TOWN OF BARTONVILLE, TEXAS
ORDINANCE NO. 783-25

AN ORDINANCE OF THE TOWN COUNCIL OF THE TOWN OF BARTONVILLE, TEXAS AMENDING VARIOUS PROVISIONS OF CHAPTER 3, "BUILDING REGULATIONS," ARTICLE 3.02, "TECHNICAL AND CONSTRUCTION CODES AND STANDARDS," OF THE CODE OF ORDINANCES, TOWN OF BARTONVILLE, TEXAS, BY ADOPTING THE 2021 EDITIONS OF THE INTERNATIONAL BUILDING CODE, INTERNATIONAL RESIDENTIAL CODE, INTERNATIONAL MECHANICAL CODE, INTERNATIONAL PLUMBING CODE, INTERNATIONAL FIRE CODE, INTERNATIONAL SWIMMING POOL AND SPA CODE, INTERNATIONAL ENERGY CONSERVATION CODE, INTERNATIONAL FUEL GAS CODE, AND INTERNATIONAL EXISTING BUILDING CODE, AND THE 2020 EDITION OF THE NATIONAL ELECTRIC CODE; PROVIDING FOR THE MODIFICATION OF THE CODE TO INCORPORATE LOCAL AMENDMENTS; PROVIDING FOR THE RECORDING OF THE CODES AS PUBLIC RECORDS; PROVIDING THAT THIS ORDINANCE SHALL BE CUMULATIVE OF ALL ORDINANCES; PROVIDING A SAVINGS CLAUSE; PROVIDING A SEVERABILITY CLAUSE; PROVIDING FOR ENGROSSMENT AND ENROLLMENT; PROVIDING FOR A PENALTY FOR VIOLATIONS; PROVIDING FOR PUBLICATION IN THE OFFICIAL NEWSPAPER; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the Town of Bartonville, Texas (the "Town"), is a Type-A general law municipality located in Denton County, Texas, created in accordance with provisions of the Texas Local Government Code and operating pursuant to the enabling legislation of the State of Texas; and

WHEREAS, the Town Council has previously adopted the 2009 editions of the International Building Code, International Residential Code, International Mechanical Code, and International Plumbing Code, the 2012 edition of the International Fire Code, the 2018 edition of the International Energy Conservation Code, and the 2011 edition of the National Electric Code, and

WHEREAS, Chapter 214, Subchapter G, of the Texas Local Government Code provides the International Building Code, International Residential Code, International Mechanical Code, International Plumbing Code, International Fire Code, International Energy Conservation Code, and National Electric Code are adopted as the municipal codes in this state and grants a municipality the power to adopt local amendments to the codes and administer and enforce the codes; and

WHEREAS, the Town Council desires to update and adopt the 2021 editions of the International Building Code, International Residential Code, International Mechanical Code, International Plumbing Code, International Fire Code, International Swimming Pool and Spa Code, International Energy Conservation Code, International Fuel Gas Code, and international existing building code, and 2020 edition of the National Electric Code; and

WHEREAS, the Town Council desires to provide a mechanism by which local modifications reflecting the unique needs of the Town may be made when deemed appropriate; and

WHEREAS, the North Central Texas Council of Governments and Town Staff have recommended adoption of certain amendments to the Codes to reflect locally accepted practice; and

WHEREAS, the Town Council has determined that the adoption of these codes as amended herein is in the public interest and therefore deems it advisable to enact this Ordinance.

NOW, THEREFORE, BE IT ORDAINED BY THE TOWN COUNCIL OF THE TOWN OF BARTONVILLE, TEXAS, THAT:

SECTION 1.

Division 2, "Building Code," of Article 3.02, "Technical and Construction Codes and Standards," of Chapter 3, "Building Regulations," of the Code of Ordinances, Town of Bartonville, Texas, is hereby amended in its entirety to read as follows:

"**§ 3.02.041 Adoption.**
The 2021 edition of the International Building Code is hereby adopted as the official building code of the town. This building code is fully incorporated by reference as though copied into this division in its entirety. The material contained in the International Building Code shall not be included in any formal municipal codification of ordinances but shall be maintained as a public record in the office of the town secretary and will be available for public inspection and copying during regular business hours.

§ 3.02.042 Amendments.
The 2021 edition of the International Building Code, as adopted herein, is hereby amended as shown in Exhibit "A" attached to Ordinance No. 783-25.

§ 3.02.043 through § 3.02.070 are hereby reserved."

SECTION 2.

Division 3, "Residential Code," of Article 3.02, "Technical and Construction Codes and Standards," Chapter 3, "Building Regulations," of the Code of Ordinances, Town of Bartonville, Texas, is hereby amended in its entirety to read as follows:

"§ 3.02.071 Adoption.
The 2021 edition of the International Residential Code is hereby adopted as the official residential code of the town. This residential code is fully incorporated by reference as though copied into this division in its entirety. The material contained in the International Residential Code, and any local amendments thereto, shall not be included in any formal municipal codification of

ordinances but shall be maintained as a public record in the office of the town secretary and will be available for public inspection and copying during regular business hours.

§ 3.02.072 Amendments.
The 2021 edition of the International Residential Code, as adopted herein, is hereby amended as shown in Exhibit "B" attached to Ordinance No. 783-25.

§ 3.02.073 through § 3.02.100 are hereby reserved."

SECTION 3.

Division 4, "Mechanical Code," of Article 3.02, "Technical and Construction Codes and Standards," of Chapter 3, "Building Regulations," of the Code of Ordinances, Town of Bartonville, Texas, is hereby amended in its entirety to read as follows:

"§ 3.02.101 Adoption.
The 2021 edition of the International Mechanical Code is hereby adopted as the official mechanical code of the town. This mechanical code is fully incorporated by reference as though copied into this division in its entirety. The material contained in the International Mechanical Code, and any local amendments thereto, shall not be included in any formal municipal codification of ordinances but shall be maintained as a public record in the office of the town secretary and will be available for public inspection and copying during regular business hours.

§ 3.02.102 Amendments.
The 2021 edition of the International Mechanical Code, as adopted herein is hereby amended as shown in Exhibit "C" attached to Ordinance No. 783-25.

§ 3.02.103 through § 3.02.130 are hereby reserved."

SECTION 4.

Division 5, "Plumbing Code," of Article 3.02, "Technical and Construction Codes and Standards," of Chapter 3, "Building Regulations," of the Code of Ordinances, Town of Bartonville, Texas, is hereby amended in its entirety to read as follows:

"§ 3.02.131 Adoption.
The 2021 edition of the International Plumbing Code is hereby adopted as the official plumbing code of the town. This plumbing code is fully incorporated by reference as though copied into this division in its entirety. The material contained in the International Plumbing Code, and any local amendments thereto, shall not be included in any formal municipal codification of ordinances but shall be maintained as a public record in the office of the town secretary and will be available for public inspection and copying during regular business hours.

§ 3.02.132 Amendments.
The 2021 edition of the International Plumbing Code, as adopted herein is hereby amended as show in Exhibit "D" attached to Ordinance No. 783-25.

§ 3.02.133 through § 3.02.160 are hereby reserved."

SECTION 5.

Division 6, "Fire Code," of Article 3.02, "Technical and Construction Codes and Standards," of Chapter 3, "Building Regulations," of the Code of Ordinances, Town of Bartonville, Texas, is hereby amended in its entirety to read as follows:

"§ 3.02.161 Adoption.
The 2021 edition of the International Fire Code is hereby adopted as the official fire code of the town. This fire code is fully incorporated by reference as though copied into this division in its entirety. The material contained in the International Fire Code, and any local amendments thereto, shall not be included in any formal municipal codification of ordinances but shall be maintained as a public record in the office of the town secretary and will be available for public inspection and copying during regular business hours.

§ 3.02.162 Amendments.
The 2021 edition of the International Fire Code, as adopted herein is hereby amended as shown in Exhibit "E" attached to Ordinance No. 783-25.

§ 3.02.163 through § 3.02190 are hereby reserved."

SECTION 6.

Division 7, "Swimming Pool and Spa Code," of Article 3.02, "Technical Construction Codes," of Chapter 3, "Building Regulations," of the Code of Ordinances, Town of Bartonville, Texas, is hereby created to read as follows:

"§ 3.02.191 Adoption.
The 2021 edition of the International Swimming Pool and Spa Code is hereby adopted as the official swimming pool and spa code of the town. This swimming pool and spa code is fully incorporated by reference as though copied into this division in its entirety. The material contained in the International Swimming Pool and Spa Code, and any local amendments thereto, shall not be included in any formal municipal codification of ordinances but shall be maintained as a public record in the office of the town secretary and will be available for public inspection and copying during regular business hours.

§ 3.02.192 Amendments.
The 2021 edition of the International Swimming Pool and Spa Code, as adopted herein is hereby amended as shown in Exhibit "F" attached to Ordinance No. 783-25.

§ 3.02.193 through § 3.02.220 are hereby reserved."

SECTION 7.

Division 8, "Energy Conservation Code," of Article 3.02, "Technical Construction Codes," of Chapter 3, "Building Regulations," of the Code of Ordinances, Town of Bartonville, Texas, is hereby created to read as follows:

"§ 3.02.221 Adoption.
The 2021 edition of the International Energy Conservation Code is hereby adopted as the official energy conservation code of the town. This energy conservation code is fully incorporated by reference as though copied into this division in its entirety. The material contained in the International Energy Conservation Code, and any local amendments thereto, shall not be included in any formal municipal codification of ordinances but shall be maintained as a public record in the office of the town secretary and will be available for public inspection and copying during regular business hours.

§ 3.02.222 Amendments.
The 2021 edition of the International Energy Conservation Code, as adopted herein is hereby amended as shown in Exhibit "G" attached to Ordinance No. 783-25.

§ 3.02.223 through § 3.02.250 are hereby reserved."

SECTION 8.

Division 9, "Electrical Code," of Article 3.02, "Technical Construction Codes," of Chapter 3, "Building Regulations," of the Code of Ordinances, Town of Bartonville, Texas, is hereby created to read as follows:

"§ 3.02.251 Adoption.
The 2020 edition of the National Electric Code is hereby adopted as the official electric code of the town. This electric code is fully incorporated by reference as though copied into this division in its entirety. The material contained in the National Electric Code, and any local amendments thereto, shall not be included in any formal municipal codification of ordinances but shall be maintained as a public record in the office of the town secretary and will be available for public inspection and copying during regular business hours.

§ 3.02.252 through § 3.02.280 are hereby reserved."

SECTION 9.

Division 11, "Fuel and Gas Code," of Article 3.02, "Technical Construction Codes," of Chapter 3, "Building Regulations," of the Code of Ordinances, Town of Bartonville, Texas, is hereby created to read as follows:

“§ 3.02.311 Adoption.
The 2021 edition of the International Fuel Gas Code is hereby adopted as the official fuel gas code of the town. This fuel gas code is fully incorporated by reference as though copied into this division in its entirety. The material contained in the International Fuel Gas Code, and any local amendments thereto, shall not be included in any formal municipal codification of ordinances but shall be maintained as a public record in the office of the town secretary and will be available for public inspection and copying during regular business hours.

§ 3.02.312 Amendments.
The 2021 edition of the International Fuel Gas Code, as adopted herein is hereby amended as shown in Exhibit “H” attached to Ordinance No. 783-25.

§ 3.02.313 through § 3.02.610 is hereby reserved.”

SECTION 10.

Division 12, “Existing Building Code,” of Article 3.02, “Technical Construction Codes,” of Chapter 3, “Building Regulations,” of the Code of Ordinances, Town of Bartonville, Texas is hereby created to read as follows:

“§ 3.02.611 Adoption.
The 2021 edition of the International Existing Building Code is hereby adopted as the official existing building code of the town. This existing building code is fully incorporated by reference as though copied into this division in its entirety. The material contained in the International Existing Building Code, and any local amendments thereto, shall not be included in any formal municipal codification of ordinances but shall be maintained as a public record in the office of the town secretary and will be available for public inspection and copying during regular business hours.

§ 3.02.612 Amendments.
The 2021 edition of the International Existing Building Code, as adopted herein is hereby amended as shown in Exhibit “I” attached to Ordinance No. 783-25.

§ 3.02.613 through § 3.02.910 is hereby reserved.”

SECTION 11.

The Town may from time to time determine that additional local modifications of the code adopted herein are necessary and appropriate to meet the unique needs of the Town. The effectuate modifications, the Town Council may enact individual ordinances amending this Ordinance fully setting forth the changes to be made. Such subsequent amendments shall be consolidated as an exhibit to this Ordinance, and shall be maintained as a public record in the office of the Town Secretary, available for public inspection and copying during regular business hours.

SECTION 12.

This Ordinance shall be cumulative of all provisions of the Code of Ordinances, Town of Bartonville, Texas except where the provisions of this Ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinances are hereby repealed.

SECTION 13.

All rights and remedies of the Town are expressly saved as to any and all violations of the provisions of any ordinances of the Town which have accrued at the time of the effective date of this Ordinance; and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such ordinances same shall not be affected by this Ordinance but may be prosecuted until final disposition by the courts.

SECTION 14.

It is hereby declared to be the intention of the Town Council that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph, or section of this Ordinance shall be declared unconstitutional by the valid judgement of decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs, or sections of this Ordinance since the same would have been enacted by the Town Council without incorporation in this Ordinance of any such unconstitutional phrase, clause, sentence, paragraph, or section.

SECTION 15.

The Town Secretary of the Town of Bartonville is hereby directed to engross and enroll this Ordinance by copying the exact Caption and Effective Date clause in the minutes of the Town Council of the Town of Bartonville and by filing this Ordinance in the Ordinance records of the Town.

SECTION 16.

Any person, firm, or corporation who violates, disobeys, omits, neglects, or refuses to comply with or who resists the enforcement of any of the provisions or terms of this Ordinance shall be fined no more than two thousand dollars ($2,000.00) for all violations involving zoning, fire safety, or public health and sanitation, including dumping or refuse, and shall be fined not more than five hundred dollars ($500.00) for all other violations of this Ordinance. Each day that a violation is permitted to exist shall constitute a separate offense.

SECTION 17.

The Town Secretary of the Town of Bartonville is hereby directed to publish the caption and penalty clause in the official Town newspaper as authorized by Section 52.011 of the Texas Local Government Code.

SECTION 18.

This Ordinance shall take effect and be in full force from and after its passage and publication as provided by law, and it is so ordained.

PASSED AND APPROVED by the Town Council of the Town of Bartonville, Texas, on this the 15th day of April 2025.

APPROVED:

Jaclyn Carrington,
Mayor

ATTEST:

Shannon Montgomery, TRMC,
Town Secretary

The following sections, paragraphs, and sentences of the *2021 International Building Code* are hereby amended as follows: Standard type is text from the IBC. Underlined type is text inserted. ~~Lined through type is deleted text from IBC.~~

Section 101.4; change to read as follows:

101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.~~7~~8 and referenced elsewhere in this code, when specifically adopted, shall be considered part of the requirements of this code to the prescribed extent of each such reference. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. Any reference to NFPA 70 or the Electrical Code shall mean the Electrical Code as adopted.

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes.)

Section 101.4.8; add the following:

101.4.8 Electrical. The provisions of the Electrical Code shall apply to the installation of electrical systems, including alterations, repairs, replacement, equipment, appliances, fixtures, fittings and appurtenances thereto.

(Reason: This was dropped when ICC quit publishing the ICC Electrical Code, but the Electrical Code still should be referenced regardless of how it is adopted.)

Section 103 and 103.1; amend to insert the Department Name

~~CODE COMPLIANCE AGENCY~~ BUILDING INSPECTIONS DEPARTMENT

103.1 Creation of enforcement agency. The ~~[INSERT NAME OF DEPARTMENT]~~ Building Inspections Department is hereby created and the official in charge thereof shall be known as the *building official*. The function of the agency shall be the implementation, administration and enforcement of the provisions of this code.

(Reason: Reminder to be sure ordinance reads the same as designated by the city.)

Section 105.2 Work exempt from permit; amend to read as follows:

105.2 Work exempt from permit. Exemptions from *permit* requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. *Permits* shall not be required for the following:

Building:

1. ~~One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet (11 m_2).~~
2. ~~Fences not over 7 feet (1829 mm) high.~~
3. ~~Oil derricks.~~
4. ~~Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge or impounding Class I, II or IIA liquids.~~
5. ~~5.~~ 1. (Remainder Unchanged)
6. ~~6.~~ 2. (Remainder Unchanged)
7. ~~Painting, papering, tiling, carpeting, cabinets, counter tops and similar finish work.~~
8. ~~Temporary motion picture, television and theater stage sets and scenery.~~

~~9. Prefabricated swimming pools accessory to a Group R-3 occupancy that are less than 24 inches (610 mm) deep, are not greater than 5,000 gallons (18 925 L) and are installed entirely above ground.~~

~~10. Shade cloth structures constructed for nursery or agricultural purposes, not including service systems.~~

~~11. Swings and other playground equipment accessory to detached one- and two-family dwellings.~~

~~12.~~ 3. Window awnings supported by an exterior wall of ~~in~~ Group R-3, as applicable in Section 101.2, and Group U occupancies, ~~supported by an exterior wall that do not project more than 54 inches (1372 mm) from the exterior wall and do not require additional support~~.

~~13. Nonfixed and movable fixtures, cases, racks, counters and partitions not over 5 feet 9 inches (1753 mm) in height.~~

~~**Electrical:**~~

~~1. **Repairs and maintenance**: Minor repair work, including the replacement of lamps or the connection of approved portable electrical equipment to approved permanently installed receptacles.~~

~~2. **Radio and television transmitting stations**: The provisions of this code shall not apply to electrical equipment used for radio and television transmissions, but do apply to equipment and wiring for a power supply and the installation of towers and antennas.~~

~~3. **Temporary testing systems**: A permit shall not be required for the installation of any temporary system required for the testing or servicing of electrical equipment or apparatus.~~

~~**Gas:**~~

~~1. Portable heating appliance.~~

~~2. Replacement of any minor part that does not alter approval of equipment or make such equipment unsafe.~~

~~**Mechanical:**~~

~~1. Portable heating appliance.~~

~~2. Portable ventilation equipment.~~

~~3. Portable cooling unit.~~

~~4. Steam, hot or chilled water piping within any heating or cooling equipment regulated by this code.~~

~~5. Replacement of any part that does not alter its approval or make it unsafe.~~

~~6. Portable evaporative cooler.~~

~~7. Self-contained refrigeration system containing 10 pounds (4.54 kg) or less of refrigerant and actuated by motors if 1 horsepower (0.75 kW) or less.~~

~~**Plumbing:**~~

~~1. The stopping of leaks in drains, water, soil, waste or vent pipe, provided, however, that if any concealed trap, drain pipe, water, soil, waste or vent pipe becomes defective and it becomes necessary to remove and replace the same with new material, such work shall be considered as new work and a permit shall be obtained and inspection made as provided in this code.~~

~~2. The clearing of stoppages or the repairing of leaks in pipes, valves or fixtures and the removal and reinstallation of water closets, provided that such repairs do not involve or require the replacement or rearrangement of valves, pipes or fixtures.~~

Section 109; add Section 109.7, 109.8, and 109.8.1 to read as follows:

109.7 Re-inspection Fee. A fee as established by city council resolution may be charged when:

1. The inspection called for is not ready when the inspector arrives;

2. No building address or permit card is clearly posted;

3. Town approved plans are not on the job site available to the inspector;

4. The building is locked or work otherwise not available for inspection when called;

5. The job site is red-tagged twice for the same item;

6. The original red tag has been removed from the job site;

7. Failure to maintain erosion control, trash control or tree protection.

Any re-inspection fees assessed shall be paid before any more inspections are made on that job site.

109.8 Work Without Permit.

109.8.1 Investigation. Whenever work for which a permit is required by this code has been commenced without first obtaining a permit, a special investigation shall be made before a permit may be issued for such work.

(Reason: This fee is not a fine or penalty but is designed to compensate for time and trips when inspections are called for when not ready and to remove incentive to attempt to evade permits and code compliance.)

Section 110.3.6; Lath, gypsum board and gypsum panel product inspection; Delete exception

~~Exception:~~ *~~Gypsum board and gypsum panel products that are not part of a fire resistance rated assembly or a shear assembly.~~*

(Reason: Lath or gypsum board inspections are not typically performed in this area.)

Section 116.5; add Section 116.5.1 to read as follows:

116.5 Damage or renovations to existing structures. When a structure is renovated or is damaged to 50% of the gross floor area or if the value of the damage or renovation exceed 50% of the value of the structure at the time of damage or renovation all requirements of this code shall be complied with in any such repair, fix, or renovation.

Section 202; amend definitions of Ambulatory Care Facility, Atrium, High-Rise Building, and Special Inspector 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;
- Sedation dentistry;
- Surgery centers;
- Colonic centers;
- Psychiatric centers.

ATRIUM. ~~A vertical space that is closed at the top, connecting two or more *stories* in Group I-2 and I-3 occupancies or~~ An opening connecting three or more *stories* in all other occupancies.

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

SPECIAL INSPECTOR. A qualified person employed or retained by an *approved* agency ~~and approved by the building official~~ who shall prove to the satisfaction of the registered design professional in

responsible charge and the Building Official as having the competence necessary to inspect a particular type of construction requiring *special inspection*.

