*Section 5601.1.3; change to read as follows:**

**5601.1.3 Fireworks.** The possession, manufacture, storage, sale, handling, and use of fireworks are prohibited. The restrictions of this section shall be applicable and in force throughout the territory of the City of Amarillo, Texas, and extending for a distance outside the City limits for a total of 2,500 feet. The owner, lessee or occupant of the property or structure where fireworks are being stored or used shall be deemed responsible for violating this section.

**Exceptions:**

1. Only when approved for fireworks displays, storage, and handling of fireworks as allowed in Section 5604 and 5608.
2. ~~Manufacture, assembly and testing of fireworks as allowed in Section 5605.~~
3. 2. The use of fireworks for approved fireworks displays as allowed in Section 5608.
4. ~~The possession, storage, sale... {Delete remainder of text}~~

(Reason: Restricts fireworks to approved displays only, which is consistent with regional practice. Such is intended to help protect property owners and individuals from unintentional fireworks fires within the jurisdiction, as well as to help protect individuals from fireworks injuries. It is noted that there has been a change in the State Law to allow possession of unopened fireworks in certain areas of the vehicle, and it is highly recommended that AHJ's familiarize themselves with the applicable State Laws in this regard.)

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**\*\*Section 5609 Temporary Storage of Consumer Fireworks – delete entire Section.**

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**\*\*Section 5610; Add new Section to read as follows:**

**SECTION 5610**  
**ENFORCEMENT AND SEIZURE OF FIREWORKS**

**5610.1 General.** Where the possession, manufacture, storage, sale, handling and use of fireworks is prohibited, Section 5610.1.1 through 5610.1.3 will provide remedy for violation and the destruction of fireworks.

**5610.1.1** The fire department and police department are each authorized to seize, and destroy the fireworks seized, inside the city limits in violation of this chapter, in accordance with the following procedures:

1. At the time of seizing illegal fireworks inside the city limits, the Fire Marshal or police officer shall prepare an inventory of such fireworks and photograph same at the scene. All such photographs shall constitute and be evidence.
2. The Fire Marshal or police officer shall, by end of the tour of duty during which the fireworks are seized, deposit same into a receptacle dedicated for the purpose by the fire or police department. Such container shall be secure from flames, other sources of ignition, pilfering, and theft.
3. As soon as practicable thereafter, and in accordance with internal orders and procedures of the fire or police chief, all such fireworks shall be destroyed, disabled, or otherwise rendered useless by any safe method, by personnel trained in the handling of explosives or hazardous materials.

**5610.1.2** The fire and police chief may adopt reasonable internal regulations and procedures for their respective departments, as necessary to implement this section.

5610.1.3 The seizure of illegal fireworks in violation of Texas Occupations Code, Chapter 2154, shall remain in custody as evidence, with destruction delayed, in accordance with the requirements and procedures of Section 2154.304, of the Texas Occupations Code.

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\*\*\*Section 5703.6; add a sentence to read as follows:

**5703.6 Piping Systems.** Piping systems, and their component parts, for flammable and combustible liquids shall be in accordance with Sections 5703.6.1 through 5703.6.11. An approved method of secondary containment shall be provided for underground tank and piping systems.

*(Reason: Increased protection in response to underground leak problems and remediation difficulty in underground applications. Coordinates with TCEQ requirements.)*

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\*\*\*Section 5704.2.9.5; add Section 5704.2.9.5.3 to read as follows:

**5704.2.9.5.3. Combustible liquid storage tanks inside of buildings.** The maximum aggregate allowable quantity limit shall be 3,000 gallons of Class II or II combustible liquid for storage in protected above ground tanks complying with Section 3404.2.9.7 when all the following conditions are met.

1. The entire 3,000 gallon quantity shall be in stored in protected above ground tanks;
2. The 3,000 gallon capacity shall be permitted to be stored in a single tank or multiple smaller tanks;
3. The tanks shall be located in a room protected by an automatic sprinkler system complying with Section 903.3.1.1;
4. Tanks shall be connected to fuel burning equipment, including generators, utilizing and approved closed piping system.

The quantity of combustible liquid stored in tanks complying with this section shall not be counted towards the maximum allowable quantity set forth in Table 5003.1.1(1), and such tanks shall not be located more than two stories below grade.