*(Reason: To clarify the range of uses included in the definition. [Explanatory note related to **Ambulatory Care Facilities**: This group of uses includes medical or dental offices where persons are put under for dental surgery or other services. Section 903.2.2 will now require such uses to be sprinklered if on other than the floor of exit discharge or if four or more persons are put under on the level of exit discharge. Recommend (1.) jurisdictions document any pre-existing non-conforming conditions prior to issuing a new C of O for a change of tenant and, (2.) On any medical or dental office specify on C of O the maximum number of persons permitted to be put under general anesthesia. It is recommended that before a Certificate of Occupancy is issued, a letter of intended use from the business owner shall be included and a C of O documenting the maximum number of care recipients incapable of self preservation allowed.)*
*(Reason, **Atrium**: Accepted practice in the region based on legacy codes. Section 1019 permits unenclosed two story stairways under certain circumstances.)*
*(Reason, **High-Rise Building**: To define high-rise, as it influences sprinkler requirement thresholds based on the fire fighting capabilities of a jurisdiction.)*
*(Reason, **Special Inspector**: The registered design professional in responsible charge should be included.)*

Section 202; amended to add new definitions for Assisted Living Facilities and Repair Garage to read as follows:

ASSISTED LIVING FACILITIES. A building or part thereof housing persons, on a 24-hour basis, who because of age, mental disability or other reasons, live in a supervised residential environment which provides personal care services. The occupants are capable of responding to an emergency situation without physical assistance from staff.

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 serving of motor vehicles for items such as lube changes, inspections, windshield repair or replacement, shocks, minor part replacement and other such minor repairs.

Section 303.1; amended to add Section 303.1.2 Associated with Group E Occupancies to read as follows:

303.1.2 Associated with Group E occupancies. A room or space used for assembly purposes that is associated with a Group E occupancy is not considered a separate occupancy, when applying the assembly requirements of Chapters 10 and 11.

(Reason: To clarify that egress and accessibility requirements are applicable for assembly areas, i.e. cafeteria, auditoriums, etc.)

Section 304.1; amended to add the following to the list of occupancies to read as follows:

Fire stations
Police stations with detention facilities for 5 or less

(Reason: Consistent with regional practice dating back to the legacy codes.)

Section 307.1.1; add the following sentence to Exception 4 to read as follows:

4. Cleaning establishments… *{Text unchanged}* …with Section 707 or 1-hour *horizontal assemblies* constructed in accordance with Section 711, or both. See also IFC Chapter 21, Dry Cleaning Plant provisions.

(Reason: To call attention to detailed requirements in the Fire Code.)

Section 402.4.2.1 Tennant Separation amend to read as follows:

402.4.2.1 Tenant separations. Each tenant space shall be separated from other tenant spaces by a *fire partition* wall sheet rocked on both sides and complying with Section 708. ~~A tenant separation wall is not required between any tenant space and the mall.~~

Exception: Existing conditions shall be subject to field inspection and review for approval at that time.

Section 403.1, Exception 3; amend to read as follows:

3. The open air portion of a building *[remainder unchanged].*

(Reason: To clarify enclosed portions are not exempt.)

Section 403.3.2, Water supply to required fire pumps; amend to read as follows:

403.3.2 Water supply to required fire pumps. In ~~all~~ buildings that are more than ~~420 feet (129 m) in building height and buildings of Type IVA and IVB construction that are more than 120 feet (36 576 mm)~~ 120 feet (36.5 m) in *building height*, required fire pumps shall be supplied by connections to no~~t~~ 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. (No change to exception).

Section 403.3, Exception; amend to read as follows:

403.3 Automatic sprinkler system. Buildings and structures shall be equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1 and a secondary water supply where required by Section 403.3.3.

Exception: An *automatic sprinkler system* shall not be required in spaces or areas of ~~telecommunications equipment buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided that those spaces or areas are equipped throughout with an automatic fire detection system in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour fire barriers constructed in accordance with Section 707 or not less than 2-hour horizontal assemblies constructed in accordance with Section 711, or both~~ open parking garages in accordance with Section 406.5.

(Reason: To provide adequate fire protection to enclosed areas.)

Section 404.5; delete Exceptions.

(Reason: Consistent with amended atrium definition.)

Section 404.10, Exit stairways in an atrium; amend to read as follows:

404.10 Exit stairways in an atrium. Where an *atrium* contains an ~~interior~~ *exit access stairway* all the following shall be met:

1. The entry to the *exit access stairway* is the edge of the closest riser of the *exit access stairway*.
2. The entry of the *exit access stairway* shall have access from a minimum of two directions.
3. The distance between the entry to an *exit access stairway* in an *atrium* and the entrance to a minimum of one *exit access stairway* enclosed in accordance with Section 1023.2 shall comply with the separation required by Section 1007.1.1.
4. *Exit* access travel distance shall be measured to the closest riser of the *exit access stairway*.
5. Not more than 50 percent of the *exit access stairways* shall be located in the same *atrium*.

Section 406.3.3.1 Carport separation; amend read as follows:

406.3.3.1 Carport separation. A fire separation is not required between a Group R-~~3~~2 and U carport, provided that the carport is entirely open on ~~two or more~~ all sides and ~~there are not enclosed areas above~~ that the distance between the two is at least 10 feet (3048 mm).

(Reason: Simplifies the fire separation distance and eliminates the need to obtain opening information on existing buildings when adding carports in existing apartment complexes. Consistent with legacy codes in effect in region for years and no record of problems with car fires spreading to apartments as a result.)

Section 423.5.1 Required occupant capacity; amend to read as follows:

423.5.1 Required occupant capacity. The required occupant capacity of the *storm shelter* shall include all of the buildings on the site and shall be the ~~greater of the following~~:

1. ~~The~~ t*Total occupant* load of the classrooms, vocational rooms and offices in the Group E occupancy.
2. ~~The occupant load of the largest indoor assembly space that is associated with Group E occupancy.~~

Exceptions:

1. Where a new building is being added on an existing Group E site, and where the new building is not of sufficient size to accommodate the required occupant capacity of the *storm shelter* for all of the buildings on the site, the storm shelter shall at a minimum accommodate the required occupant capacity for the new building.
2. Where approved by the *building official*, the required occupant capacity of the shelter shall be permitted to be reduced by the occupant capacity of any existing *storm shelters* on the site.
3. Where approved by the building official, the actual number of occupants for whom each occupied space, floor or building is designed, although less than those determined by occupant load calculation, shall be permitted to be used in the determination of the required design occupant capacity for the storm shelter.

Section 503.1 General; amend to read as follows:

503.1 General. Unless otherwise specifically modified in Chapter 4 and this chapter, *building height*, number of *stories* and *building area* shall not exceed the limits specified in Sections 504 and 506 based on the type of construction as determined by Section 602 and the occupancies as determined by Section 302 except as modified hereafter. *Building height*, number of stories and *building* area provisions shall be applied independently. For the purposes of determining area limitations, height limitations and type of construction, each portion of a building separated by one or more *fire walls* complying with Section 706 shall be considered to be a separate building. Where a building contains more than one distinct type of construction, the building shall comply with the most restrictive area, height and stories, for the lesser type of construction or be separated by fire walls, except as allowed in Section 510.

Table 506.2; delete footnote "i" from the table.

~~i. The maximum allowable area for a single-story non sprinklered Group U greenhouse is permitted to be 9000 square feet or the allowable area shall be permitted to comply with Table C102.1 of Appendix C.~~

(Reason: To eliminate the need for Appendix C adoption and remain consistent with 6000 sq. ft. sprinkler provision.)

Section 506.3.1 Minimum percentage of perimeter; amend to read as follows:

506.3.1 Minimum percentage of perimeter. To qualify for an area factor increase based on frontage, a building shall have not less than 25 percent of its perimeter on a *public way* or open space. Such open space shall be either on the same lot or dedicated for pubic use and shall be accessed from a street or approved *fire lane*.

Section 602.1.1 Minimum requirements; add sentence to read as follows:

602.1.1 Minimum Requirements. [Existing Text to remain]

Where a building contains more than one distinct type of construction, the building shall comply with the most restrictive area, height, and stories for the lesser type of construction or be separated by fire walls.

(Reason: To create definite language that requires separation between dissimilar building types.)

Section 708.4.2 Fireblocks and draftstops in combustible construction; amend to read as follows:

708.4.2 Fireblocks and draftstops in combustible construction. *[Body of text unchanged]*

Exceptions:

1. Buildings equipped with an automatic sprinkler system installed throughout in accordance with Section 903.3.1.1, or in accordance with Section 903.3.1.2 provided that sprinkler protection is provided in the space between the top of the fire partition and the underside of the floor or roof sheathing, deck or slab above as required for systems complying with Section 903.3.1.1. Portions of buildings containing concealed spaces filled with noncombustible insulation as permitted for sprinkler omission shall not apply to this exception for draftstopping. *[Remainder unchanged]*

Reason: (The most common exception used to eliminate the need for sprinklers in concealed spaces of combustible construction is to fill the space with noncombustible insulation. This exception was changed in 2010 to permit a 2-inch air gap at the top of the filled space. A space compliant with the permitted omission above would allow hot gas and smoke to spread unimpeded throughout a building not provided with draftstopping. For this reason, omission of sprinklers permitted in accordance with NFPA 13 referenced standard should not be permitted with IBC exception requiring draftstopping in combustible construction.)

Section 712.1.9 Two-story openings; amended to read as follows:

712.1.9 Two-story openings. *[Body of text unchanged]*

1. Does not connect more than two stories.
2. Does not penetrate a horizontal assembly that separates fire areas or smoke barriers that separate smoke compartments.
3. Is not concealed within the construction of a wall or a floor/ceiling assembly.
4. Is not open to a corridor in Group I and ~~R~~ H occupancies.
5. Is not open to a corridor on nonsprinklered floors.
6. Is separated from floor openings and air transfer openings serving other floors by construction conforming to required shaft enclosures.

Section 718.3 Draftstopping in floors; exceptions is amended to read as follows:

718.3 Draftstopping in floors. *[Body of text unchanged]*

Exceptions: Buildings equipped throughout with an *automatic sprinkler system* in accordance with Section 903.3.1.1. and provided that in combustible construction, sprinkler protection is provided in the floor space.

(Reason: To remain consistent with changes in 708.4.2 code.)

Section 901.6.1 Automatic sprinkler system; 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 nighttime 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.)

Section 903.1.1; amend 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.)

Section 903.2 Where required; amend to read as follows and delete the exception:

903.2 Where required. ~~Approved a~~Automatic ~~s~~Sprinklers ~~systems in new buildings and structures~~ shall ~~be provided in the locations described in Sections 903.2.1 through 903.2.12~~ 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.)

Section 903.2.4.2 Group F-1 distilled spirits; amend to read as follows:

903.2.4.2 Group F-1 distilled spirits. An *automatic sprinkler system* shall be provided throughout a Group F-1 *fire area* used for the manufacture of distilled spirits involving more than 120 gallons of distilled spirits (>16% alcohol) in the fire area at any one time.

Section 903.2.9 Group S-1; amend by adding Section 903.2.9.3 and add Section 903.2.9.3.1 to read as follows:

903.2.9.3 Group S-1 Distilled spirits or wine. An *automatic sprinkler system* shall be provided throughout a Group S-1 *fire area* used for the bulk storage of distilled spirits or wine involving more than 120 gallons of distilled spirits or wine (>16% alcohol) in the fire area at any one time.

903.2.9.3.1 Self-service storage facility. An automatic sprinkler system shall be installed throughout all self-service storage facilities.

(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 903.2.9.4 Group S-1 upholstered furniture and mattresses; amend by deleting the exception.

903.2.9.4 Group S-1 upholstered furniture and mattresses. [Body of text unchanged]

> ~~**Exception**: Self-service storage facilities not greater than one story above grade plane where all storage spaces can be accessed directly from the exterior.~~

Section 903.2.9; amended by adding Section 903.2.9.5 to read as follows:

903.2.9.5 Self-service storage facility. An automatic sprinkler system shall be installed throughout all self-service storage facilities.

Section 903.2.11; amend Section 903.2.11.3 and add Sections 903.2.11.7, 903.2.11.8, and 903.2.11.9 to read as follows:

903.2.11.3 Buildings over ~~55~~ 35 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*, that is located ~~55~~ 35 feet (~~16 764~~ 10 668 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 (4572 mm), see Chapter 32 to determine if those provisions apply.

903.2.11.8 Spray booths and rooms. New and existing spray booths and spraying rooms shall be protected by an approved automatic fire-extinguishing system.

903.2.11.9 Buildings over 5,000 sq. ft. An automatic sprinkler system shall be installed throughout all buildings with a building area 5,000 sq. ft. or greater, as well as in all existing buildings that are enlarged to be 5,000 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.)

Section 903.3.1.1.1 Exempt locations; amend to read as follows:

903.3.1.1.1 Exempt Locations. When approved by the *fire code official*, ~~A~~automatic sprinklers shall not be required in the following rooms or areas where such *...{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, whe~~re~~n *approved* by the fire 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. ~~Rooms or areas that are of noncombustible construction with wholly noncombustible contents.~~
5. ~~Fire service access e~~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.}

(Reason: Gives clarification. 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.)

Section 903.3.1.2 NFPA 13R sprinkler systems; amend to read as follows:

903.3.1.2 NFPA 13R sprinkler systems. *Automatic sprinkler systems* in Group R occupancies shall be permitted to be installed throughout in accordance with NFPA 13R where the Group R occupancy meets all of the following conditions:

1. Four stories or ~~fewer~~ less above *grade plane*.
2. The floor level of the highest *story* is ~~30~~ 35 feet (~~9144~~ 10668 mm) or less above the lowest level of fire department vehicle access.
3. The floor level of the lowest *story* is ~~30~~ 35 feet (~~9144~~ 10668 mm) or less below the lowest level of fire department vehicle access.

[Remainder of section unchanged]

Section 903.3.1.2.2 Corridors and balconies in the means of egress; amend to read as follows:

903.3.1.2.2 Corridors and balconies ~~in the means of egress~~. Sprinkler protection shall be provided in all *corridors* and for all balconies ~~in the means of egress where any of the following conditions apply~~.

~~1. Corridors with combustible floor or walls.~~
~~2. Corridors with an interior change of direction exceeding 45 degrees (0.79 rad).~~
~~3. Corridors that are less than 50 percent open to the outside atmosphere at the ends.~~
~~4. Open-ended corridors and associated exterior stairways and ramps as specified in Section 1027.6, Exception 3.~~
~~5. Egress balconies not complying with Sections 1021.2 and 1021.3.~~

Section 903.3.1.2.3; amend to read as follows:

Section 903.3.1.2.3 Attached Garages and Attics. ~~Attic~~ Sprinkler protection ~~shall be provided as follows~~ is required in attached garages, and in the following attic spaces:

1. [Remainder Unchanged]
2. [Remainder Unchanged]
3. ~~Where located in a building of Type III, Type IV or Type V construction designed in accordance with Section 510.2 or 510.4, attics not required by Item 1 to have sprinklers shall comply with one of the following if the roof assembly is located more than 55 feet (16 764 mm) above the lowest level of fire department vehicle access needed to meet the provisions in Section 503.~~

   ~~3.1 Provide automatic sprinkler system protection.~~
   ~~3.2 Construct the attic using noncombustible materials.~~
   ~~3.3 Construct the attic using fire-retardant-treated wood complying with Section 2303.2.~~
   ~~3.4 Fill the attic with noncombustible insulation.~~

4. 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.

~~The height of the roof assembly shall be determined by measuring the distance from the lowest required fire vehicle access road surface adjacent to the building to the eave of the highest pitched roof, the intersection of the highest roof to the exterior wall, or the top of the highest parapet, whichever yields the greatest distance. For the purpose of this measurement, required fire vehicle access roads shall include only those roads that are necessary for compliance with Section 503 of the International Fire Code:~~

5. 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 head 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; amend 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 new Section 903.3.1.4 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 sprinklering 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.)

Section 903.3.5; amend to read as follows:

903.3.5 Water supplies. Water supplies for *automatic sprinkler systems* shall comply with this section and the standards referenced in Section 903.3.1. The potable water supply shall be protected against backflow in accordance with the requirements of this section and the *International Plumbing Code*. For connections to public waterworks systems, the water supply test used for design of fire protection systems shall be adjusted to account for seasonal and daily pressure fluctuations based on information from the water supply authority and as approved by the fire code official. 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.)

Section 903.4; amend by adding the following paragraph after "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.)

Section 903.4.2; amend by adding the following sentence at the end of the section 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.)

Section 905.2; amend 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.)

Section 905.3; amend by adding Section 905.3.9 and exception to read as follows:

905.3.9 Buildings exceeding 10,000 sq. ft. In buildings exceeding 10,000 square feet in area per story and where any portion of the building's interior area is more than 200 feet (60960 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.)

Section 905.4, amend paragraphs 1, 3, and 5 and add new paragraph 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 ~~the main floor~~ an intermediate landing between stories, unless otherwise *approved* by the fire code official.
   Exception: {No change}
2. {No change.}
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 a~~n~~ ~~interior~~ *exit stairway* hose connection by a {remainder of text unchanged}.
4. {No change.}
5. Where the roof has a slope less than 4 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 a~~n~~ ~~interior~~ *exit stairway* with stair access to the roof provided in accordance with Section 1011.12.
6. {No change.}
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.)

Section 905.8; amend "Exception," to read as follows:

Exception: Where subject to freezing and in accordance with NFPA 14. Additionally, 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 Supervisory alarm.

Section 905.9; amend by adding the following paragraph after "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 906.1.1; amended by deleting exception 3 in its entirety.

Section 907.1; amended to add Section 907.1.4 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.

(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.)

Section 907.2.1; amend to read as follows:

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: {No change.}

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.

(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; amend 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. Wher~~e~~n *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. {No change.}

   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.)
   1.2. 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 ½ 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.)

Section 907.2.10; amend to read as follows:

907.2.10 Group S. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group S public- and self-storage occupancies ~~three~~

~~stories or greater in height~~ for interior corridors and interior common areas. Visible notification appliances are not required within storage units.

Exception: {No change.}

Section 907.2.11.1; amend to read as follows:

Section 907.2.11.1 Group R-1. Single- or multiple-station smoke alarms and carbon monoxide alarms shall be installed and maintained in all the following locations in Group R-1:

1. In sleeping areas.
2. In every room in the path of the means of egress from the sleeping area to the door leading from the sleeping unit.
3. In each story within the sleeping unit, including basements. For sleeping units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
4. For new construction, an approved carbon monoxide alarm shall be installed outside of each separate area in the immediate vicinity of the bedrooms in dwelling units that have an attached garage or gas fired appliance.
5. Where work requiring a permit occurs in existing dwellings that have attached garages or gas fired appliances, carbon monoxide alarms shall be provided.

Section 907.2.13; amend paragraph 3 under "Exceptions," 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.)

Section 907.4.2; amend by adding 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.)

Section 907.6.1; amend by adding 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.)

Section 907.6.3; amend by deleting all four Exceptions.

(Reason: To assist responding personnel in locating the emergency event for all fire alarm systems.)

Section 907.6.6; amend by adding a sentence at end of the paragraph to read as follows:

See 907.6.6 for the required information transmitted to the supervising station.

(Reason: Deleted Previous code amendment Section 909.22, For removal because it is already in the code in Sections 909.20.5, 909.20.6, 909.20.6.1, 909.20.6.2, and 909.20.6.3.)

Sections 909.20.5; amend to read as follows:

909.20.5 Stairway ramp pressurization alternative. Where the building is equipped throughout with an *automatic sprinkler system* in accordance with Section 903.1.1, ~~the vestibule is not required, provided that each~~ and the stair pressurization alternative is chosen for compliance with building code requirements for a smokeproof enclosure, *interior exit stairways or ramps* ~~is~~ shall be pressurized to ~~not less than~~ a minimum of 0.10 inches of water (25 Pa) and ~~not more than~~ 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 some control panel as per Section 909.16, and a smoke control permit shall be required from the Fire Department as per Section 105.7.

Sections 909.20.7 through 909.20.7.3; amend to read as follows:

909.20.7 Ventilating equipment. The activation of ventilating equipment ~~required by the alternatives in Sections 909.20.4, 909.20.5 and 909.20.6~~ 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* ~~and~~ or *ramp shaft* and vestibule doors is activated by smoke detection or power failure, mechanical equipment shall activate and operate at the required performance levels. Smoke detectors shall be installed in accordance with Section 907.3.

909.20.7.1 Ventilating 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 *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.
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 located outside of a 2-hour fire barrier construction shall be protected using any one of the following methods:~~
2. ~~Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a fire-resistance rating of not less than 2 hours.~~ Control wiring and power wiring utilizing a 2-hour rated cable or cable system.
3. Where encased with not less than 2 inches (51 mm) of concrete.

4. Control wiring and power wiring protected by a listed *electrical circuit protection system*~~s~~ ~~shall have~~ with a *fire-resistance rating* of not less than 2 hours. ~~Electrical circuit protective systems shall be installed in accordance with their listing requirements.~~

909.20.7.2 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.

909.20.7.3 Acceptance and testing. Before the mechanical equipment is *approved*, the system shall be tested in the presence of the ~~building~~ *fire code official* to confirm that the system is operating in compliance with these requirements.

Section 910.2; amend to read as follows:

910.2 Where required. Smoke and heat vents or a mechanical smoke removal system shall be installed as required by Section 910.2.1, 910.2.2, and 910.3.2.

Exceptions:

1. Frozen food warehouses used solely for storage of Class I and II commodities where protected by an *approved automatic sprinkler system*.
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; amend by adding Section 910.2.3 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 15,000 square feet (1394 m^2) 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 910.3.4; amend Section 910.3.4 and add Sections 910.3.4.1 and 910.3.4.2 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; amend to read as follows:

910.4.3.1 Makeup Air. Makeup air openings shall be provided within 6 feet (1829 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 m2 per 0.4719 m3/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.)

Section 910.4.4; amend to read as follows:

Section 910.4.4 Activation. The mechanical smoke removal system shall be activated ~~by manual controls only~~ automatically by the automatic sprinkler system or by an approved fire detection system. Individual manual controls shall also be provided.

Exception: Manual only systems per Section 910.2.

Section 912.2; amend by adding 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.

(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; amend by adding Section 913.2.1.1 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.)

Section 913.4; amend by adding the following sentence at the end of the section:

The fire-pump system shall also be supervised for "loss of power," "phase reversal," and "pump running" conditions by supervisory signal on district circuits.

Section 1006.2.1; amend Exception 3 to read as follows:

3. Unoccupied rooftop mechanical rooms and *penthouses* are not required to comply with the common path of egress travel distance measurement.

Section 1006.2.2; amend by adding Section 1006.2.2.7 to 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.)

Section 1009.1; amend by adding paragraph 3 under "Exceptions," to read as follows:

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

Section 1009.8; amend by adding the following Exception 7:

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.)

Section 1010.2.5; amend exceptions 3 and 4 to read 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 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.)

Section 1015.8; amend paragraph 1 to read as follows:

1. Operable windows where the top of the sill of the opening is located more than ~~75~~ 55 feet (~~22 860~~ 16764 mm) above the finished grade or other surface below and that are provided with window fall prevention devices that comply with ASTM F2006~~-17~~.

Section 1020.2 Construction; add exception 6 to read as follows:

6. In unsprinklered 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.)

Section 1020.7; amend to read as follows:

1020.7 Corridor continuity. All corridors ~~Fire-resistance-rated corridors~~ shall be continuous from the point of entry to an *exit* and shall not be interrupted by intervening rooms. ~~Where the path of egress travel within a fire-resistance-rated corridor to the exit includes travel along enclosed exit access stairways or ramps, the fire resistance rating shall be continuous for the length of the stairway or ramp and for the length of the connecting corridor on the adjacent floor leading to the exit.~~

~~**Exceptions:**~~

1. ~~Foyers, lobbies or reception rooms constructed as required for corridors shall not be construed as intervening rooms.~~
2. ~~Enclosed elevator lobbies as permitted by Item 1 of Section 1016.2 shall not be construed as intervening rooms.~~

Section 1030.1.1.1 Spaces under grandstands and bleachers; delete this section.

(Reason: Unenforceable.)

****Section 1101.1 Scope; add exception to Section 1101.1 as follows:**

Exception: Components of projects regulated by and registered with Architectural Barriers Division of Texas Department of Licensing and Regulation shall be deemed to be in compliance with the requirements of this chapter.

(Reason: To accommodate buildings regulated under state law. Further clarified in 2015 to mean components that are specifically addressed by TDLR shall be exempt.)

Section 1101.1; amended by adding "Exception," to read as follows:

Exception: Components of projects regulated by and registered with Architectural Barriers Division of Texas Department of Licensing and Regulation shall be deemed to be in compliance with the requirements of this chapter.

Table 1505.1; amend by amending footnote "b" to read as follows and deleting footnote "c":

b. Nonclassified roof coverings shall be permitted on buildings of ~~Group R-2 and~~ U occupancies~~, where there is a minimum fire separation distance of 6 feet measured from the leading edge of the roof~~ having not more than 120 sq. ft. of projected roof area. When exceeding 120 sq. ft. of projected roof area, buildings of U occupancies may use non-rated non-combustible roof coverings.

Section 1510.1; amend to read as follows:

1510.1 General. ~~A radiant barrier installed above a deck shall comply with Sections 1510.2 through 1510.4.~~ Materials and methods of applications used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15. All individual replacement shingles shall be in compliance with the rating required by Table 1505.1.

Section 1809.5.1; delete section in its entirety.

Section 2211.1; amend by adding Exception 5 to read as follows:

5. All framed walls top plates must be braced and supported by structural members to ceiling steel or roof at 6' (foot) on center spacing. (Lay in grid is not a structural support.)

Section 2308.5.8; amend to read as follows:

2308.5.8 Pipes in walls. Stud partitions containing plumbing, heating or other pipes 2 inches and larger shall be ~~framed~~ installed in a 2" x 6" stud wall and top/bottom plates and the joist underneath spaced to provide proper clearance for the piping. {Remainder of text unchanged.}

Section 2702; amend by adding Section 2702.5 to read as follows:

2702.5 Designated critical operations area (DCOA): In areas within a facility or site requiring continuous operation for the purpose of public safety, emergency management, national security or business continuity, the power systems shall comply with NFPA 70 Article 708.

Section 2901.1; amend by adding a sentence to read as follows:

[P] 2901.1 Scope. {*existing text to remain*} The provisions of this Chapter are meant to work in coordination with the provisions of Chapter 4 of the International Plumbing Code. Should any conflicts arise between the two chapters, the Building Official shall determine which provision applies.

(Reason: Gives building official discretion.)

Section 2902.1; amend by adding the following sentence to read as follows:

{Existing text to remain.} In other than E Occupancies, the minimum number of fixtures in Table 2902.1 may be lowered, if requested in writing, by the applicant stating reasons for a reduced number and approved by the Building Official.

(Reason: To allow flexibility for designer to consider specific occupancy needs.)

Table 2902.1; amend by adding footnote g to read as follows:

g. Drinking fountains are not required in M Occupancies with an occupant load of 100 or less, B Occupancies with an occupant load of 25 or less, and for dining and/or drinking establishments.

(Reason: Adjustment meets the needs of specific occupancy types.)

Section 2902.1; amend by adding new Section 2902.1.4 to read as follows:

2902.1.4 Additional fixtures for food preparation facilities. In addition to the fixtures required in this Chapter, all food service facilities shall be provided with additional fixtures set out in this section.

2902.1.4.1 Hand washing lavatory. At least one hand washing lavatory shall be provided for use by employees that is accessible from food preparation, food dispensing and ware washing areas. Additional hand washing lavatories may be required based on convenience of use by employees.

2902.1.4.2 Service sink. In new or remodeled food service establishments, at least one service sink or one floor sink shall be provided so that it is conveniently located for the cleaning of mops or similar wet floor cleaning tool and for the disposal of mop water and similar liquid waste. The location of the service sink(s) and/or mop sink(s) shall be approved by the Town of Bartonville's health department.

(Reason: Coordinates Health law requirements with code language for consistent regional practice.)

Section 3001.2 Emergency elevator communication systems for the deaf, hard of hearing and speech impaired; delete this section in its entirety.

(Reason: Per Elevator manufacturers input, they were not consulted prior to code approval and technology of elevator provisions as submitted are not currently available to provide this feature.)

Section 3002.1; amend by adding exceptions to read as follows:

Exceptions:

1. Elevators completely located within atriums shall not require hoistway enclosure protection.

2. Elevators in open or enclosed parking garages that serve only the parking garage, shall not require hoistway enclosure protection.

(Reason: Provides specific Code recognition that elevators within atriums and within parking garages do not require hoistway enclosure protection. Amendment needed since specific Code language does not currently exist.)

Section 3005.4; amend to read as follows:

3005.4 Machine rooms, control rooms, machinery spaces and control spaces. ~~The following rooms and~~ Elevator machine rooms, control rooms, control spaces and machinery spaces shall be enclosed with *fire barriers* constructed in accordance with Section 707 or *horizontal assemblies* constructed in accordance with Section 711, or both.

~~1. Machine rooms~~
~~2. Control rooms~~
~~3. Control spaces~~
~~4. Machinery spaces outside of the hoistway enclosure~~

The *fire-resistance rating* shall be not less than the required rating of the hoistway enclosure served by the machinery. Openings in the *fire barriers* shall be protected with assemblies having a *fire protection rating* not less than required for the hoistway enclosure door.

Exceptions:

1. ~~For other than fire service access elevators and occupant evacuation elevators, where machine rooms, machinery spaces, control rooms and control spaces do not abut and do not have openings to the hoistway enclosure they serve, the fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 711, or both, shall be permitted to be reduced to a 1-hour fire-resistance rating.~~ Elevator machine rooms, control rooms, machinery spaces and

control spaces completely located within atriums shall not require enclosure protection.

2. ~~For other than fire service access elevators and occupant evacuation elevators, in buildings for stories or less above grade plane where machine room, machinery spaces, control room and control spaces do not abut and do not have openings to the hoistway enclosure the serve, the machine room, machinery spaces, control rooms and control spaces are not required to be fire-resistance rated.~~ Elevator machine rooms, control rooms, machinery spaces and control spaces in open or enclosed parking garages that serve only the parking garage, shall not require enclosure protection.

(Reason: This amendment eliminates code language to be consistent with the regional goal to require passive enclosures of these areas unless a hoistway enclosure is not required by other Code provisions. See companion change to eliminate fire sprinklers thereby eliminating shunt trip.)

Section 3005.5; amend by adding subsections 3005.5.1, 3005.5.1.1, 3005.5.1.1.1, 3005.5.1.1.2, 3005.5.1.2, 3005.5.1.3, and 3005.5.1.4 to read as follows:

3005.5.1 Fire protection in machine rooms, control rooms, machinery spaces and control spaces.

3005.5.1.1 Automatic sprinkler system. The building shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1, except as otherwise permitted by Section 903.3.1.1.1 and as prohibited by Section 3005.5.1.1.1.

3005.5.1.1.1 Prohibited locations. Automatic sprinklers shall not be installed in machine rooms, elevator machinery spaces, control rooms, control spaces and elevator hoistways.

3005.5.1.1.2 Sprinkler system monitoring. The sprinkler system shall have a sprinkler control valve supervisory switch and water-flow initiating device provided for each floor that is monitored by the building's fire alarm system.

3005.5.1.2 Water protection. An approved method to prevent water from infiltrating into the hoistway enclosure from the operation of the automatic sprinkler system outside the elevator lobby shall be provided.

3005.5.1.3 Omission of shunt trip. Means for elevator shutdown in accordance with Section 3005.5 shall not be installed.

3005.5.1.4 Storage. Storage shall not be allowed within the elevator machine rooms, control room, machinery spaces and/or control spaces. Provide approve signage at each entry to the above listed locations stating: "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. The new section above is intended to be identical to Sections 3007.2, 3007.3, and 3007.4 for Fire Service Access Elevators and Sections 3008.2, 3008.3 and 3008.4 for Occupant Evacuation Elevators; reinforces the need to maintain space clean and free of combustibles. See companion change to eliminate fire sprinklers therein, to always require an enclosure - with IBC 3005.4 exceptions deleted - resulting in the limited need for a shunt trip system.)

Section 3006.2; amend paragraph 5 to read as follows:

5. The building is a high rise and the elevator hoistway is more than ~~75 feet (22 860 mm)~~ 55 feet (16764 mm) in height. The height of the hoistway shall be measured from the *lowest floor* at or above grade to the highest floors served by the hoistway.

(Reason: 2018 IBC text does not address hoistways that are greater than 75'-0" in height that are both below grade and above grade but not located above the high rise classification nor does the IBC address hoistways wholly located above grade such as those that serve sky lobbies".)

Section 3007.3; amend to read as follows:

3007.3 Water protection. Water from the operation of an automatic sprinkler system outside the lobby shall be prevented from infiltrating into the hoistway enclosure in accordance with an approved method.

Section 3008.3; amend to read as follows:

3008.3 Water protection. Water from the operation of an *automatic sprinkler system* outside the lobby shall be prevented from infiltrating into the hoistway enclosure in accordance with an *approved* method.

End

The following sections, paragraphs, and sentences of the *2021 International Residential Code* are hereby amended as follows: Standard type is text from the IRC. Underlined type is text inserted. ~~Lined through type is deleted text from IRC.~~

In 2009, **the State Legislature enacted SB 1410 prohibiting cities from enacting fire sprinkler mandates in residential dwellings.** However, jurisdictions with ordinances that required sprinklers for residential dwellings prior to and enforced before January 1, 2009, may remain in place. Reference; Section R313 Automatic Fire Sprinkler Systems.

Section R102.4; amend to read as follows:

R102.4 Referenced codes and standards. The *codes*, when specifically adopted, and standards referenced in this *code* shall be considered part of the requirements of this *code* to the prescribed extent of each such reference and as further regulated in Sections R102.4.1 and R102.4.2. Whenever amendments have been adopted to the referenced *codes* and standards, each reference to said *code* and standard shall be considered to reference the amendments as well. Any reference made to NFPA 70 or the *Electrical Code* shall mean the *Electrical Code* as adopted.

> ~~**Exception:** Where enforcement of a code provision would violate the conditions of the listing of the equipment or appliance, the conditions of the listing and manufacturer's instructions shall apply.~~

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes.)

Section R103 and R103.1 amend to insert the Department Name

~~DEPARTMENT OF BUILDING SAFETY~~ TOWN OF BARTONVILLE DEPARTMENT OF COMMUNITY DEVELOPMENT

R103.1 Creation of enforcement agency. The ~~department of building safety~~ Town of Bartonville Department of Community Development is hereby created and the official in charge ~~thereof~~ of plan reviews and inspections shall be known as the *building official*.

(Reason: Reminder to be sure ordinance reads the same as designated by the city.)

Section R104.10.1 Flood Hazard areas; delete this section.

(Reason: Flood hazard ordinances may be administered by other departments within the city.)

Section R105.2; amend by deleting numbered paragraphs 1, 2, 3, 5, and 10 under subparagraph titled "Building."

Sections R105.3.1.1 and R106.1.4; delete these sections.

(Reason: Floodplain provisions are addressed locally.)

Section R108; amend by adding Section 108.7 to read as follows:

R108.7 Re-inspection fee. A fee as established by Town council resolution may be charged when:

1. The inspection called for is not ready when the inspector arrives.
2. No building address or permit card is clearly posted.
3. Approved plans are not on the job site and available to the inspector at time of inspection.
4. The building is locked or wok otherwise is not available for inspection when called.
5. The job site is red-tagged twice for the same item.
6. The original red tag has been removed from the job site.
7. Violations exist on the property including failure to maintain erosion control, trash control or tree protection.

8. Any re-inspection fees assessed shall be paid before additional inspections are conducted on that job site.

Section R110 (R110.1 through R110.5); delete the section.

(Reason: Issuing CO's for residences is not a common practice in the area.)

Section R112; amend in its entirety to read as follows:

SECTION R112
~~BOARD OF APPEALS~~ MEANS OF APPEAL

R112.1 ~~General~~ Application for appeal. Any person shall have the right to appeal a decision of the building official to the Board of Adjustment as provided in Section 2.02 of the Denton County Emergency Services District No 1 Land Development Code. ~~In order to hear and decide appeals of orders, decisions or determinations made by the building official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The building official shall be an ex officio member of said board but shall not have a vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business, and shall render decisions and findings in writing to the appellant with a duplicate copy to the building official.~~

~~**R112.2. Limitations on authority.** An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The board shall not have authority to waive requirements of this code.~~

~~**R112.3 Qualifications.** The board of appeals shall consist of members who are qualified by experience and training to pass judgment on matter pertaining to building construction and are not employees of the jurisdiction.~~

~~**R112.4 Administration.** The building official shall take immediate action in accordance with the decision of the board.~~

Section R202; change definition of "Townhouse" to read as follows:

TOWNHOUSE UNIT. A single-family dwelling unit separated by property lines in a *townhouse* that extends from foundation to roof and that has a *yard* or *public way* on at least two sides.

(Reason: To distinguish Townhouses on separate lots.)

Table R301.2; amend to read as follows:

GROUND SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY[f]	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP[e]	ICE BARRIER UNDER-LAYMENT[h]	FLOOD HAZARDS[g]	AIR FREEZING INDEX[i]	MEAN ANNUAL TEMP[j]
	SPEED[d] (MPH)	Topographic Effects[k]	Special Wind Region[L]	Windborne Debris Zone[m]		Weathering[a]	Frost Line Depth[b]	Termite[c]					
5 lb/ft2	115 (3 sec-gust)/ 76 fastest mile	No	No	No	A	Moderate	6"	Very Heavy	22^0 F	No	Local Code	150	64.9^0 F

{Delete remainder of table Manual J Design Criteria and footnote N.}

(Reason: To promote regional uniformity. Manual J is utilized by third party and not part of performed plan reviews. This is reference table only, not needed.)

Section R302.1; add exception #6 to read as follows:

Exceptions: *{previous exceptions unchanged}*

6. Open non-combustible carport structures may be constructed when also approved within adopted ordinances.

(Reason: Refers to other ordinances, such as zoning ordinances.)

Section R302.2.6; amend by deleting exception #6.

Section R302.3; add Exception #3 to read as follows:

Exceptions:

1. *{existing text unchanged}*
2. *{existing text unchanged}*
3. Two-family dwelling units that are also divided by a property line through the structure shall be separated as required for townhouses.

(Reason: Provide guidance for a common construction method in this area. Correlates with amendment to IRC Section R202 Townhouse definition.)

Section R302.5.1; amend to read as follows:

R302.5.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 13/8 inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 13/8 inches (35 mm) thick, or 20-minute fire-rated doors. ~~Doors shall be self-latching and equipped with a self-closing or automatic closing device~~.

(Reason: Absence of data linking self-closing devices to increased safety. Self-closing devices often fail to close the door entirely.)

Section R302.7; amend to read as follows:

R302.7 Under stair protection. All enclosed space under stairs that ~~is accessed by a door or access panel~~ have "No Access" shall have ~~walls~~ under stair surface of 5/8" fire-rated gypsum board and any soffits protected on the enclosed side with ~~½ inch (127. mm)~~ 5/8-inch (15.8 mm) fire-rated gypsum board or one-hour fire-resistive construction.

Section R303.3, Exception; amend to read as follows:

Exception: {existing text unchanged**}** Spaces containing only a water closet or water closet and a lavatory may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.

(Reason: Consistent with common local practice as recirculating fans are recognized as acceptable air movement.)

Section R307; amend by creating Section 307.3 to read as follows:

R307.3 Blocking. Required at one toilet at grade level. Blocking per Sec. R307.4 and Figure 307.4, shall be installed at rear wall and one wall adjacent to toilet at the lowest living level where a toilet is provided.

Section R307; amend by creating Section 307.4 and Figure 307.4 to read as follows:

R307.4 Blocking. Blocking may be ½" plywood or equivalent or 2 x solid wood blocking flush with wall.

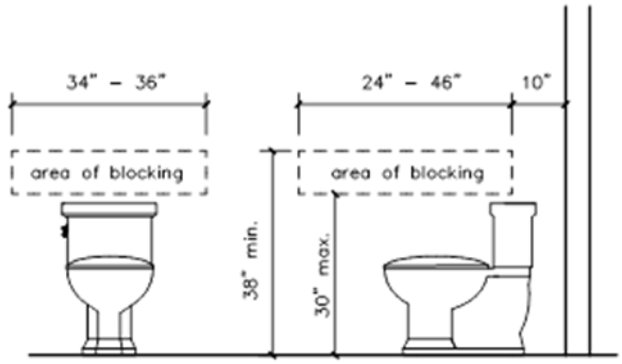


Figure 307.4

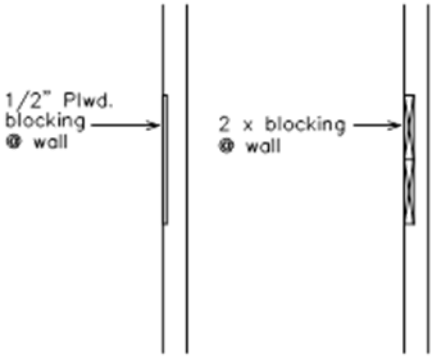


Figure 307.4

Section R310.2.3; amend to read as follows:

R310.2.3 Maximum height from floor. Where a window is provided as the emergency escape and rescue opening, it shall have ~~the bottom of the clear opening~~ a sill height of not ~~greater~~ more than 44 inches (1118 mm) above the floor; where the sill height is below grade, it shall be provided with a window well in accordance with Section R310.2.3. Second or third story windows that are required for emergency escape and rescue shall be provided with an approved fire escape ladder.

Section R313.2 One and two family dwellings automatic sprinkler systems; delete this section and subsection in their entirety*.*

(Reason: In 2009, the State Legislature enacted SB 1410, amending section 1301.551 subsection I of the occupation code, prohibiting cities from enacting fire sprinkler mandates one or two family dwellings only. However, jurisdictions with ordinances that required sprinklers for one or two family dwellings prior to and enforced before January 1, 2009, may remain in place.*)*

Section R315.2.2 Alterations, repairs and additions; amend to read as follows:

Exception:
1. [existing text remains]
2. Installation, alteration or repairs of all electrically powered mechanical systems or plumbing appliances.
~~3. Installation, alternation or repairs of mechanical systems that are not fuel fired.~~

(Reason: Revised exception for clarity. Code intent is to protect against the products of combustion.)

Section R322 Flood Resistant Construction; deleted section.

(Reason: Floodplain hazard ordinances may be administered by other departments within the city.)

Section R327.1; amend by creating Section R327.1.1 to read as follows:

Section 327.1.1 Adjacency to structural foundation. Depth of the swimming pool and spa shall maintain a ratio of 1:1 from the nearest building foundation or footing of a retaining wall.

Exception: A sealed engineered design drawing of the proposed new structure shall be submitted for approval.

Section R401.2; amended by adding a new paragraph following the existing paragraph to read as follows.

Section R401.2. Requirements. *{existing text unchanged} …*

Every foundation and/or footing, or any size addition to an existing post-tension foundation, regulated by this code shall be designed and sealed by a Texas-registered engineer.