---

\*\*\*Section 5704.2.11.4; add a sentence to read as follows:

**5704.2.11.4 Leak Prevention.** Leak prevention for underground tanks shall comply with Sections 5704.2.11.4.1 and 5704.2.11.4.2 through 5704.2.11.4.3. An approved method of secondary containment shall be provided for underground tank and piping systems.

*(Reason: Increased protection in response to underground leak problems and remediation difficulty in underground applications.)*

---

\*\*\*Section 5704.2.11.4.2; change to read as follows:

**5704.2.11.4.2 Leak Detection.** Underground storage tank systems shall be provided with an approved method of leak detection from any component of the system that is designed and installed in accordance with NFPA 30 and as specified in Section 5704.2.11.4.3.

*(Reason: Reference to IFC Section 5704.2.11.4.3 amendment.)*

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\*\*\*Section 5704.2.11.4.3; add Section 5704.2.11.4.3 to read as follows:

**5704.2.11.4.3 Observation Wells.** Approved sampling tubes of a minimum 4 inches in diameter shall be installed in the backfill material of each underground flammable or combustible liquid storage tank. The tubes shall extend from a point 12 inches below the average grade of the excavation to ground level and shall be provided with suitable surface access caps. Each tank site shall provide a sampling tube at the corners of the excavation with a minimum of 4 tubes. Sampling tubes shall be placed in the product line excavation within 10 feet of the tank excavation and one every 50 feet routed along product lines towards the dispensers, a minimum of two are required.

*(Reason: Provides an economical means of checking potential leaks at each tank site.)*

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**\*\*\*Section 5707.4; add paragraph to read as follows:**

Mobile fueling sites shall be restricted to commercial, industrial, governmental, or manufacturing, where the parking area having such operations is primarily intended for employee vehicles. Mobile fueling shall be conducted for fleet fueling or employee vehicles only, not the general public. Commercial sites shall be restricted to office-type or similar occupancies that are not primarily intended for use by the public.

*(Reason: The general public does not expect a hazardous operation to be occurring in a typical parking lot or for a fuel truck to be traversing such parking lot, temporarily fueling a vehicle, and moving on to the next area in the parking lot to fuel the next vehicle. Vehicular accidents occur in parking lots on a regular basis, but the presence of a fuel truck, especially one in the process of fueling a vehicle with gasoline, greatly adds to the potential risk involved in such accidents. By restricting such operations to the occupancies in question, the employees of the business may be adequately notified to expect such operations to occur in the parking lot.)*

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**\*\*\*Section 6103.2.1; add Section 6103.2.1.8 to read as follows:**

**6103.2.1.8 Jewelry Repair, Dental Labs and Similar Occupancies.** Where natural gas service is not available, portable LP-Gas containers are allowed to be used to supply approved torch assemblies or similar appliances. Such containers shall not exceed 20-pound (9.0 kg) water capacity. Aggregate capacity shall not exceed 60-pound (27.2 kg) water capacity. Each device shall be separated from other containers by a distance of not less than 20 feet.

*(Reason: To provide a consistent and reasonable means of regulating the use of portable LP-Gas containers in these situations. Reduces the hazard presented by portable containers when natural gas is already available. Please note that current State Law does not allow for the enforcement of any rules more stringent than that adopted by the State, so this amendment is only applicable as to the extent allowed by that State Law.)*

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**\*\*\*Section 6104.2, Exception; add an exception 2 to read as follows:**

**Exceptions:**

1. *{Existing text unchanged}*
2. Except as permitted in Sections 308 and 6104.3.2, LP-gas containers are not permitted in residential areas.

*(Reason: To provide a consistent and reasonable means of regulating the use LP-Gas containers. Reduces the hazard presented by such containers when natural gas is already available. References regional amendment to IFC 6104.3.2. Please note that current State Law does not allow for the enforcement of any rules more stringent than that adopted by the State, so this amendment is only applicable as to the extent allowed by that State Law.)*

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**\*\*\*Section 6104.3; add Section 6104.3.3 to read as follows:**

**6104.3.3 Spas, Pool Heaters, and Other Listed Devices.** Where natural gas service is not available, an LP-gas container is allowed to be used to supply spa and pool heaters or other listed devices. Such container shall not exceed 250-gallon water capacity per lot. See Table 6104.3 for location of containers.