(Amendment to 2015 IRC carried forward to 2018 IRC.)

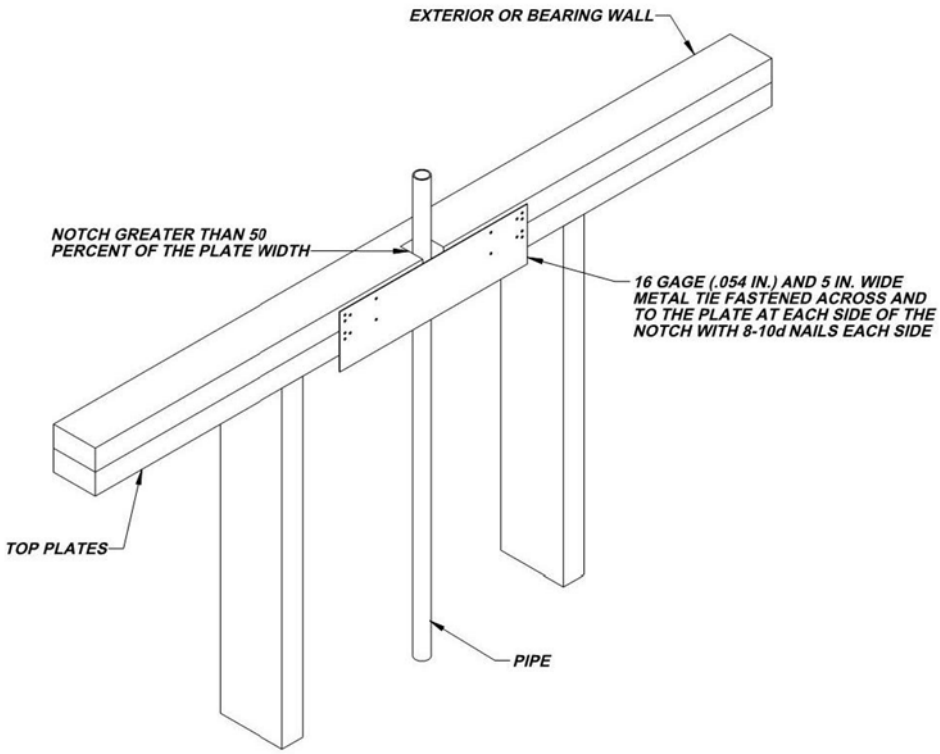
Section R602.6.1; amend the following:

R602.6.1 Drilling and notching of top plate. When ~~where~~ piping or ductwork is placed in or partly in an exterior wall or interior *load-bearing wall*, necessitating cutting, drilling or notching of the top plate by more than 50 percent of its width, a galvanized metal tie not less than 0.054 inch thick (1.37 mm) (16 Ga) and ~~1 ½ inches (38) mm~~ 5 inches (127 mm) wide shall be fastened across and to the plate at each side of the opening with not less than eight 10d (0.148 inch diameter) having a minimum length of 1 ½ inches (38 mm) at each side or equivalent. Fasteners will be offset to prevent splitting of the top plate material. The metal tie must extend a minimum of 6 inches past the opening. See figure R602.6.1. {remainder unchanged}

(Amendment to 2015 IRC carried forward to 2018 IRC.)

Figure R602.6.1; amended to appear and read as follows:

Plumbing in walls and top plates. Any plumbing in a stud wall and top plate 2" and larger shall be installed in a 2" x 6" stud wall and top/bottom plates.



(Amendment to 2015 IRC carried forward to 2018 IRC also provides additional assurance of maintaining the integrity of the framing by spreading the nailing pattern.)

Section R703.8.4.1; amend by adding Section 703.8.4.1.2 to read as follows:

R703.8.4.1.2 Veneer ties for wall studs. In stud framed exterior walls, all ties may be anchored to studs as follows:

1. When studs are 16 in (407 mm) o.c., stud ties shall be spaced no further apart than 24 in (737 mm) vertically starting approximately 12 in (381 mm) from the foundation; or
2. When studs are 24 in (610 mm) o.c., stud ties shall be spaced no further apart than 16 in (483 mm) vertically starting approximately 8 in (254 mm) from the foundation.

(This amendment had been a carry over amendment for years to provide clear instruction for placement of brick ties. It is now retained with changes to reflect its correct placement and use for clarity when attachment to framing lumber (studs). It should remain for those purposes. It is in addition to the new new Table in 2018 which provides for brick ties directly to sheathing.)

Section R806.3; amend by adding Section 806.3.1 to read as follows:

R806.3.1 Eave and cornice vents. Where eave or cornice vents are installed, they shall be a minimum of 3 feet from all window and door openings.

Section 807.1; amend to read as follows:

R807.1 Attic access. {Existing text remains.} Decking materials for walkway shall be of ½" minimum plywood or 5/8" minimum wafer board. A permanent ladder and/or stairways with a #300 lb. rating for access and removal of equipment shall be provided.

Section R902.1; amend and add exception #5 to read as follows:

R902.1 Roofing covering materials. Roofs shall be covered with materials as set forth in Sections R904 and R905. Class A, B, or C roofing shall be installed ~~in designated by law as requiring their use or when the edge of the roof is less than 3 feet from a lot line~~. *{remainder unchanged}*

Exceptions:

1. *{text unchanged}*
2. *{text unchanged}*
3. *{text unchanged}*
4. *{text unchanged}*

5. Non-classified roof coverings shall be permitted on one-story detached *accessory structures* used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed (area defined by jurisdiction).

(Reason: to address accessory structures Group U exempt from permits per Section R105.2)

Chapter 11 [RE] – Energy Efficiency is deleted in its entirety; Reference the 2021 IECC for energy code provisions and recommended amendments.

(Reason: The recommended energy code changes from the Energy and Green Advisory Board update the amendments for Chapter 11. The 2018 International Energy Conservation Code should be referenced for residential energy provisions. This approach simply minimizes the number of amendments to the IRC.)

Section M1305.1.2; amend to read as follows:

M1305.1.2 Appliances in attics. *Attics* containing *appliances* shall be provided . . . {bulk of paragraph unchanged} . . . sides of the appliance where access is required. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches (508 mm by 762 mm), and large enough to allow removal of the largest *appliance*. As a minimum, for access to the attic space, provide one of the following:

1. A permanent stair.
2. A pull down stair with a minimum 300 lb (136 kg) capacity.
3. An *access* door from an upper floor level.

Exceptions: {*remaining text unchanged}*

(Reason: To provide a safe means of accessibility to appliances in attics and to allow for different types of construction limitations. Consistent with regional amendment to IFGC and IMC 306.3.)

Section M1401.4; amend to read as follows:

M1401.4 ~~Outdoor~~ Exterior installations. *Equipment* and *appliances* installed outdoors shall be *listed* and *labeled* for outdoor installation. No a/c condensers shall be located in side yards less then 5 feet, unless approved by the Building Official. {remaining text unchanged.}

Section M1411.3; amend to read as follows:

M1411.3 Condensate disposal. Condensate from all cooling coils ~~and~~ or evaporators shall be conveyed from the drain pan outlet to ~~an *approved* place of disposal~~ a sanitary sewer through a trap, by means of a direct or indirect drain. *{remaining text unchanged}*

(Reason: Reflects regional practice and to reduce excessive runoff into storm drains.)

Section M1411.3.1, Items 3 and 4; add text to read as follows:

M1411.3.1 Auxiliary and secondary drain systems. *{bulk of paragraph unchanged}*

1. *{text unchanged}*
2. *{text unchanged}*
3. An auxiliary drain pan… *{bulk of text unchanged}…* with Item 1 of this section. A water level detection device may be installed only with prior approval of the *building official*.
4. A water level detection device… *{bulk of text unchanged}…* overflow rim of such pan. A water level detection device may be installed only with prior approval of the *building official*.

(Reason: Reflects standard practice in this area.)

Section M1411.3.1.1; amend to read as follows:

M1411.3.1.1 Water-level monitoring devices. On down-flow units …*{bulk of text unchanged}*… installed in the drain line. A water level detection device may be installed only with prior approval of the *building official.*

(Reason: Reflects standard practice in this area.)

M1503.6 Makeup air required; amend and add exception to read as follows:

M1503.6 Makeup air required. Where one or more gas, liquid or solid fuel-burning *appliance* that is neither direct-vent nor uses a mechanical draft venting system is located within a dwelling unit's air

barrier, each exhaust system capable of exhausting in excess of 400 cubic feet per minute (0.19 m^3/s) shall be mechanically or passively provided with makeup air at a rate approximate~~ly equal~~ to the difference between exhaust air rate and 400 cubic feet per minute. Such makeup air systems shall be equipped with not fewer than one damper complying with Section M1503.6.2.

Exception*:* Makeup air is not required for exhaust systems installed for the exclusive purpose of space cooling and intended to be operated only when windows or other air inlets are open**.** Where all appliances in the house are of sealed combustion, power-vent, unvented, or electric, the exhaust hood system shall be permitted to exhaust up to 600 cubic feet per minute (0.28 m3/s) without providing makeup air. Exhaust hood systems capable of exhausting in excess of 600 cubic feet per minute (0.28 m3/s) shall be provided with a makeup air at a rate approximately to the difference between the exhaust air rate and 600 cubic feet per minute.

(Reason: Exception requires makeup air equaling the amount above and beyond 400 cfm for larger fan which will address concerns related to "fresh" air from the outdoors in hot humid climates creating a burden on HVAC equipment and negative efficiency impacts from back-drafting and wasted energy.)

Section M1601.4.4; amend to read as follows:

M1601.4.4 Support. ~~Factory-made~~ Metal ducts *listed* in accordance with UL 181 shall be supported in accordance with manufacturer's installation instructions or other approved means. ~~Field- and shop-fabricated fibrous glass~~ Flexible ducts shall be supported ~~in accordance with the SMACNA Fibrous Glass Duct Construction Standards or the NAIMA Fibrous Glass Duct Construction Standards~~ by 1-inch wide 18-gauge solid metal straps with 6" metal saddles at intervals not exceeding 10 feet or in accordance with the manufacturer's installation instructions. ~~Field- and shop-fabricated metal and flexible ducts shall be supported in accordance with SMACNA HVAC Duct Construction Standards- Metal and Flexible.~~

Section M2005.2; amend to read as follows:

M2005.2 Prohibited locations. Fuel-fired water heaters shall not be installed in a room used as a storage closet. Water heaters located in a bedroom or bathroom shall be installed in a sealed enclosure so that *combustion air* will not be taken from the living space. Access to such enclosure may be from the bedroom or bathroom when through a solid door, weather-stripped in accordance with the exterior door air leakage requirements of the *International Energy Conservation Code* and equipped with an *approved* self-closing device. Installation of direct-vent water heaters within an enclosure is not required.

(Reason: Corresponds with the provisions of IFGC Section 303.3, exception #5.)

Section G2404.1 (301.1); amended to read as follows:

G2404.1 (301.1) Scope. This section shall govern the approval and installation of all equipment and appliances that comprise parts of the installations regulated by this code in accordance with Section G2401. All gas meters shall be located on the structure.

Section G2408.3 (305.5) Private garages; delete this section in its entirety.

(Reason: This provision does not reflect standard practice in this area.)

Section G2415.2 (404.2) CSST; add a second paragraph and exception to read as follows:

Both ends of each section of medium pressure gas piping shall identify its operating gas pressure with an *approved* tag. The tags are to be composed of aluminum or stainless steel and the following wording shall be stamped into the tag:

"WARNING: 1/2 to 5 psi gas pressure - Do Not Remove"
Exception: Corrugated stainless steel tubing (CSST) shall be a minimum of 1/3" (18 EDH).

(Reason: To protect homeowners and plumbers.)

Section G2415.12 (404.12) and G2415.12.1 (404.12.1); amend to read as follows:

G2415.12 (404.12) Minimum burial depth. Underground *piping systems* shall be installed a minimum depth of ~~12 inches (305 mm)~~ 18 inches (457 mm) below grade, ~~except as provided for in Section G2415.12.1.~~

G2415.12.1 (404.12.1) Individual Outdoor Appliances; Delete in its entirety

(Reason: To provide increased protection to piping systems.)

Section G2417.1 (406.1); amend to read as follows:

G2417.1 (406.1) General. Prior to acceptance and initial operation, all *piping* installations shall be ~~visually~~ inspected and *pressure tested* to determine that the materials, design, fabrication, and installation practices comply with the requirements of this *code*. The *permit* holder shall make the applicable tests prescribed in Sections 2417.1.1 through 2417.1.5 to determine compliance with the provisions of this *code*. The *permit* holder shall give reasonable advance notice to the *building official* when the *piping system* is ready for testing. The *equipment*, material, power and labor necessary for the inspections and test shall be furnished by the *permit* holder and the *permit* holder shall be responsible for determining that the work will withstand the test pressure prescribed in the following tests.

(Reason: To utilize language used in the IPC regarding who is responsible for testing procedures.)

Section G2417.4; amend to read as follows:

G2417.4 (406.4) Test pressure measurement. Test pressure shall be measured with a monometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the pressure test period. The source of pressure shall be isolated before the pressure tests are made. ~~Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure.~~

(Reason: To require the use of more accurate diaphragm gauges. Spring gauges do not provide accurate measurement below approximately 17 psig.)

Section G2417.4.1; amend to read as follows:

G2417.4.1 (406.4.1) Test pressure. The test pressure to be used shall be no less than ~~1 ½ times the proposed maximum working pressure, but not less than~~ 3 psig (20 kPa gauge), or at the discretion of the Code Official, the piping and valves may be tested at a pressure of at least six (6) inches (152 mm) of mercury, measured with a manometer or slope gauge, ~~irrespective of design pressure. Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe.~~ For tests requiring a pressure of 3 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one half inches (3 ½"), a set hand, 1/10 pound incrementation and pressure range not to exceed 6 psi for tests requiring a pressure of 3 psig. For tests requiring a pressure of 10 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one-half inches (3 ½"), a set hand, a minimum of 2/10 pound incrementation and a pressure range not to exceed 20 psi. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa) (1/2 psi) and less than 200 inches of water column pressure (52.2 kPa) (7.5 psi), the test pressure shall not be less than ten (10) pounds per square inch (69.6 kPa). For piping carrying gas at a pressure that exceeds 200 inches of water column (52.2 kPa) (7.5 psi), the test pressure shall be not less than one and one-half times the proposed maximum working pressure.

Diaphragm gauges used for testing must display a current calibration and be in good working condition. The appropriate test must be applied to the diaphragm gauge used for testing

(Reason: To provide for lesser pressures to coordinate with the use of more accurate diaphragm gauges.)

Section G2417.4.2; amend to read as follows:

G2417.4.2 (406.4.2) Test duration. The test duration shall be held for a length of time satisfactory to the *Building Official*, but in no case for ~~be not~~ less than ~~10~~ fifteen (15) minutes. For welded *piping*, and for *piping* carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa), the test duration shall be held for a length of time satisfactory to the *Building Official*, but in no case for less than thirty (30) minutes.

(Reason: To comply with accepted regional practices.)

Section G2420.1 (406.1); amend by adding Section G2420.1.4 to read as follows:

G2420.1.4 Valves in CSST installations. Shutoff *valves* installed with corrugated stainless steel (CSST) *piping systems* shall be supported with an approved termination fitting, or equivalent support, suitable for the size of the *valves*, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration but in no case greater than 12-inches from the center of the *valve*. Supports shall be installed so as not to interfere with the free expansion and contraction of the system's *piping*, fittings, and *valves* between anchors. All *valves* and supports shall be designed and installed so they will not be disengaged by movement of the supporting *piping*.

(Reason: To provide proper security to CSST valves. These standards were established in this region in 1999 when CSST was an emerging technology.)

Section G2420.5.1 (409.5.1); amend to read as follows:

G2420.5.1 (409.5.1) Located within the same room. The shutoff valve…*{bulk of paragraph unchanged}…* in accordance with the appliance manufacturer's instructions. A secondary shutoff valve must be installed within 3 feet (914 mm) of the firebox if appliance shutoff is located in the firebox.

(Reason: Reflects regional practice and provides an additional measure of safety.)

Section G2421.1 (410.1); add text and Exception to read as follows:

G2421.1 (410.1) Pressure regulators. A line *pressure regulator* shall be *… {bulk of paragraph unchanged}… approved* for outdoor installation. Access to *regulators* shall comply with the requirements for access to *appliances* as specified in Section M1305.

> **Exception:** A passageway or level service space is not required when the *regulator* is capable of being serviced and removed through the required *attic* opening.

(Reason: To require adequate access to regulators.)

Section G2422.1.2.3 (411.1.3.3) Prohibited locations and penetrations; delete Exception 1 and Exception 4.

(Reason: To comply with accepted regional practices.)

Section G2445.2 (621.2); add Exception to read as follows:

G2445.2 (621.2) Prohibited use. One or more *unvented room heaters* shall not be used as the sole source of comfort heating in a *dwelling unit*.

> **Exception:** Existing *approved unvented room heaters* may continue to be used in *dwelling units*, in accordance with the *code* provisions in effect when installed, when *approved* by the *Building Official* unless an unsafe condition is determined to exist as described in *International Fuel Gas Code* Section 108.7 of the Fuel Gas Code.

(Reason: Gives code official discretion.)

Section G2448.1.1 (624.1.1); amend to read as follows:

G2448.1.1 (624.1.1) Installation requirements. The requirements for *water heaters* relative to access, sizing, *relief valves*, drain pans and scald protection shall be in accordance with this *code.*

(Reason: To clarify installation requirements. Also corresponds with amendments regarding water heater access.)

Section 2602.1; amend by amending "Exception," to read as follows:

Exception: Sanitary drainage ~~piping and~~ systems that ~~convey only the discharge from bathtubs, showers, lavatories, clothes washers and laundry trays shall not be required to connect to a public sewer or to a private sewage disposal system provided that the piping or systems are connected to a system in accordance with Section P2910 or P2911~~ were installed with septic tank or septic system, upon failure or need of repair must be connected to the Town Sanitary Sewer System.

Section P2603; amend to read as follows:

P2603.3 Protection against corrosion. Metallic piping, except for cast iron, ductile iron and galvanized steel, shall not be placed in direct contact with steel framing members, concrete or cinder walls and floors or other masonry. Metallic piping shall not be placed in direct contact with corrosive soil. Where sheathing is used to prevent direct contact, the sheathing ~~material~~ shall have a thickness ~~shall be~~ of not less than 0.008 inch (8 mil) (0.203 mm) and the sheathing shall be made of approved material ~~plastic~~. Where sheathing protects piping that penetrates concrete or masonry walls or floors, the sheathing shall be installed in a manner that allows movement of the piping within the sheathing.

(Reason: Allows for other materials to be accepted.)

Section P2603.5.1 Sewer depth; amend to read as follows:

P2603.5.1 Sewer depth. *Building sewers* that connect to private sewage disposal systems shall be ~~not less than~~ a minimum of [number] inches (mm) below finished grade at the point of septic tank connection. Building sewers shall be ~~not less than [NUMBER]~~ a minimum of 12 inches (304 mm) below grade.

(Reason: Provides sewer depth that is common in this region. Deleted reference to private sewage disposal because a private sewage disposal code is not typically adopted in this region.)

Section P2604; add Section P2604.2.1 to read as follows:

P2604.2.1 Plastic sewer and DWV piping installation. Plastic sewer and DWV piping installed underground shall be installed in accordance with the manufacturer's installation instructions. Trench width shall be controlled to not exceed the outside the pipe diameter plus 16 inches or in a trench which has a controlled width equal to the nominal diameter of the piping multiplied by 1.25 plus 12 inches. The piping shall be bedded in 4 inches of granular fill and then backfilled compacting the side fill in 6-inch layers on each side of the piping. The compaction shall be to minimum of 85 percent standard proctor density and extend to a minimum of 6 inches above the top of the pipe.

(Reason: To follow manufacturer backfill requirements and to be clear to Inspectors out in the field.)

Section P2718.1; amend by adding Section P2718.1.1 to read as follows:

P2718.1.1 Pan required. All clothes washing machines on a second floor or above shall have a pan. The pan shall be tested with a water test during construction and exit the exterior of the structure to the outside.

Section P2801.5; amend to read as follows:

P2801.5 Prohibited locations. Water heaters shall be located in accordance with Chapter 20. No tank type water heaters shall be permitted to be installed in New Residential attics. Tank less water heater(s) may be approved for attic installation and shall require a pan and drain the T&P line directly to the outdoor or approved location.

Section P2801.6; amend to read as follows:

P2801.6 Required pan. Where a storage tank-type water heater or a hot water storage tank is installed in a location where water leakage from the tank will cause damage, the tank shall be installed in a pan constructed of one of the following:

1. Galvanized steel or aluminum of not less than 0.0236 inch (0.6010 mm) in thickness.
2. Plastic not less than 0.036 inch (0.9 mm) in thickness.
3. Other *approved* materials.

~~A plastic pan beneath a gas-fired water heater shall be constructed of material having a flame spread index of 25 or less and a smoke-developed index of 450 or less when tested in accordance with ASTM E84 or UL 723~~.

(*Reason: Plastic burns degrading material over time on gas fired water heaters and to maintaining protection level.)*

Section P2801.6.1; amend to read as follows:

Section P2801.6.1 Pan size and drain. The pan shall be not less than 1 1/2 inches (38 mm) ~~deep~~ in depth and shall be of sufficient size and shape to receive all dripping or condensate from the tank or water heater. The pan shall be drained by an indirect waste pipe having a diameter of not less than 3/4 inch (19 mm) ~~diameter~~. Piping for safety pan drains shall be of those materials listed in Table P2906.5. Multiple pan drains may terminate to a single discharge piping system when *approved* by the administrative authority and permitted by the manufactures installation instructions and installed with those instructions. {*existing text unchanged}*

(Reason: Regionally accepted practice.)

Section P2801.7; amend by adding "Exception," to read as follows:

Exception: Electric Water Heater ~~elevation of the ignition source is not required for appliances that are listed as flammable vapor ignition-resistant~~.

Section P2804.6.1; change to read as follows:

Section P2804.6.1 Requirements for discharge piping. The discharge piping serving a pressure relief valve, temperature relief valve or combination thereof shall:

1. Not be directly connected to the drainage system.
2. Discharge through an air gap ~~located in the same room as the water heater.~~
3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.
4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.

   Exception: Multiple relief devices may be installed to a single T & P discharge piping system when approved by the administrative authority and permitted by the manufactures installation instructions and installed with those instructions.

5. Discharge to ~~the floor, to the pan serving the water heater or storage tank, to a waste receptor~~ an approved location or to the outdoors.

[remainder unchanged]

(Reason: To ensure the T&P is ran to the exterior.)

Section P2902.5.3; amend to read as follows:

P2902.5.3 Lawn irrigation systems. The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker ~~assembly~~, a double-check assembly or a reduced pressure principle backflow preventer ~~prevention assembly~~. A valve~~s~~ shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer ~~prevention assembly~~.

(Reason: To provide clarity.)

Section P3003.9.2; amend to read as follows:

P3003.9.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer ~~or other approved primer~~ that conforms to ASTM F656 shall be applied. Solvent cement not purple in color and conforming to ASTM D2564, CSA B137.3, ~~or~~ CSA B181.2 or CSA B182.1 shall be applied to all joint surfaces. The joint shall be made while the cement is wet and shall be in accordance with ASTM D2855. Solvent cement joints shall be permitted above or below ground.

~~Exception: A primer is not required where both of the following conditions apply:~~

1. ~~The solvent cement used is third-party certified as conforming to ASTM D 2564~~
2. ~~The solvent cement is used only for joining PVC drain, waste, and vent pipe and fittings in not pressure applications in sizes up to and including 4 inches (102mm) in diameter.~~

(Reason: to keep the "process of joining PVC pipe".)

Section P3005.2.1; amend to read as follows:

P3005.2.1 Horizontal drains and building drains. *Horizontal* drainage pipes in buildings shall have cleanouts located at intervals of not more than ~~100 feet (30 480 mm)~~ 75 feet. *Building drains* shall have cleanouts located at intervals not more than ~~100 feet (30 480 mm)~~ 75 feet except where manholes… {remaining text unchanged}.

Section P3101.2.1; amend to read as follows:

P3101.2.1 Venting required. No flat venting permitted. ~~Every trap and trapped fixture shall be vented in accordance with one of the venting methods specified in this chapter.~~

Section P3111 Combination waste and vent systems; delete this section in its entirety.

(Reason: A combination waste and vent system is not approved for use in residential construction.)

Section P3112.2; amend to read as follows:

P3112.2 ~~Vent connection~~ Installation. ~~The island fixture vent shall connect to the fixture drain as required for an individual or comment vent. The vent shall rise vertically to above the drainage outlet of the fixture being vented before offsetting horizontally or vertically downward. The vent or branch vent for multiple island fixture vents shall extend not less than 6 inches (152 mm) above the highest island fixture being vented before connecting to the outside vent terminal.~~ Traps for island sinks and similar equipment

shall be roughed in above the floor and may be vented by extending the vent as high as possible, but not less than the drainboard height and then returning it downward and connecting it to the horizontal sink drain immediately downstream from the vertical fixture drain. The return vent shall be connected to the horizontal drain through a wye-branch fitting and shall, in addition, be provided with a foot vent taken off the vertical fixture vent by means of a wye-branch immediately below the floor and extending to the nearest partition and then through the roof to the open air or may be connected to other vents at a point not less than six (6) inches (152 mm) above the flood level rim of the fixtures served. Drainage fittings shall be used on all parts of the vent below the floor level and a minimum slope of one-quarter (1/4) inch per foot (20.9 mm/m) back to the drain shall be maintained. The return bend used under the drain-board shall be a one (1) piece fitting or an assembly of a forty-five (45) degree (0.79 radius), a ninety (90) degree (1.6 radius) and a forty-five (45) degree (0.79 radius) elbow in the order named. Pipe sizing shall be as elsewhere required in this Code. The island sink drain, upstream of the return vent, shall serve no other fixtures. An accessible cleanout shall be installed in the vertical portion of the foot vent.

(Reason: To clarify the installation of island venting and to provide a regional guideline on a standard installation method for this region.)

END

The following sections, paragraphs, and sentences of the *2021 International Mechanical Code* (IMC) are hereby amended as follows: Standard type is text from the IMC. Underlined type is text inserted. ~~Lined through type is deleted text from the IMC.~~

Note: Historically the North Central Texas Council of Governments (NCTCOG) has limited Chapter 1 amendments in order to allow each city to insert their local policies and procedures. We now have 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.**

Section 102.8; change to read as follows:

102.8 Referenced Codes and Standards. The codes and standards referenced herein shall be those that are listed in Chapter 15 and such codes, when specifically adopted, and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference ~~and as further regulated in Sections 102.8.1 and 102.8.2~~.

~~**Exception:** Where enforcement of a code provision would violate the conditions of the listing of the *equipment* or *appliance*, the conditions of the listing and the manufacturer's installation instructions shall apply.~~

102.8.1 Conflicts. Where conflicts ~~differences~~ occur between provisions of this code and the referenced standards, the provisions of this code shall apply. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the adopted amendments. Any reference to NFPA 70 shall mean the National Electrical Code as adopted.

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes.)

Section 106.4; amend by adding Sections 106.4.8 and 106.4.9 to read as follows:

106.4.8 Fee schedule. Fees for the issuance of permits and performance of inspections as required by this code shall be as established from time to time by resolution of the Town Council and set forth in the Town's Fee Schedule

106.4.9 Fee refunds. The building official shall establish a policy for authorizing the refunding of fees.

Section 306.3; change to read as follows:

306.3 Appliances in Attics. Attics containing *appliances* shall be provided with an opening and unobstructed passageway large enough to allow removal of the largest *appliance*. The passageway shall be not less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) in length measured along the centerline of the passageway from the opening to the *appliance*. The passageway shall have continuous solid flooring not less than 24 inches (610 mm) wide. A level service space not less than 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present at the front or service side of the *appliance*. The clear access opening dimensions shall be ~~not less than~~ a minimum of 20 inches by 30 inches (508 mm by 762 mm), or larger where such dimensions are not large enough to allow removal of the largest appliance, shall have continuous solid flooring with a minimum thickness of 1/2" plywood or 5/8" wafer board, and shall be placed over a load bearing wall or with engineered approval. A walkway to an appliance shall be rated as a floor as approved by the building official. ~~and large enough to allow removal of the largest *appliance*.~~ As a minimum, for access to the attic space, provide one of the following:

1. A permanent stair.

2. A pull-down stair with a minimum 300 lbs. (136 kg) capacity.

3. An access door from an upper floor level.

4. Access Panel may be used in lieu of items 1, 2, and 3 with prior approval of the code official due to building conditions.

Exceptions:

1. The passageway and level service space are not required where the *appliance* is capable of being serviced and removed through the required opening.
2. Where the passageway is unobstructed and not less than 6 feet (1829 mm) high and 22 inches (559 mm) wide for its entire length, the passageway shall be not greater than 50 feet (15 250 mm) in length.

A receptacle outlet shall be provided at or near the equipment and appliance location within 25 feet and in accordance with the Electrical Code.

(Reason: To provide a safe means of accessibility to appliances in attics and to allow for different types of construction limitations. Consistent with regional amendment to International Fuel and gas Code (IFGC) 306.3.)

Section 306.5; change to read as follows:

306.5 Equipment and Appliances on Roofs or Elevated Structures. Where *equipment* requiring access or *appliances* are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access such *equipment* or *appliances*, an interior or exterior means of access shall be provided. Exterior ladders providing roof access need not extend closer than 12 feet (2438 mm) to the finish grade or floor level below and shall extend to the equipment and appliances' level service space. Such access shall not require climbing over obstructions greater than 30 inches (762 mm) in height or walking on roofs having a slope greater than ~~four~~ 4 units vertical in 12 units horizontal (33-percent slope). Such access shall not require the use of portable ladders. Where access involves climbing over parapet walls, the height shall be measured to the top of the parapet wall.

Permanent ladders installed to provide the required access shall comply with the following minimum design criteria:

1. The side railing shall extend above the parapet or roof edge not less than 30 inches (762 mm).
2. Ladders shall have rung spacing not to exceed 14 inches (356 mm) on center. The uppermost rung shall be not greater than 24 inches (610 mm) below the upper edge of the roof hatch, roof, or parapet, as applicable.
3. Ladders shall have a toe spacing not less than 6 inches (152 mm) deep.
4. There shall be not less than 18 inches (457 mm) between rails.
5. Rungs shall have a diameter not less than 0.75-inch (19.1 mm) and capable of withstanding a 300-pound (136 kg) load.
6. Ladders over 30 feet (9144 mm) in height shall be provided with offset sections and landings capable of withstanding 100 pounds per square foot (488 kg/m^2). Landing dimensions shall be not less than 18 inches (457 mm) and not less than the width of the ladder served. A guard rail shall be provided on all open sides of the landing.
7. Climbing clearance. The distance from the centerline of the rungs to the nearest permanent object on the climbing side of the ladder shall be not less than 30 inches (762 mm) measured perpendicular to the rungs. This distance shall be maintained from the point of ladder access to the bottom of the roof hatch. A minimum clear width of 15 inches (381 mm) shall be provided on both sides of the ladder measured from the midpoint of and parallel with the rungs except where cages or wells are installed.
8. Landing required. The ladder shall be provided with a clear and unobstructed bottom landing area having a minimum dimension of 30 inches (762 mm) by 30 inches (762 mm) centered in front of the ladder.

9. Ladders shall be protected against corrosion by *approved* means.
10. Access to ladders shall be provided at all times.

Catwalks installed to provide the required access shall be not less than 24 inches (610 mm) wide and shall have railings as required for service platforms.

Exception: This section shall not apply to Group R-3 *occupancies*.

A receptacle outlet shall be provided at or near the equipment and appliance location within 25 feet and in accordance with the Electrical Code.

(Reason: To assure access to roof appliances and provide options to not extend exterior ladders to grade. Consistent with IFGC amendments.)

Section 306.5.1; change to read as follows:

306.5.1 Sloped Roofs. Where *appliances*, *equipment*, fans or other components that require service are installed on a roof having a slope of three units vertical in 12 units horizontal (25-percent slope) or greater and having an edge more than 30 inches (762 mm) above grade at such edge, ~~a level platform shall be provided on each side of the *appliance* or *equipment* to which access is required for service, repair, or maintenance~~ a catwalk at least 16 inches in width with substantial cleats spaced not more than 16 inches apart shall be provided from the roof *access* to a level platform at the appliance. ~~The level platform shall be provided on each side of the appliance to which *access* is required for service, repair, or maintenance.~~ The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1067 mm) above the platform, shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the *International Building Code*. Access shall not require walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). Where access involves obstructions greater than 30 inches (762 mm) in height, such obstructions shall be provided with ladders installed in accordance with Section 306.5 or stairways installed in accordance with the requirements specified in the *International Building Code* in the path of travel to and from *appliances*, fans, or *equipment* requiring service.

(Reason: To assure safe access to roof appliances. Consistent with IFGC amendments.)

Section 306.6; change to read as follows:

306.6 Water Heaters Above Ground or Floor. When the mezzanine or platform in which a water heater is installed is more than eight (8) feet (2438 mm) above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

Exception: A maximum 10-gallon water heater (or larger with approval) is capable of being accessed through a lay-in ceiling, and the water heater installed is not more than ten (10) feet (3048 mm) above the ground or floor level and may be reached with a portable ladder.

306.6.1 Inadequate Lighting at Location. Whenever the mezzanine or platform is not adequately lighted or access to a receptacle outlet is not obtainable for the main level, lighting and a receptacle outlet shall be provided in accordance with Section 306.3.1.

(Reason: To provide safe access to water heaters and to provide lighting and receptacle for maintenance of equipment. Consistent with regional amendments to IFGC 306.7 and International Plumbing Code (IPC) 502.5.)

Section 307.2.3; amend item 2 to read as follows:

2. A separate overflow drain line shall be connected to the drain pan provided with the *equipment*. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a

stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection. However, the conspicuous point shall not create a hazard such as dripping over a walking surface or other areas so as to create a nuisance.

(Reason: Greater specificity in prohibited locations for condensate discharge. Consistent with regional amendment to IPC 314.2.1.)

Section 403.2.1; add an item 5 to read as follows:

5. Toilet rooms within private dwellings that contain only a water closet, lavatory, or combination thereof may be ventilated with an *approved* mechanical recirculating fan or similar device designed to remove odors from the air.

(Reason: Consistent with common regional practice. Consistent with regional amendment to International Residential Code (IRC) R303.3.)

Section 501.3; add an exception to read as follows:

501.3 Exhaust Discharge. The air removed by every mechanical exhaust system shall be discharged outdoors at a point where it will not cause a public nuisance and not less than the distances specified in Section 501.3.1. The air shall be discharged to a location from which it cannot again be readily drawn in by a ventilating system. Air shall not be exhausted into an attic, crawl space, or be directed onto walkways.

Exceptions:

1. Whole-house ventilation-type attic fans shall be permitted to discharge into the attic space of *dwelling units* having private attics.

2. Commercial cooking recirculating systems.

3. Where installed in accordance with the manufacturer's instructions and where mechanical or *natural ventilation* is otherwise provided in accordance with Chapter 4, *listed* and *labeled* domestic ductless range hoods shall not be required to discharge to the outdoors.

4. Toilet room exhaust ducts may terminate in a warehouse or shop area when infiltration of outside air is present.

(Reason: Provide a reasonable alternative in areas where a large volume of outside air is present.)

Section 505.1; change to read as follows:

505.1 General. Domestic cooking exhaust *equipment* shall comply with the requirements of this section. All domestic cooking exhaust equipment ventilation shall be made vertical through the roof and shall not be permitted horizontal.

Section 506.1; change to read as follows:

506.1 General. Commercial kitchen hood ventilation ducts and exhaust *equipment* shall comply with the requirements of this section. ~~Commercial kitchen grease ducts shall be designed for the type of cooking *appliance* and hood served.~~ All commercial cooking exhaust equipment ventilation shall be made vertical through the roof and shall not be permitted horizontal. Type I and Type II hoods.

Section 603.6.1.1; change to read as follows:

603.6.1.1 Duct length. ~~Flexible air ducts shall not be limited in length.~~ Flexible air ducts shall be a maximum of 5' (feet) and are required to have 1" (inch) solid metal straps and 6" (inch) metal saddles.

Section 607.5.1; change to read as follows:

607.5.1 Fire Walls. Ducts and air transfer openings permitted in fire walls in accordance with Section 706.11 of the *International Building Code* shall be protected with *listed* fire dampers installed in accordance with their listing. For hazardous exhaust systems, see Section 510.1-510.9 IMC.

(Reason: Correspond with un-amended IBC 710.7.)

END

The following sections, paragraphs, and sentences of the *2018 International Plumbing Code* are hereby amended as follows: Standard type is text from the IPC. Underlined type is text inserted. ~~Lined through type is deleted text from the IPC.~~

Note: Historically NCTCOG has limited Chapter 1 amendments in order to allow each city to insert their local policies and procedures. We now have 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.**

Table of Contents, Chapter 7, Section 714; change to read as follows:

713 Engineered Drainage Design 7-12

(Reason: Editorial change to make compatible with amendment to Section 714.1.)

Section 102.8; change to read as follows:

102.8 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 15 and such codes, when specifically adopted, and standards shall be considered as part of the requirements of this code to the prescribed extent of each such reference ~~and as further regulated in Sections 102.8.1 and 102.8.2~~. Where the differences occur between provisions of this code and the referenced standards, the provisions of this code shall be the minimum requirements. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the adopted amendments. Any reference to NFPA 70 shall mean the National Electrical Code as adopted.

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes.)

Section 305; change to read as follows:

305.1 Protection against contact. Metallic piping, except for cast iron, ductile iron and galvanized steel, shall not be placed in direct contact with steel framing members, concrete or cinder walls and floors or other masonry. Metallic piping shall not be placed in direct contact with corrosive soil. Where sheathing is used to prevent direct contact, the sheathing shall have a thickness of not less than 0.008 inch (8 mil) (0.203 mm) and the sheathing shall be made of approved material ~~plastic~~. Where sheathing protects piping that penetrates concrete or masonry walls or floors, the sheathing shall be installed in a manner that allows movement of the piping within the sheathing.

(Reason: Allows for other materials to be accepted.)

305.4.1 Sewer depth. ~~*Building sewers* that connect to private sewage disposal systems shall be installed not less than **[NUMBER]** inches (mm) below finished grade at the point of septic tank connection. *Building sewers* shall be installed not less than **[NUMBER]** inches (mm) below grade.~~ Building sewers shall be a minimum of 12 inches (304 mm) below grade.

(Reason: Provides sewer depth that is common in this region. Deleted reference to private sewage disposal because a private sewage disposal code is not typically adopted in this region.)

Section 306; amend by adding Section 306.2.4 to read as follows:

306.2.4 Plastic sewer and DWV piping installation. Plastic sewer and DWV piping installed underground shall be installed in accordance with the manufacturer's installation instructions. Trench width shall be controlled to not exceed the outside the pipe diameter plus 16 inches or in a trench which has a controlled width equal to the nominal diameter of the diameter of the piping multiplied by 1.25 plus 12 inches. The piping shall be bedded in 4 inches of granular fill and then backfilled compacting the side fill in 6-inch layers on each side of the piping. The compaction shall be to minimum of 85 percent standard proctor density and extend to a minimum of 6 inches above the top of the pipe.

(Reason: To follow manufacturer backfill requirements and to be clear to Inspectors out in the field)

Section 413.4; change to read as follows:

413.4 Required location for floor drains ~~Public laundries and central washing facilities~~. Floor drains shall be installed in the following areas:

1. In public ~~coin-operated~~ laundries and in the central washing facilities of multiple family dwellings, the rooms containing automatic clothes washers shall be provided with floor drains located to readily drain the entire floor area. Such drains shall have a minimum outlet of not less than 3 inches (76 mm) in diameter.

2. Commercial kitchens. In lieu of floor drains in commercial kitchens, the Code Official may accept floor sinks.

3. Public restrooms.

(Reason: To make more compatible with local health code practices.)

Section 608.17.5; change to read as follows:

608.17.5 Connections to lawn irrigation systems.
~~The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric vacuum breaker, a pressure vacuum breaker assembly or a reduced pressure principle backflow prevention assembly. Values shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow prevention assembly.~~

The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker, a double-check assembly or a reduced pressure principle backflow preventer. A valve shall not be installed downstream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer.

(Reason: To recognize regional practices.)

Section 703.6; Delete

~~703.6 Combined sanitary and storm public sewer.~~ ~~Where the public sewer is a combined system for both sanitary and storm water, the sanitary sewer shall be connected independently to the public sewer.~~

(Reason: not a standard practice in this region)

Section 704; amend by adding Section 704.5 to read as follows:

***704.5* Single stack fittings.** Single stack fittings with internal baffle, PVC schedule 40 or cast-iron single stack shall be designed by a registered engineer and comply to a national recognized standard.

(Reason: to allow owners, installers, inspectors, and design professionals to ready identify product markers to determine they meet all required standards.)

Section 712.4; amend by adding Section 712.4.3 to read as follows:

712.4.3 Dual Pump System. All sumps shall be automatically discharged and, when in any "public use" occupancy where the sump serves more than 10 fixture units, shall be provided with dual pumps or ejectors arranged to function independently in case of overload or mechanical failure. For storm drainage sumps and pumping systems, see Section 1113.

Section 713, 713.1; change to read as follows:

SECTION 713
ENGINEERED ~~COMPUTERIZED~~ DRAINAGE DESIGN

713.1 Design of drainage system. The sizing, design and layout of the drainage system shall be ~~permitted to be~~ designed by a registered engineer using *approved* ~~computer~~ design methods.

(Reason: Code was too restrictive.)

Section 903.1.1; change to read as follows:

903.1.1 Roof extension unprotected. Open vent pipes that extend through a roof shall terminate not less than **~~[NUMBER]~~** six (6) inches (152 mm) above the roof.

(Reason: To provide regional guideline on standard installation method for this area and address reference number correction.)

Section 1109; delete this section.

~~SECTION 1109 COMBINED SANITARY AND STORM PUBLIC SEWER~~

~~1109.1 General.~~ ~~Where the *public sewer* is a combined system for both sanitary and *storm water*, the storm sewer shall be connected independently to the *public sewer.*~~

Section 1202.1; delete Exceptions 1 and 2.

SECTION 1202 MEDICAL GASES

1202.1 Nonflammable medical gases. Nonflammable medical gas systems, inhalation anesthetic systems, and vacuum piping systems shall be installed, tested, and labeled in accordance with NFPA 99.

~~Exceptions:~~

~~1. This section shall not apply to portable systems or cylinder storage.~~
2. ~~Vacuum system exhaust terminations shall comply with the *International Mechanical Code*.~~

(Reason: State law already specifies that Med Gas systems must comply with NFPA 99.)