**Exception:** Lots where LP-gas can be off-loaded wholly on the property where the tank is located may install up to 500 gallon above ground or 1,000 gallon underground approved containers.

*(Reason: Allows for an alternate fuel source. Dwelling density must be considered and possibly factored into zoning restrictions. Reduces the hazard presented by over-sized LP-Gas containers. Please note that current State Law does not allow for the enforcement of any rules more stringent than that adopted by the State, so this amendment is only applicable as to the extent allowed by that State Law.)*

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**\*\*\*Section 6107.4 and 6109.13; change to read as follows:**

**6107.4 Protecting Containers from Vehicles.** Where exposed to vehicular damage due to proximity to alleys, driveways or parking areas, LP-gas containers, regulators and piping shall be protected in accordance with ~~NFPA 58~~ Section 312.

**6109.13 Protection of Containers.** LP-gas containers shall be stored within a suitable enclosure or otherwise protected against tampering. Vehicle impact protection shall be provided as required by Section 6107.4.

**Exception:** ~~Vehicle impact protection shall not be required for protection of LP-gas containers where the containers are kept in lockable, ventilated cabinets of metal construction.~~

*(Reason: NFPA 58 does not provide substantial physical protection [it allows raised sidewalks, fencing, ditches, parking bumpers as 'vehicle barrier protection'] of the container(s) from vehicular impact as is required and has been required historically, as per Section 312, i.e. bollard protection. Further, the exception to Section 6109.13 would allow for portable containers in ventilated metal cabinets to not require any physical protection whatsoever from vehicular impact, regardless of the location of the containers. Please note that current State Law does not allow for the enforcement of any rules more stringent than that adopted by the State, so this amendment is only applicable as to the extent allowed by that State Law.)*

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**\*\*\*Table B105.2; change footnote a. to read as follows:**

- a. The reduced fire-flow shall be not less than ~~4,000~~ 1,500 gallons per minute.

*(Reason: The minimum fire-flow of 1,500 gpm for other than one- and two- family dwellings has existed since the 2000 edition of the IFC, as well as the Uniform Fire Code before that little to no technical justification was provided for the proposed code change at the code hearings. The board believes that the already-allowed 75 percent reduction in required fire-flow for the provision of sprinkler protection is already a significant trade-off. The minimum 1,500 gpm is not believed to be overly stringent for the vast majority of public water works systems in this region, especially since it has existed as the requirement for so many years. Further, the continued progression of trading off more and more requirements in the codes for the provision of sprinkler protection has made these systems extremely operation-critical to the safety of the occupants and properties in question. In other words, should the sprinkler system fail for any reason, the fire-flow requirements drastically increase from that anticipated with a sprinkler-controlled fire scenario.)*

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**\*\*\*Table C102.1; change footnote b. to read as follows:**

- (b) Where streets are provided with median dividers that cannot be crossed by fire fighters pulling hose lines, or where arterial streets are provided with four or more traffic lanes ~~and have a traffic count of more than 30,000 vehicles per day~~, hydrant spacing shall average 500 feet on each side of the street and be arranged on an alternating basis.

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**\*\*\*Section D104.2; Delete exception in its entirety.**

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**\*\*\* Section L103.1; add Section L103.1.1 to read as follows:**

Section L103.1.1 Submittals. ~~Plans and specifications shall be from a Firefighter Air Replenishment company and sealed by a Texas licensed Professional Engineer.~~

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**\*\*\* Section L104.5; add Section L104.5.2 to read as follows:**

Section L104.5.2 Location. ~~Stored pressure air supply shall be located in the fire command center of fire protection equipment room as determined by the Fire Code Official.~~

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**\*\*\* Section L104.15; add a sentence to end of paragraph to read as follows:**

Section L104.15 Air monitoring system. ~~(Existing text unchanged)...~~ Air monitoring shall be required at a location approved by the Fire Code Official.

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***\*\*Adopt the following Appendices in its entirety:***

**Appendix B – Fire-Flow Requirements for Buildings**

**Appendix C – Fire Hydrant Locations and Distribution**

**Appendix D – Fire Apparatus Access Roads**

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***END***

DRAFT