END

Exhibit E – Ordinance 781-25

The following sections, paragraphs, and sentences of the *2021 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.~~

Note: Historically, the North Central Texas Council of Governments (NCTCOG) has limited Chapter 1 amendments in order to allow each city to insert their local policies and procedures. We now have 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.

Amendments to the 2021 International Fire Code. The following sections of the 2021 Edition of the International Fire Code, the provisions of which shall be controlling within the limits of the Town of Bartonville boundaries, are hereby amended for the purpose of consistency with specific past practices and the recommendations of the North Central Texas Council of Governments (NCTCOG) Fire Advisory Board and the Denton County Emergency Services District No. 1 (DCESD1). The following text is from the NCTCOG, DCESD1 recommended amendments, and local amendments approved by the Town of Bartonville with previous fire codes.

Explanation of Options A and B:
Please note that as there is a wide range in firefighting philosophies/capabilities of cities across the region, OPTIONS "A" and "B" are provided in the Fire and Building Code amendments. Jurisdictions should choose one of these based on their fire-fighting philosophies/capabilities when adopting code amendments.

Amendments to the International Fire Code, 2021 Edition.
General Terms

1. Code official or fire code official. The fire chief or designee, Fire Marshal or designee, or member of the fire department charged with the duties of administration and enforcement of this code or a duly authorized representative.
2. Jurisdiction. All references to "jurisdiction" shall mean the Town of Bartonville, Texas.
3. Chief. All references to "Chief of the Bureau of Fire Prevention" shall be replaced with Fire Marshal."
4. Fire Marshal. All references to "Fire Marshal" shall include the Fire Marshal's designee.

***Section 101.1; amend to read as follows*:**

101.1 Title. These regulations shall be known as the fire code of the Town of Bartonville, hereinafter referred to as "this Code."

Section 102.1; change #3 to read as follows:

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

***Section 102.1.1 shall be added to read as follows*:**

Section 102.1.1 Reconstruction and remodel (all structures). Existing systems need not comply unless the total building remodel or expansion initiated after the effective date of this code, as adopted, exceeds 30% of the building. When cumulative building remodels or expansion exceeds 50%; the building must comply within 18 months of the permit application. Must comply with current fire codes in regards to:

1. Panic hardware
2. Fire alarms

3. Exit lights
4. Emergency lighting
5. Exits and exit ways
6. Fire Protection Systems

***Section 102.7; amend to read as follows*:**

Section 102.7 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 80 of the International Fire Code (IFC), and such codes when specifically adopted, and standards shall be considered ~~to be~~ part of the requirements of this code to the prescribed extent of each such reference ~~and as further regulated by Sections 102.7.1 and 102.7.2~~. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standards shall be considered to reference the amendments as well. Any reference to NFPA 70 or the ICC Electrical Code shall mean the Electrical Code, as adopted.

102.7.1 Conflicts. Where conflicts occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

102.7.2 Provisions in referenced codes and standards. Where the extent of the reference to a referenced code or standard includes subject matter that is within the scope of this code and any adopted amendments, the provisions of this code and any adopted amendments, as applicable, shall take precedence over the provisions in the referenced code or standard.

***Section 102.7.3 shall be added to read as follows*:**

102.7.3 Current editions. The most currently published editions of NFPA shall be the Referenced Codes adopted. Specific reference is made for the adoption of NFPA 3: Standard for Commissioning of Fire Protection Life Safety Systems and NFPA 17A, including all associated appendices, specifically Appendix B and NFPA 96: Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations and Appendix B of NFPA 96.

***Section 103.1, amend to read as follow*s:**

103.1 General ~~Creation of agency.~~ ~~The [INSERT NAME OF DEPRARMENT] is hereby created and the offical in charge thereof shall be known as the *fire code official*. The function of the agency shall be implementation, administration and enforcement of the provisions of the code.~~ **General.** The Fire Code shall be enforced by the Denton County Emergency Services District No 1. The Denton County Emergency Services District No 1 is hereby established as the Fire Department of the Town of Bartonville.

***Section 104.1 is amended by adding Section 104.1.1 to read as follows*:**

104.1.1 Code Official. For the purpose of this code, "Code Official" shall mean the Fire Chief or his designated representative(s).

***Section 105.1 is amended by adding Section 105.1.7 to read as follows*:**

105.1.7 Failure to obtain permit or working without a permit. Any person who fails to obtain a permit or is conducting work without a permit approved by the Denton County Emergency Services District No 1 shall be liable to a fee of two (2) times the required permit fee figured in accordance with the fee schedule adopted by resolution of the Town council. A minimum fee of one-hundred twenty dollars ($120.00) in addition to the required permit fee will be assessed. Working without a permit shall include non-compliance of Sections 105.3.5 and 105.4.6.

Section 105.2.3 is amended by adding Section 105.2.3.1 as follows:

105.2.3.1 Time limitation of application. Reinstatement of expired permits will require the applicant to resubmit permit application and required documents and shall be liable for applicable permit fees.

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.)

***Section 105.4.6 shall be added to read as follows*:**

105.4.6 Retention of construction documents. One set of construction documents shall be retained by the Fire Code Official until final approval of the work covered therein. One set of approved construction documents shall be returned to the applicant, and said set, along with the Fire Department Permit, shall be kept on site of the building or work at all times during which the work authorized thereby is in progress. Construction documents shall be retained by the installing company as required by the Texas State Fire Marshal's Office, after final approval of work covered therein.

Section 105.6.25 shall be added to read as follows:

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

Section 105.6.51 shall be added 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.

Section 105.7 shall be added to read as follows:

105.7 Required construction permits. The code official is authorized to issue construction permits for work set forth in Sections 105.7.1 to 105.7.26.

***Section 105.7.12 shall be added to read as follows*:**

105.7.12 Gates and barricades across fire apparatus access roads. A construction permit shall be required to install any system that during normal operation delays or prevents entry to, or obstructs a fire lane or street into, the premises of a residential or commercial area.

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 is amended by adding Section 105.8 to read as follows*:**

105.8 Permit and other fees. Fees for each permit required, plan reviews, inspections, re-inspections, other regulatory storage/handling, and equipment use or process established by resolution of DCESD1

from time to time and made a part of the District's Fee Schedule shall be paid prior to the issuance of such permit, performance of such service, or use of such equipment.

***Section 106.2 is amended by adding Section 106.2.3 to read as follows*:**

106.2.3 Inspection of existing premises. The Fire Chief, or designated representative, shall inspect all buildings, premises, or portion thereof as often as may be necessary. An initial inspection and one (1) re-inspection shall be made free of charge. If the Fire Chief or his designee is required to make follow-up inspections after the initial inspection and re-inspection to determine whether a violation or violations observed during the previous inspection have been corrected, a fee shall be charged. The occupant, lessee, or person making use of the building or premises shall pay said fee or fees within thirty (30) days of being billed as a condition to continue lawful occupancy of the building or premises.

Fees for follow-up inspections after initial and re-inspection shall be as set forth in the fee schedule as adopted by resolution of the Town council.

Recurring violations from year to year will result in issuance of a citation and shall not be restricted to the inspection and re-inspection procedure as indicated in this Section.

***Section 107.4 shall be amended as follow*s:**

107.4 Work commencing before permit issuance. Any ~~A~~ person, firm, partnership, corporation, association, or other entity who commences any work, activity or operation regulated by this code before obtaining the necessary permits shall be ~~subject to a fee established by the applicable governing authority, which shall be in addition to the required permit fees~~ fined a minimum of $250.00 or double the permit fee, whichever is greater. Each day work continues shall constitute a separate and distinct violation.

***Section 110.4 shall be added to read as follows*:**

110.4 Violation Penalties. Any person, firm, or corporation violating any of the provisions or terms of this Article or Code adopted herein or shall fail to comply with any of the requirements thereof or who shall erect, install, alter, repair or do work in violation of the approved construction documents or directive of the fire code official, or of a permit or certificate used under the provisions of this code shall be guilty of a misdemeanor and, upon conviction in the Municipal Court of the Town of Denton County Emergency Services District No 1, shall be subject to a fine not to exceed two thousand and no/100 dollars ($2,000.00) for each offense. Each and every day any such violation shall continue shall be deemed to constitute a separate offense.

***Section 112.3; add sentence to end of paragraph to read as follows*:**

Section 112.3 Notice of Violation; Citation
The fire code official is authorized to issue citations alleging violations of this code for prosecution in the Municipal Court. Notice under this section is not a prerequisite to prosecution of violations of this code.

***Section 112.4 shall be added 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 of not more than two thousand and no/100 ($2,000.00) dollars for each offense, and each and every day such violation shall continue shall be deemed to constitute a separate offense.

***Section 112.4.1 Violation penalties. Shall be amended to read as follows*:**

Persons who shall violate a provision of this code, or shall fail to comply with any of the requirements thereof, or who shall erect, install, alter, repair, or do work in violation of the *approved construction documents*, or directive, of the *fire code official*, or of a permit, or a certificate, used under provisions of this code, shall be fined a minimum of $500.00 or double the permit fee, whichever is greater. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

***Section 112.4.2 shall be added to read as follows*:**

112.4.2 Citations. It is the intent of this division to achieve compliance by the 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 Chief or his 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 Chief.
Notwithstanding any other provision of this code or of the International Fire Code, a citation may be issued without prior notice and the opportunity to correct the condition or violation if the violation is determined to be an immediate threat to life safety.

***Section 112.4.3 is added to read as follows*:**

112.4.3 Compliance with codes. Any person or entity that violates, disobeys, omits, neglects, or refuses to comply with, or who resists the enforcement of the provisions of this or other codes as referenced in this ordinance shall be guilty of a misdemeanor and subject to the penalties as set forth in the Code of Ordinances of the Town. In addition to these penalties, the fire code official or his or her designee is authorized to close any business or shut down any operation when any hazard or condition exists therein that poses a serious and imminent threat to life or property. Any reasonable method may be used to affect closure, including, but not limited to, disconnection of utilities and padlocking of any doors. Any person in control of or occupying any premises ordered closed or performing or overseeing any operation ordered discontinued who refuses an order to leave or to discontinue is guilty of a misdemeanor and subject to the penalties described herein.

***Section 113.4 Shall be amended to read as follows*:**

113.4 Failure to comply. Any person, firm, or corporation who shall continue any work after having been served with a stop work order, except such work as that person, firm, or corporation is directed to perform to remove a violation or unsafe condition, shall be ~~subject to fines established by the authority having jurisdiction.~~ fined not less than Five Hundred Dollars ($500.00) or more than Two Thousand Dollars ($2,000.00).

Section 202 is amended by adding definitions for the phrases "ADDRESSABLE FIRE DETECTION SYSTEM," "ANALOGUE ADDRESSABLE FIRE DETECTION SYSTEM," "DEFENDING IN PLACE," "SELF-SERVICE STORAGE FACILITY," "STANDBY PERSONNEL," and "UPGRADED OR REPLACED FIRE ALARM SYSTEM" "AMBULATORY HEALTH CARE FACILITY," "ATRIUM," "FIRE WATCH," "FIREWORKS," "HIGH-PILED COMBUSTIBLE STORAGE," "HIGH RISE BUILDING," AND "REPAIR GARAGE" to read as follows:

ADDRESSABLE FIRE DETECTION SYSTEM. Any system capable of providing identification of each individual alarm-initiating device. The identification shall be in plain English and as descriptive as possible to specifically identify the location of the device in alarm. The system shall have the capability of alarm verification.

ANALOG 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 capable of 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.

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 capable of 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.

[B] 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)

[B] 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.)

CHANGE OF OCCUPANCY. A change in the purpose or level of activity within a building that involves a change of ownership, change in occupant, or the change in the designated use-type of the building as described in Chapter 3 of this code and the application of the requirements of this code. The definition shall also apply to usage of the surrounding site and access to and from the building, structure, or site, as necessary to achieve the purpose of this code and to obtain compliance with other codes and ordinances of this jurisdiction. No building or lease space shall be allowed to change use, occupant, ownership, or classification types without meeting all the requirements of this code.

ELECTRICAL CODE. Electrical Code shall mean NFPA 70, the National Electrical Code, as adopted by this jurisdiction. For the purpose of this code, all references to NFPA 70 and/or the ICC Electrical Code shall be assumed to mean the Electrical Code as defined herein.

FIRE ALARM SYSTEM. A fire alarm system shall include but not limited to the following:

- Manual pull stations at all required exits.
- Notification throughout the entire building.
- Systems installed to monitor a fire sprinkler system shall also be considered a Fire Alarm System

[B] 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.)*

EMERGENCY ACCESS EASEMENT. An access road or fire lane located on private property dedicated by the owner(s) of the property to provide fire apparatus access.

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}*…

(Reason: Increased safety from fireworks related injuries.)

HIGH-PILED COMBUSTIBLE STORAGE: add a second paragraph to read as follows : Any building or portion of building used for storage classified as a group S Occupancy or Speculative Building exceeding 5,000 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 (speculative warehouse), a fire protection system and life safety features shall be installed as for Class IV commodities, to the maximum pile height.

HIGH-RISE BUILDING. A building with an occupied floor located more than 55 feet (16,764 mm) above the lowest level of Fire Department vehicle access.

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

The following are not considered an upgrade or replacement:

- Firmware updates
- Software updates

(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.)

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.

Exception: {No change.}

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

Section 307.2; change to read as follows:

307.2 Permit Required. A permit shall be obtained from ~~the fire code official~~ Denton County Fire Marshall Office 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.)

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.)

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: {No change.}

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

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

Exceptions:

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

1. Portable outdoor fireplaces used at one- and two-family dwellings.
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.)

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.)

*****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.)

Section 307.6 shall be added to read as follows:

Section 307.6 Logging of Open Burning. Persons desiring to kindle a fire for the recognized silvicultural or range or wildlife management practices, prevention of control of disease, pests, open burning, trench burns, bonfires, or recreational fires shall first contact Denton County Office of Emergency Services (County Fire Marshal) and determine if the day of the burn is an approved burn day. Fires of these types are prohibited on non-burn days. Open fires must be logged with the Denton County Office of Emergency Services prior to kindling and notice given to the Denton County Emergency Services District No 1.

Section 308.1.4; change to read as follows:

308.1.4 Open-flame Cooking Devices. ~~Charcoal burners and other o~~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 (3048 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 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).

3. {No change.}

(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.)

Section of 308.1.4.1 is amended by adding Section 308.1.4.1 to read as follows:

308.1.4.1 Burning of refuse prohibited. The burning of refuse in a barbeque grill or open-flame cooking device is not an approved method for refuse disposal, is declared a public nuisance, and is prohibited anywhere in the Town of Bartonville. Refuse shall mean and include garbage, rubbish, and trade waste defined as follows:

Garbage. Garbage shall mean animal and vegetable matter such as that originating in houses, kitchens, restaurants, hotels, produce markets, food service or processing establishments, greenhouses, hospitals, clinics, or veterinary facilities.

Rubbish. Rubbish shall mean solids not considered to be highly flammable or explosive such as, but not limited to, rags, old clothes, leather, rubber, carpets, wood, excelsior, paper, ashes, tree branches, yard trimmings, furniture, metal food containers, glass, crockery, masonry, and other similar materials.

Trade Waste. Trade waste shall mean all solid or liquid material resulting from construction, building operations, or the prosecution or any business, trade or industry such as, but not limited to, plastic products, cinders and other forms of solid or liquid waste materials.

Materials Producing Dense Smoke Prohibited. The burning of rubber, asphaltic materials, combustible and flammable liquids, impregnated wood or similar materials which produce dense smoke are considered objectionable, a hazard, a public nuisance to the community, and are strictly prohibited.

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.)

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.)

Section 308 Open Flames is amended by adding Section 308.5 and subsections to read as follows:

Section 308.5; Open burning
Section 308.5.1, 308.5.2 shall be amended to add the following:
Section 308.5.1; Multifamily structure.
It shall be a violation of this code for any person to use, allow, or permit the use of a fixed or portable grill or cooking device that uses an open flame or electrical heating element within ten (10) feet of any multi-family structure, under any covered portion of a multi-family structure, under any covered parking structure, on any roof or portion thereof.

Section 308.5.2 Sign.
It shall be a violation of this code for any person to own or manage any multi-family structure without installing and maintaining on each balcony, patio, landing, or similar structure of each dwelling unit an approved sign readily visible to the occupants that prohibits the use of any grill, hibachi, smoker, electrical heating element, or similar apparatus within ten (10) feet of all apartment structures. Signs shall be at least thirty (30) square inches with the word “PROHIBITED” in one (1) inch letter and the remaining message in at least one-fourth (1/4) inch letter, red on white, and provide the following warning:

PROHIBITED- THE USE OF ANY GRILL, HIBACHI, OR SMOKER IN OR WITHIN TEN FEET OF ALL APARTMENT STRUCTURES, PATIOS AND CARPORTS. DCESDNO.1 FIRE CODE - FINE UP TO $2000.00

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.)

***Section 401.3 is amended by adding Section 401.3.4 to read as follows*:**

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

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.)

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.)

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.

Exceptions:
{No change.}
{No change.}
Notification of teachers/staff having supervision of light- or sound-sensitive students/occupants, such as those on the autism spectrum, for the protection of those students/occupants shall be allowed prior to conducting a drill.

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

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 and before vertical construction with combustible material has begun. , ~~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.)

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 ten feet (10') 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.)

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 (~~6096 mm~~ 7315 mm), exclusive of shoulders, except for approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than ~~13 feet 6 inches (4115 mm)~~ 16 feet (4876.8 mm).

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 or where necessary to meet the public safety objectives of the jurisdiction.

(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.)

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 the imposed loads of fire apparatus and shall be surfaced so as to provide all-weather driving capabilities~~. Construction of all fire lanes shall be in accordance with the Unified Development Code, the Engineering Design Manual, and this section. Fire lanes shall be constructed of a concrete surface capable of supporting the imposed loads of a 2-axle, 85,000 lb. fire apparatus. The design shall be based on the geotechnical investigation of the site but shall meet the stated minimums.

Whenever forty percent (40%) of existing, non-conforming fire lanes are replaced within a twelve-month period, the entire fire lane shall be replaced according to current standards.

All fire lanes shall be maintained and kept in a good state of repair at all times by the owner. It shall further be the responsibility of the owner to ensure that all fire lane markings required by Section 503.3 be kept so that they are easily distinguishable by the public.

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

***Section 503.2.4 shall be amended as follows*:**

503.2.4 Turning radius. The required turning radius of a fire apparatus access road shall be ~~determined by the fire code official~~ in accordance with this section. Fire lane dimensions established by Appendix D, or other sections of this Code shall be superseded by the criteria established by 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-four feet (54') and an inside radius of thirty feet (30').

***Section 503.2.7 shall be amended as follows*:**

503.2.7 Grade. The grade of the fire apparatus access road shall be within the limits established by the fire code official ~~based on the fire department's apparatus~~. 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%

Exception: The code official shall have the authority to adjust the grade along the fire lane when necessary for fire or rescue operations or based upon the hazard being protected or general topography of the lot. In no case shall the grade exceed nine percent (9%). Written approval from the fire code official shall be required.

***Section 503.2.8 shall be amended to read as follows*:**

503.2.8 Angles of approach and departure. The angles of approach and departure for a fire apparatus access road shall be within the limits established by the fire code official ~~based on the fire department's apparatus~~. In no case shall the grades exceed the following:

- Maximum Angle of Approach – 5%
- Maximum Angle of Departure – 5%

Exception. The code official shall have the authority to adjust the grade along the fire lane when necessary for fire or rescue operations or based on the hazard being protected or the general topography of the lot. Written approval from the fire code official shall be required.

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.

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

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~~.~~, whether attended or unattended for any period of time. Persons in charge of a construction project, such as, but not limited to, a General Contractor, are responsible to ensure that fire apparatus access roads are kept clear of vehicles and other obstructions at all times and may be issued a citation for non-compliance under this section. 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. The Fire Chief and Police Chief, and their designated representatives, are authorized to remove or cause to be removed any material, vehicle, or object obstructing a fire apparatus access road at the expense of the owner of such material, vehicle, or object.

503.4.1 ~~Traffic calming devices.~~ ~~Traffic calming devices shall be prohibited unless approved by the fire code official.~~ **Obstruction and Control.** No owner or person in charge of any premises served by a fire

lane or access easement shall abandon, restrict, or close any fire lane or easement without first securing from the Town approval of an amended plat or other acceptable legal instrument showing the removal of the fire lane.

503.4.2 Speed control devices. Speed bumps or other similar obstacles designed to slow the speed of traffic and that have the effect of slowing or impeding the response of fire apparatus shall require a permit as required in Section 105.7 of this code prior to installation. Speed control devices shall be constructed out of concrete, by approved molded plastic, or a similar material.

(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.)

***Section 503.6 is amended to read as follows*:**

503.6.1 Security Gates. When mechanically operated gates or barriers are provided, or required, across a fire apparatus access road, an approved emergency vehicle traffic preemption device shall be provided compatible with the fire department's apparatus. The installation of security gates across a fire apparatus access road shall be approved by the ~~fire code official~~ Fire Marshal. Where security gates are installed, they shall have an approved means of emergency operation. The security gates and the emergency operation shall always be operational. Electric gate operators, where provided, shall be listed in accordance with UL 325. Gates intended for automatic operation shall be designed, constructed, and installed to comply with the requirements of ASTM F 2200.

***Section 503.6.1.1 and subsections shall be added to read as follows*:**

503.6.1.1 Distance from street, sidewalk, roadway, or right-of-way. Gates shall be located on private property a minimum of 30 feet from the property line being crossed by the drive or 30 feet from the nearest edge of the roadway.

Section 503.6.1.2 Electronic operation. All main gates shall be electrically operated. A secondary/emergency power source must be available and brought online automatically upon loss of primary power to the access gates. The secondary/emergency power source shall automatically open the gates. A manual disconnect is required in the event of complete power failure. The manual disconnect shall be placed in a weather-tight box, with a piano-type hinge on one side and a Knox Box PL-1 padlock and hasp on the other side.

Section 503.6.1.3 Open with key-operated switch. All main gates shall open with the fire department Knox K.S. #2 key-operated switch. The Knox key-operated switch shall be provided and installed by the owner. The key-operated switch shall be located 10 feet from the gate, on the left side of the approach, and placed on a pedestal with the key switch facing the fire lane or road. The key switch shall be no closer than 4 feet 6 inches or no farther than 5 feet 5 inches from the ground.

Section 503.6.1.4 Access codes. It shall be the owner's responsibility to program the security gate and provide the fire department with the access code, and to maintain DCESD No 1's accessibility through the assigned access code.

Section 503.6.1.5 Medians. Where a security gate is installed with a median, the entry side of the gate shall have a minimum opening of 30 feet (measured back of curb to back of curb.

Section 503.6.1.6 Optically controlled emergency entry devices. All electronic security gates, commercial properties, and residential subdivisions shall be equipped with an optically controlled emergency override device (Opticom) that is compatible with the optical activation device installed on fire apparatus. The devices shall be placed in both directions of travel to provide for the opening of gates as the fire apparatus approaches and exits the property. Permits for installation are required, and the Fire Marshal shall test and approve the installation upon completion to determine compliance.

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)~~ 1 inch. 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.

505.1.1 Single family homes. R-3 Single Family occupancies shall have approved numerals of a minimum 4" high, ⅝" stroke ½ inch stroke and a color contrasting with the background clearly visible and legible from the street fronting the property and rear alleyway where such alleyway exists.

505.1.2 Multifamily Communities. Street Address shall be a minimum of 12" high with a 2" stroke. Individual building numbers shall be a minimum of 18" high with a 3" stroke. Buildings over 100 feet in length require a minimum of two (2) numbers per building. Apartment spread numbers shall be a minimum of 7" high with a one inch stroke and corridor spread numbers shall be a minimum of 4" high with a ⅝" brush stroke. Individual apartment unit numbers shall be a minimum of 4" in height with a ⅝" stroke.

505.1.3 Large Office and Warehouse Buildings. Address must be visible from all access directions. Number shall be a minimum of 24" in height with a 4" stroke. Buildings over 500 feet long shall have two address locations if more than one access point is visible. Suite numbers shall be required for multi-tenant complexes and shall be located over the front door and on the rear door, 6" in height with a 1" brush stroke.

505.1.4 Shopping Centers, High Rise Buildings, and Other Applications. A minimum of 12" high numbers with a 2" brush stroke shall be visible from all access directions. Suite numbers are required over the door with 4" high numbers with a ⅝" brush stroke. Buildings beyond 100 feet from the street and 10,000 square feet shall install 18" numbers with a 3" stroke.

505.1.5 Marquee and Monument. Addresses installed on a marquee located next to the street will require numbers 12" high with a 2" brush stroke to be located a minimum of 3 feet above grade. Marquee and Monument signs must meet Town of Bartonville Sign Ordinance Requirements.

(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.)

***Section 506.1 is amended by adding the following sentence at the end of the section*:**

All new and existing occupancies, except single-family residences, shall provide (a) Knox box(es) as specified in the Fire Marshal's Office written policy statement.

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.)

***Section 507.5.1 is amended to read as follows*:**

507.5.1 Where required. ~~Where a portion of the facility or building hereafter constructed or moved into within the jurisdiction is more than 400 feet (122 m) from a hydrant on a fire apparatus road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official. Exceptions: 1. For Group R-3 and Group U occupancies, the distance shall be 600 feet (183 m). 2. For buildings equipped with an approved automatic sprinkler system installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).~~ As properties develop, fire hydrants shall be located at all intersecting streets and at the maximum spacing indicated in Table 507.5.1. Distances between hydrants shall be measured along the route that fire hose is laid by a fire vehicle from hydrant to hydrant.

TABLE 507.5.1
MAXIMUM DISTANCE BETWEEN HYDRANTS

OCCUPANCY	SPRINKLERED	NOT SPRINKLERED
Residential (1 & 2 Family)	600 feet	500 feet
Residential (Multi-Family)	400 feet	300 feet
All Other	500 feet	300 feet

There shall be a minimum of two (2) fire hydrants serving each property within the prescribed distance listed in Table 507.5.1.
Protected Properties. Fire Hydrants shall be installed along fire lanes with spacing as required for street installations specified in 507.5.1. In addition, hydrants required to provide supplemental water supply for automatic fire protection systems shall be within 100 feet of the Fire Department connection (FDC) for such systems.

***Sections 507.5.1-507.5.1.3 shall be added to read as follows*:**

Section 507.5.1 Where required. When a portion of the facility or building hereafter constructed or moved into, or within the jurisdiction, is more than 500 feet from a hydrant on the fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the Fire Marshal.

Exception: For Group R-3 and Group U occupancies, the distance requirement shall be 300 feet.

Exception 2: {deleted}

Section 507.5.1.2 Location. The location of fire hydrants on private property or along fire access roads shall be approved by the Fire Marshal.

***Section 507.5.1.2 Fire system connections to read as follows*:**

Section 507.5.1.2 Fire department system connections. Fire hydrants shall be located within a 100-foot hose lay of the Fire Department Connection (FDC). Fire Department Connections, when remotely located, shall have a 42” by 42” concrete pad below each connection.

Section 507.5.1.3 Requirements when not on public streets. Fire hydrants not installed on a public street shall be looped to provide a water supply from 2 directions.

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.)

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.)

***Section 510; read as follows*:**

510.1 Emergency responder communication coverage in new buildings. Approved in-building~~, two-way~~ emergency responder communication ~~coverage~~ enhancement system (ERCES) for emergency responders shall be provided ~~in all new buildings. In-building, the twoway emergency responder communication coverage within the building shall be based on the existing coverage levels of the public safety communication systems utilized by the jurisdiction, measured at the exterior of the building. This section shall not require improvement of the existing public safety communication systems.~~ , the following buildings:

1. High Rise Buildings
2. The total building area is 10,000 square feet or more.
3. The total basement area is 10,000 square feet or more; or
4. There are floors used for human occupancy more than 30 feet below the finished floor of the lowest level of exit discharge.
5. Buildings or structures where the Fire Marshal determines that in-building radio coverage is critical because of its unique design, location, use or occupancy.

Exceptions:

~~1. Where approved by the building official and the fire code official, a wired communications system in accordance with Section 907.2.13.2 shall be permitted to be installed or maintained instead of an approved radio coverage system.~~

~~2. Where it is determined by the fire code official that the radio coverage system is not needed.~~

1. Buildings and areas of buildings that have minimum radio coverage signal strength levels of the local 800 MHz Radio System within the building in accordance with Section 510.4.1 without the use of an emergency responder communications enhancement system (ERCES).
2. In facilities where emergency responder communication coverage is required and such systems, components or equipment required could have a negative impact on the normal operations of that facility, the fire code official shall have the authority to accept an automatically activated emergency responder communication coverage system.
3. One- and two-family dwellings and townhouses.
4. Subject to the approval of the fire code official, buildings other than high-rise buildings, colleges, universities, and buildings primarily occupied by Group E or I occupancies that have completed a

Mobile Emergency Responder Radio Coverage application and submitted payment as outlined in the application.

510.1.1; Compliance verification.
New buildings require compliance verification testing by an approved ERCC third-party special inspector. A copy of the compliance verification special inspection report shall be submitted to the building official for review and archiving to the project records prior to the project final approval or issuance of a *Certificate of Occupancy*.

Exception: Buildings without basements and three stories or less in height with an aggregate total building area of <10,000 square feet.

510.2; Emergency responder communication enhancement system in existing buildings. Existing buildings shall be provided with approved in-building, emergency responder communications enhancement system for emergency responders as required in Chapter 11.

***Section 605.4 and 605.4.2.2; change to read as follows*:**

605.4 Fuel oil storage systems. Fuel oil storage systems ~~for building heating systems~~ shall be installed and maintained in accordance with this code. Tanks and fuel-oil piping systems shall be installed in accordance with Chapter 13 of the *International Mechanical Code* and Chapter 57.

605.4.1 Fuel oil storage in outside, aboveground 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 (2498 L). The storage of fuel oil above ground in quantities exceeding 660 gallons (2498 L) shall comply with NFPA 31 and Chapter 57.

605.4.1.1 Approval. Outdoor fuel oil storage tanks shall be in accordance with UL 142 or UL 2085 and also listed as double-wall/secondary containment tanks.

605.4.2 Fuel oil storage inside buildings. Fuel oil storage inside buildings shall comply with Sections 605.4.2.2 through 605.4.2.8 and Chapter 57.

605.4.2.1 Approval. Indoor fuel oil storage tanks shall be in accordance with UL 80, UL 142, or UL 2085.

605.4.2.2 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. ~~The tank shall be listed as a secondary containment tank, and the secondary containment shall be monitored visually or automatically.~~
3. 3,000 gallons (11,356 L) ~~in buildings equipped with an automatic sprinkler system in accordance with Section 903.3.1.1~~, 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. ~~The tank shall be listed as a secondary containment tank, as required by UL 2085, and the secondary containment shall be monitored visually or automatically.~~

***606.2 shall be added to read as follows*:**

606.2 Where Required. A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors, including but not limited to cooking equipment used in fixed, mobile, or temporary concessions, such as trucks, buses, trailers, pavilions, or any form of roofed enclosure, as required by the fire code official.

Section 704.1; now 704.1.1 change to read as follows:

704.1.1 Enclosure. Interior vertical shafts including, but not limited to, stairways, elevator hoist-ways, service and utility shafts, that connect two or more stories of a building shall be enclosed or protected in accordance with the codes in effect at the time of construction but, regardless of when constructed, not less than as required in Chapter 11. New floor openings in existing buildings shall comply with the International Building Code.

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.)

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.)

Add Sections 901.11 Certification, Section 901.12 Failure of system, and Section 901.13 Message alarms. To read as follows:

Section 901.11 Certification. A notarized certification indicating all work has been performed as permitted and that the work meets code requirements must be submitted at the final inspection.

Section 901.12 Failure of system. All fire alarm systems shall be designed and constructed so the failure, malfunction, or removal of any single device or failure of the wiring to a device does not interfere with the operation of other devices in the system.

Section 901.13 Message alarms. Pre-recorded or voice message fire alarms shall not be approved unless accompanied by a fire alarm signal of audio-visual devices that meet the minimum standards of the Americans with Disabilities Act (ADA).

***Section 901 General is amended by changing Section 901.3 and 901.5 as shown in the International Fire Code to read as follows*:**

Section 901.3.1 Permit required. Permits shall be required as set forth in Sections 105.6 and 105.7 and as required by this section. A permit shall be required for the installation, reconsideration, modification, moving, or alteration of any life safety system, including but not limited to fire sprinkler systems, fire alarm systems, fixed extinguishing systems, access control systems, and carbon dioxide sensing and monitoring systems. Work shall not begin on any system without first obtaining approved plans. Any person, firm, or corporation who violates this requirement shall be liable for a fine that is two times the cost of the Permit or Five Hundred Dollars ($500.00), whichever is greater.

> **Exemption:** Emergency repairs due to system malfunctions or discharging may begin, providing a permit is obtained as soon as possible, but no later than the next business day.

Section 901.3.2 Permit application. The permit application shall be submitted to DCESD1. The following shall be included with the plan submission: a CD or other media, as approved by the Fire Marshal, containing state license, plan drawings, calculations, and spec sheets in PDF format.

Section 901.3.3 Permit fee. The permit fee for the construction, repair, alteration, or relocation of a fixed system shall be in accordance with the fee schedule adopted by the DCESD1.

Section 901.5 Installation acceptance testing. Fire detection and alarm systems, fire extinguishing systems, fire hydrant systems, fire standpipe systems, fire pump systems, private fire service mains, and all other fire protection systems and appurtenances thereto, shall be subject to acceptance tests, as contained in the installation standards and as approved by the fire code official. The fire code official shall be notified before any required acceptance testing. No system shall be approved until a complete inspection of materials and a functional test has been completed and witnessed by the Fire Marshal. The installer/technician must be present for all inspections and testing.

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.)

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.)

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}*
901.7.1 Fire Watch is the responsibility of the property owner. The owner shall be required to hire a private security firm to supply two personnel for each of three 8-hour shifts or during the occupied hours of the business to monitor for fire conditions and have the means necessary for contacting 911 immediately. The fire watch shall remain in effect until the life safety systems are back in service. Should the fire watch option be declined, the entire building shall be evacuated and closed until all repairs have been made and a re-inspection has been performed by the fire code official.

(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.)

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.)

***Section 903 Automatic Sprinkler Systems is amended as follows*:**

***Section 903.1 is amended by adding subsection 903.1.2 and 903.1.3 to read as follows*:**
903.1.2 Residential sprinklers. Unless specifically allowed by this Code, residential sprinkler systems installed in accordance with NFPA 13D (1-2 family dwelling) or NFPA 13R (multi-family) shall not be granted exemptions or reductions, commonly known as "trade-offs" permitted by other requirements of this Code. Additionally, residential sprinkler systems installed in accordance with NFPA 13R shall include attic protection.

Section 903.2; add paragraph to read as follows and delete the Exception for telecommunications buildings: 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."

***Section 903.2 Where required. Replace the exception and amend as follows*:**

Approved automatic sprinkler systems shall be provided in all new buildings and structures, including residential, where the **total area under roof** is 5,000 square feet or greater. In reference to this code, the fire sprinklers requirement at 12,000 sq. ft. is changed to 5,000 sq. ft.

This section is also amended by replacing the exception with the following exceptions:

Exceptions:

1. Open parking garages in compliance with Section 406.3 of the International Building Code, provided fire department standpipes and connections are installed in such a way that no portion of the garage is more than 100 feet, unobstructed hose lay from the connection.
2. Single-family residential, which is not connected to the municipal water system, are exempt from the requirement of an automatic sprinkler system even if the total area under the roof is 5,000 square feet or greater.

***Section 903.2.4.2; change to read as follows*:**

903.2.4.2 Group F-1 distilled spirits. An automatic sprinkler system shall be provided throughout a Group F-1 fire area used for the manufacture of distilled spirits involving more than 120 gallons of distilled spirits (>16% alcohol) in the fire area at any one time

***Section 903.2.9.3; change to read as follows*:**

903.2.9.3 Group S-1 distilled spirits or wine. An automatic sprinkler system shall be provided throughout ~~all buildings containing~~ a Group S-1 ~~occupancy~~ fire area used for the bulk storage of distilled spirits or wine involving more than 120 gallons of distilled spirits or wine (>16% alcohol) in the fire area at any one time.

***Section 903.2.8. Group R is amended to read as follows*:**

Section 903.2.8. Group R. An automatic sprinkler system installed in accordance with Section 903.3 shall be provided throughout all buildings with a Group R fire area. An automatic sprinkler system shall be provided throughout all buildings with a Group R-2 occupancy where the fire area is 2 stories in height, including basements, or where the building has more than 3 units. Any Group R-2 occupancy two (2) or more stories in height shall be required to have a sprinkler system meeting the requirements of NFPA Standard 13.

***Section 903.2.9.2 Bulk Storage of Tires; Section is amended by deleting that section and replacing it with a new Section 903.2.9.2 to read as follows*:**

Section 903.2.9.2 Bulk storage of tires. Buildings and structures where the area for the storage of tires exceeds 10,000 cubic feet shall be equipped throughout with an automatic fire sprinkler system meeting the requirements of NFPA Standard 13.

Section 903.2.9; add Section 903.2.9.3 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.

(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 903.2.11.3 is amended to read as follows*:**

903.2.11.3 Buildings 35 feet or more in height. An automatic sprinkler system shall be installed throughout buildings with a floor level, other than penthouses in compliance with Section 1510 of the International Building Code, located 35 feet (10,668 mm) or more above the lowest level of Fire Department vehicle access, measured to the finished floor.

Exception: {Delete}

***Section 903.2.11 is amended by adding Sections 903.2.11.7, 903.2.11.8, and 903.2.11.9 to read as follows*:**

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 Rooms. New and existing spray booths and spraying rooms shall be protected by an approved automatic fire-extinguishing system.

***Section 903.2.11.9 shall be added to read as follows*:**

903.2.11.9 Buildings 5,000 square feet or greater, under roof, an automatic sprinkler system shall be installed throughout all buildings and any portion of a building that meets any one of the following criteria listed below:

1. A building area 5,000 sq. feet or greater
2. A tenant space 5,000 sq. feet or greater
3. An existing building that is enlarged to 5,000 sq. feet or greater
4. A tenant space within an existing building that is enlarged to be 5,000 sq. feet or greater

For the purpose of this provision, firewalls and fire barriers shall not define separate buildings.

Exception: {Delete}

903.2.11.9.1 Modifications, repairs, and additions to existing buildings. An automatic sprinkler system shall be installed throughout in accordance with NFPA 13, 13D, or 13R as applicable and this code in all existing buildings when:

1. Enlarged to be 5,000 square feet or greater.
2. Greater than 5,000 square feet and the square footage increased.
3. The cumulative remodel of any building, over any period of time, from the original adoption of this ordinance (Ord. No. 3013-5-11, § 1, 5-24-2011) that is equal to or is greater than 5,000 square feet.
4. Fifty (50) percent or more of the roof assembly is replaced, or repaired, due to fire damage or structural failure, or when the removal of existing fire rated assemblies result in an increase of the original basic allowable area.

5. Required to be protected in accordance with this Code or other provisions of Article III of the ALDC.

Section 903.3.1.1.1; change 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 *... {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.}

(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.)

***Section 903.3.1.2; change to read as follows*:**

903.3.1.2 NFPA 13R sprinkler systems. Automatic sprinkler systems in Group R occupancies shall be permitted to be installed throughout in accordance with NFPA 13R where the Group R occupancy meets all of the following conditions:

1. Four stories or less above grade plane.
2. The floor level of the highest story is 35 feet (10668 mm) or less above the lowest level of fire department vehicle access.
3. The floor level of the lowest story is 35 feet (10668 mm) or less below the lowest level of fire department vehicle access.

{No change to the remainder of the section.}

Section 903.3.1.2.2; change to read as follows:

903.3.1.2.2 Corridors and balconies. Sprinkler protection shall be provided in all corridors and for all balconies.

{Delete the rest of this section.}

Section 903.3.1.2.3; delete section and replace as follows:

[F] 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.

903.3.1.3.1 Attached Garages and Media Closet (A/V Closet) to read as follows:
When sprinkler systems are required in a structure, sprinklers are required in:

1. Attached garages

Exception: Attached garages that do not share a wall with a sprinklered, conditioned space.

2. In a media closet (A/V closet) regardless of closet square footage.

903.3.1.3.2 Hydrostatic Test
All new systems shall be hydrostatically tested in accordance with NFPA 13.

(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 sprinklering 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.)

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.)

Section 903.3.7 shall be added to read as follows:

Section 903.3.7 Fire Department Connections. Is amended by deleting that section and adding the following section to read as follows:
Section 903.3.7 Fire Department Connections. The location of Fire Department Connections shall be approved by the fire code official. Locking caps of an approved style or vendor may be required by the fire code official. Locking caps shall be installed as replacements for lost or damaged caps when deemed necessary by the fire code official to address tampering problems at existing facilities. The FDC shall be labeled as "FDC" with a white background and red reflective lettering that is a minimum of 6 inches in height for each letter. A sign will be affixed to the FDC connection.

Section 903.3.7.1 is amended to add the following:

903.3.7.1 Missing or damaged FDC caps. Missing or damaged FDC caps shall be replaced with locking "Knox" FDC caps. All new FDCs and standpipe hose valve connections shall have Knox caps or plugs installed.

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.)

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.)

Section 903.4.5 to read as follows:

903.4.5 ~~Testing and maintenance.~~ ~~Automatic sprinkler systems shall be tested and maintained in accordance with Section 901.~~ **Monitoring and Supervising.** All valves on connections to water supplies, sectional control and isolation valves, and other valves in supply pipes to sprinklers and other fixed water-based fire suppression systems shall be supervised and monitored at all times. Graphic maps shall be posted in the sprinkler riser room depicting sprinkler zones. Proper tagging and/or signage complying with Fire Department specifications shall identify all valves as to their function and identify their location.

Section 903.7 shall be added to read as follows:

Section 903.7 Automatic Sprinkler System Room Access. Sprinkler system risers providing protection for multi-family and commercial buildings must be located in a ground-floor room directly accessible from the exterior of the building. The door shall be labeled as "SPRINKLER RISER ROOM" with a white background and red reflective lettering that is a minimum of 6 inches in height for each letter. The minimum size of the room shall be 36 sq. ft., with the minimum dimension being 6 ft. The outside edge of the Riser stub into the building shall be a minimum of eighteen inches (18") from the wall and riser piping, and once stacked, shall be a minimum of eighteen inches (18") from the outside edge of the piping to the inside edge of the finished wall. When approved by the fire code official, smaller rooms may be permitted.

Section 903.8 Installation schedule is amended by adding 903.8 Installation schedule, to read as follows:

Section 903.8 Installation schedule. Approved fire sprinkler systems shall be operational in a building under construction when:

1. The building is sufficiently constructed to the point that the exterior sheathing and roof have been installed; or
2. At the start of combustible interior construction; or
3. When there is an accumulation of combustible material within the building, including, but not limited to, building supplies, rubbish, and furniture; or
4. When the building goes under a conditioned atmosphere.

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

905.3.9 Buildings Exceeding 10,000 sq. ft. In buildings exceeding 10,000 square feet in area per story and where any portion of the building's interior area is more than 200 feet (60960 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.)

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. {No change.}
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. {No change.}
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. {No change.}
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.)

Section 905.8; change to read as follows:

905.8 Dry standpipes. Dry standpipes shall not be installed.

Exception: Where subject to freezing and in accordance with NFPA 14. Additionally, 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 Supervisory alarm.

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 906.1(1); delete Exception 3.

Section 907.1.4; add to read as follows:

907.1.4 Design Standards. All alarm systems, new or replacement, shall be addressable. Alarm systems serving more than 20 smoke detectors shall be analog addressable. A system employing a DACT shall employ one telephone landline as the primary. In addition, one of the following transmission means shall be employed as the backup line:

- One-way private radio alarm system
- Two-way RF multiplex system
- Transmission means complying with NFPA 72

Exception: Existing systems need not comply unless the total building remodel or expansion initiated after the effective date of this code, as adopted, exceeds 30% of the building. When cumulative building remodel or expansion exceeds 50% of the building must comply within 18 months of permit application.

907.1.5 Devices Minimum fire alarm design shall include a manual pull station at each exit and occupant notification devices throughout.

(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.)

Section 907.2.1; change to read as follows:

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.~~4~~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: {Delete.}

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.

(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. {No change.}
   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.)

Section 907.2.10; change to read as follows:

907.2.10 Group S. A manual fire alarm system that activates the occupant notification system in accordance with Section 907.5 shall be installed in Group S public- and self-storage occupancies ~~three stories or greater in height~~ for interior corridors and interior common areas. Visible notification appliances are not required within storage units.

Exception: {No change.}

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.)

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.)

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.)

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.)

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 907.6.6 is amended by adding Section 907.6.6.3 to read as follows:

907.6.6.3 Communication requirements. All alarm systems, new or replacements, shall transmit alarm, supervisory and trouble signals descriptively to the approved central station, remote supervisory station or proprietary supervising station as defined in NFPA 72, with the correct device designation and location of addressable device identification. Alarms shall not be permitted to be transmitted as a General Alarm or Zone condition.

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 15,000 square feet (1394 m^2) 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 (1829 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 m2 per 0.4719 m3/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.)

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.

(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:

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 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 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.)

Section 913.4 is amended by adding the following sentence at the end of the section:

The fire-pump system shall also be supervised for "loss of power," "phase reversal," and "pump running" conditions by supervisory signal on district circuits.

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.)

Section 1003.6 Means of egress continuity is amended by adding Section 1003.6.1 vehicle parking, to read as follows:

Section 1003.6.1 Vehicle parking. No motor vehicle shall be parked within 10 feet of any patio, stairs, or egress path at any apartment, multi-family building, hotel, motel, educational occupancy or commercial structure unless in an approved parking space.

Section 1006.2.1; change Exception #3 to read as follows:

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

Exceptions:

1. {No change.}
2. {No change.}
3. Unoccupied rooftop mechanical rooms and penthouses are not required to comply with the common path of egress travel distance measurement.

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.)

Section 1009.8; add the following Exception 7:

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.)

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 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.)

Section 1015.8 is amended by amending paragraph 1 to read as follows:

1. Operable windows where the top of the sill of the opening is located more than ~~75 feet (22 860 mm)~~ 55 feet (16 764 mm) above the finished grade or other surface below and that are provided with window fall prevention devices that comply with ASTM F 2006.

{Remaining text unchanged}

Section 1020.2 Construction; add exception 6 to read as follows:

6. In unsprinklered 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.)

Section 1024 Exit Passageways is amended by adding Section 1024.1.1 Exit ways – hotels, motels, and multi-family, to read as follows:

Section 1024.1.1 Exit ways – hotels, motels, and multi-family. All public exitways and balconies shall be constructed of material having a minimum of a class “C” flame spread rating (75 to 200 flame spread).

All balconies and landings utilized as exitways shall have a minimum length of 8 feet and a minimum width of 4 feet.

Section 1029.1.1.1 Spaces under grandstands and bleachers; delete this section.
(Reason: Unenforceable.)

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.)

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.)

Section 1103.5 Sprinkler Systems change to read as follows:

> An automatic sprinkler system shall be provided in all existing buildings ~~in accordance with Sections 1103.5.1 through 1103.5.5~~ 5,000 square feet or larger in accordance with this section when there is a change of use, occupancy or hazard classification as defined in Chapter 4 of NFPA 13: Standard for the Installation of Sprinkler Systems is present. The fire sprinkler system installation shall be completed within twelve (12) months from the date of notification by the fire code official. The fire code official is authorized to decrease the installation timeframe based on the occupant and/or use of the building to ensure life safety.

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 1103.5.3 Group I-2, Condition 2; change last sentence to read as follows:

The automatic sprinkler system shall be installed as established by adopting this ordinance and within twelve (12) months of notification by the fire code official.

Section 1103.5; add Section 1103.5.5 to read as follows:

1103.5.5 Spray Booths and Rooms. Existing spray booths and spray rooms shall be protected by an approved automatic fire-extinguishing system in accordance with Section 2404.

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

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.

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.)

Section 1203; change and add to read as follows:

1203.1.1 {No change.}

1203.1.2 {No change.}

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 {No Change}

1203.1.5 Load Duration. Emergency power systems and standby power systems shall be designed to provide the required power for a minimum duration of 2 hours without being refueled or recharged unless specified otherwise in this code.

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

1203.1.6 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.~~18~~26 or elsewhere identified in this code or any other referenced code.

1203.2.1 through 1203.2.3 {No change.}

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.

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

1203.2.5 through 1203.2.14 {No change.}

1203.2.15 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)

1203.2.16 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.

1203.2.17 {No change.}

1203.2.18 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:

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

1203.2.19 {No change.}

1203.2.20 Covered and Open Mall Buildings. Emergency power shall be provided in accordance with Section 907.2.19 and 914.2.3.

1203.2.21 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.

1203.2.22 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.

1203.2.23 Elevator Pressurization. Standby power shall be provided for elevator pressurization system as required by the *International Building Code*, Section 909.21.5.

1203.2.24 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.

1203.2.25 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.

1203.2.26 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 {No change.}

(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.)

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.)

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.)

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 • 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.)

Table 3206.2 is amended by amending Footnote's "h" 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 • 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.

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.)

Section 3311.1; change to read as follows:

Section 3311.1 Required access. Approved vehicle access for firefighting and emergency response shall be provided to all construction or demolition sites. Vehicle access shall be provided to within ~~100 feet (30 480 mm)~~ 50 feet (15,240 mm) of temporary or permanent fire department connections. Vehicle access shall be provided by either temporary or permanent roads capable of supporting vehicle loading under all weather conditions. Vehicle access shall be maintained until permanent fire apparatus access roads are available. When fire apparatus access roads are required to be installed for any structure or development, access shall be approved prior to the time when construction has progressed beyond the completion of the foundation of any structure. Whenever the connection is not visible to approaching fire apparatus, the fire department connection shall be indicated by an approved sign.

Section 5003.2.2.1 Design and Construction; change #3 and #4, and add #6 to read as follows:

3. ~~Manual valves or~~ Automatic ~~remotely activated~~ fail-safe emergency shutoff valves shall be installed on supply piping and tubing ~~with ready access~~ at the following locations: {remainder of text unchanged}.
4. ~~Manual emergency shutoff valves and controls for remotely activated~~ Automatic emergency shutoff valves shall be ~~clearly visible~~ identified, ~~provided with ready access and identified in an approved manner~~ and the location shall be clearly visible, accessible, and indicated by means of a sign.
6. Bulk tank installations over 2,000 pounds will require an engineered foundation and construction permit per the 2021 International Building Code. Three complete sets of structural drawings, specifications, and analysis (calculations) shall be provided and shall bear the seal of a licensed Texas professional engineer.

Section 5003.3.1.4 Responsibility for cleanup; add a second paragraph to read as follows:

Any costs associated with a fire department response to accomplish control and mitigation of an unauthorized discharge may be charged back to the person, firm, or corporation responsible for the release.

***Section 5004.10 Supervision and monitoring; add to paragraph to read as follows*:**

In buildings with a monitored sprinkler or fire alarm/detection system, the carbon dioxide (CO^2) emergency alarm system shall be connected to the building fire alarm control panel. A fire alarm permit is required per the DCESD1 Fire Code.

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.

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.)

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.)

*****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.)

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.)

Section 5704.2.9.5; add Section 5704.2.9.5.3 to read as follows:

Section 5704.2.9.5.3 Combustible Liquid Storage Tanks Inside of Buildings.

1. The maximum aggregate allowable quantity limit shall be 3,000 gallons (11 356 L) of Class II or III combustible liquid for storage in protected aboveground tanks complying with Section 5704.2.9.7 when all of the following conditions are met.

2. The entire 3,000 gallon (11 356 L) quantity shall be stored in protected above-ground tanks; The 3,000 gallon (11 356 L) 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; and
4. Tanks shall be connected to fuel-burning equipment, including generators, utilizing an 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 required to be located in a control area. Such tanks shall not be located more than two stories below grade.

Section 5704.2.9.6.1 shall be amended to read as follows:

5704.2.9.6.1 Locations where above-ground tanks are prohibited. The storage of Class I and Class II liquids in permanent above-ground tanks outside of buildings is prohibited within ~~the limits established by law as the limits of districts in which such storage is prohibited~~ Bartonville Town Limits unless approved by a Special Use Permit and with the approval of the Fire Marshal.

Section 5707.4 is amended by adding the following paragraph:

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.

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.)

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.)

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.)

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.)

Appendix L Requirements for Fire Fighter Air Replenishment Systems is amended by adding Section L101.2 to read as follows:

Section L101.2 Required Location. In new buildings, fill stations shall be required when any of the following conditions occur:

1. Any new building 5 or more stories in height.
2. Any new building with 2 or more floors below grade.
3. {delete}

Each stairwell shall have a supply riser. SCBA fill stations shall be located on odd numbered floors in the primary stairwell and on even numbered stairs in the secondary stairwells. The primary stairwell will be the stair located closest to the main entrance.

{Applicable to those jurisdictions adopting Appendix B}
Table B105.2; change footnote a. to read as follows:

a. The reduced fire-flow shall be not less than ~~1,000~~ 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.)

Appendix C103.1 Hydrant Spacing; shall be amended to read as follows, and C103.2 and C103.3 shall be deleted:

C103 Fire Hydrant Spacing. ~~Fire apparatus access roads and public streets providing required access to buildings in accordance with Section 503 shall be provided with one or more fire hydrants, as determined by C102.1. Where more than one fire hydrant is required, the distance between required fire hydrants shall be in accordance with Section C103.2 and C103.3.~~

1. Commercial and Industrial Areas

A. Fire hydrants shall be located no more than a five-hundred-foot (500') truck hose lay distance to all points of any structure or combustible storage area on the lot.

B. Fire hydrants located on the opposite side of a street, designated as four lanes or larger on the current Master Thoroughfare Plan, shall not be considered acceptable for meeting hydrant coverage requirements.

C. Fire hydrants shall be positioned to allow truck hose lays to follow normal traffic access to the site.

D. Fire hydrants shall be spaced at no more than three-hundred-foot (300') intervals.

2. Residential Areas

A. Fire hydrants shall be placed on block corners or near the center of the block to place every structure within a five-hundred-foot (500') truck hose lay distance from fire hydrant coverage.

B. Fire hydrants located on the opposite side of a street, designated as four lanes or larger on the current City Thoroughfare Plan, shall not be considered acceptable for meeting hydrant coverage requirements.

C. Fire hydrants shall be positioned to allow truck hose lays to follow normal traffic access to the site.

D. Fire hydrants shall be spaced at no more than five-hundred-foot (500') intervals.

Appendix C104 Hydrant Spacing, shall be deleted entirely.

[APPENDIX D - Fire Apparatus Access Roads]

Section D102.1; change to read as follows:

D102.1 Access and loading. Facilities, buildings, or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete, or other approved driving surface capable of supporting the imposed load of fire apparatus weighing up to ~~75,000 (34 050 kg)~~ 85,000 pounds (38 556 kg). Buildings 5,000 square feet or larger shall have fire apparatus roads on all four sides of the building to allow for adequate firefighting capabilities.

Section 103 Minimum Specifications; Change D103.2 to read as follows:

D103.2 Grade. Fire apparatus access roads shall not exceed ~~10 percent~~ 6 percent in grade.

Exhibit E – Ordinance 781-25

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

LENGTH (feet)	WIDTH (feet)	TURNAROUNDS REQUIRED
0–150	~~20~~ 24	None required
151–500	~~20~~ 24	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with Figure D103.1
501–750	26	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with Figure D103.1
Over 750	Special approval required	

For SI: 1 foot = 304.8 mm.

Appendix D103.5 Fire apparatus access road gates, change Item 1 to read as follows:

1. Where a single gate is provided, the gate width shall be not less than ~~20 feet (6096 mm)~~ 24 feet (7,315.2 mm). Where a fire apparatus access road consists of a divided roadway, the gate width shall be not less than 12 feet (3,658 mm)

Section D103.6; change to read as follows:

D103.6 Marking. ~~Signs.~~ ~~Where required by the fire code official, fire apparatus roads shall be marked with permanent "NO PARKING-FIRE LANE" signs complying with Figure D103.6. Signs shall have a minimum dimension of 12 inches (305 mm) wide by 18 inches (457 mm) high and have red letters on a white reflective background. Signs shall be posted on one or both sides of the fire apparatus road as required by Section D103.6.1 or D103.6.2.~~ 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. 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-foot 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 (See Figure D103.6). Signs shall have red letters on a white reflective background, 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.

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FIGURE D103.6 FIRE LANE SIGNS

Section D103.6.1; {Delete}

Section D103.6.2; {Delete}

Section D104.3; change to read as follows:

D104.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses or as approved by the fire code official.

Section D105.3; change to read as follows:

D105.3 Proximity to building. Unless otherwise approved by the fire code official, one or more of the required access routes meeting this condition shall be located not less than 15 feet (4572 mm) and not greater than 30 feet (9144 mm) from the building and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial fire apparatus access road is positioned shall be approved by the fire code official.

Section D106.3; change to read as follows:

D106.3 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses or as approved by the fire code official.

Section D107.2; change to read as follows:

D107.2 Remoteness. Where two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one-half of the length of the maximum overall diagonal dimension of the property or area to be served, measured in a straight line between accesses or as approved by the fire code official.

[APPENDIX L - Requirements For Fire Fighter Air Replenishment Systems]

Section L101.1; change to read as follows:

Section L101.1 Scope. Firefighter air replenishment systems (FARS) shall be provided in accordance with this appendix ~~The adopting ordinance shall specify building characteristics or special hazards that establish thresholds triggering a requirement for the installation of a FARS. The requirement shall be based on the fire department's capability of replenishing fire fighter breathing air during sustained~~

~~emergency operations. Considerations include~~ in new buildings when any of the following conditions occur:

1. ~~Building characteristics, such as number of stories above or below grade plane, floor area, type of construction and fire resistance of primary structural fame to allow sustained fire-fighting operations based on a rating of not less than 2 hours.~~ Any new building 5 or more stories in height.
2. ~~Special hazards, other than buildings, that require unique accommodations to allow the fire department to replenish fire fighter breathing air.~~ Any new building with 2 or more floors below grade.
3. ~~Fire department staffing level.~~ {Deleted}
4. ~~Availability of a fire department breathing air replenishment vehicle.~~

Each stairwell shall have a supply riser. SCBA fill panels shall be located on odd-numbered floors commencing at the first level in the primary stairwell and on even-numbered floors commencing at level 2 in the remaining stairwells.

Section L104.13.1; delete this section in its entirety.

Section L104.14; add paragraph to read as follows:

The external mobile air connection shall be located with approved separation from the Fire Department Connection (FDC) to allow functionality of both devices by first responders; shall be visible from and within 50 ft. of a fire apparatus access road along an unobstructed path; and shall be located in an approved signed secured cabinet.

[APPENDIX P - PERMIT FEES]

Section P100; General.

P101.1 DCESD1 shall collect the approved fees for inspections, annual permits, and other related permits as required by this Ordinance.

P101.2 Fire code construction permit fees shall be based on the contracted value of the work being permitted. Fees are as stated in the approved fee schedule and adopted by the Town. When a permit is required, the permit fee shall be doubled when work or construction has occurred without obtaining the appropriate permits.

P101.3 Fire Code operational permit fees shall be annual and due on the anniversary date of the permit issue unless otherwise indicated on the permit.

P101.4 Payment of annual permit fees shall be the responsibility of the property owner, business owner/manager, contractor, or other responsible individual as applicable.

P101.5 The Fire Marshal may request copies of bid documents or other items to verify the estimated cost of construction when calculating permit fees.

P101.6 A permit application shall be submitted to the Development Services Department and must have detailed construction plans, one (1) digital PDF copy, and a copy of the applicant's State license as applicable attached to the application.

P101.7 Contractor documentation. Anyone desiring to do work for which a construction permit is required shall be required to provide certain documentation to the Development Services Department. Such documentation shall include, but not be limited to, a copy of all applicable State licenses and contact information.

P101.8 Work shall not begin on any construction requiring a fire code permit before the permit is obtained unless approved by the Fire Marshal.

P101.9 Inspection requests. It shall be the duty of the permit holder or their duly authorized agent to notify the fire code official when work is ready for inspection. It shall be the duty of the permit holder to provide access to and means for inspections of such work that are required by this Code.

P101.10 Approval required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the fire code official. The fire code official, upon notification, shall make the requested inspections and shall either indicate the portion of the construction that is satisfactory as completed or notify the permit holder or his or her agent wherein the same fails to comply with this Code. Any portions that do not comply shall be corrected, and such portions shall not be covered or concealed until authorized by the fire code official.

P102 Required construction permits. For any and all new installations and modifications to existing fire and life safety systems, including but not limited to **Sections P102.1 through P102.16** of this document and **Section 105 Permits of the 2021 Edition of the International Fire Code.** A construction permit issued by the Fire Marshal shall be required for work as set forth in the above-referenced Sections.

P102.1 Automatic fire-extinguishing systems. The permit fee for the installation of or modification to any residential or commercial automatic fire-extinguishing system required by Section 105.6.1 and Section 903 as amended and adopted, shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.2 Energy Storage Systems. The permit fee for the installation of stationary energy storage systems required by Chapter 12 and Section 105.6.5 shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.3 Compressed gases. The permit fee to install, repair damage to, abandon, remove, place temporarily out of service, or close or substantially modify a compressed gas system required by Section 105.6.2 shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.4 Cryogenic fluids. The permit fee for the installation of or alteration to outdoor stationary cryogenic fluid storage systems required by Chapter 55 and Section 105.5.11 shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.5 Fire alarm and detection systems and related equipment. The permit fee for the installation of or modification to fire alarm and detection systems and related equipment required by Section 105.6.6 shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.6 Fire pumps and related equipment. The permit fee for the installation of or modification to fire pumps and related fuel tanks, jockey pumps, controllers, and generators required by Section 105.6.7 shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.7 Flammable and combustible liquids. The permit fee for the installation of or repair or modification to a pipeline, tank, or other such items required by Section 105.6.8 shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.8 Hazardous materials. The permit fee for the installation, repair, abandonment, removal, closure, or modification to a storage facility or other area regulated by Chapter 50 as required by Section 105.6.12 shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.9 Industrial ovens. The permit fee for the installation of industrial ovens covered by Chapter 30 as required by Section 105.6.14 shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.10 LP-gas. The permit fee for the installation of or modification to an LP-gas system required by Section 105.6.15 shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.11 Spraying or dipping. The permit fee for the installation of or modification to a spray room, dip tank, or booth required by Section 105.6.22 shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.12 Standpipe systems. The permit fee for the installation of, modification to, or removal from service of a standpipe system required by Section 105.6.23 shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.13 Smoke control or exhaust systems. The permit fee for the installation of or modification to a smoke control or exhaust system required by Section 105.6.19 shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.14 Electronic access control systems. The permit fee for the installation of or modification to an electronic access control system, as described in Section 105.6.25, shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.15 Gates across fire lanes. A permit is required for the installation of controlled access gates across required fire lanes as described in Section 105.6.11. The permit fee for the installation of or modification to controlled access gates across required fire lanes shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.16 Temporary Membrane Structures and Tents. The permit fee for the installation of a tent or membrane structure, as described in Section 105.6.24, shall be determined by the cost of construction, and the fee shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

P102.17 Fireworks Displays. A permit is required for the display of Fireworks as described in Section 5601.1.3 and Section 5608. The permit fee for fireworks displays shall be calculated based on the fee schedule as required by the most recent ordinances of DCESD1.

Gas Wells: The Fire District is authorized to conduct Annual Gas well inspections to ensure all equipment is in safe operating order and follows town and fire code regulations. The Fire District is also authorized to charge for the annual gas well inspections following their fee schedule."

Exhibit E – Ordinance 781-25

[APPENDIX Q - Address Markings] ***Fire Department Address Guide for All Properties***

Single Family Homes

Minimum 4" high, 5/8" contrasting numbers.

Multi Family Communities (Apartments, condos, townhouses)

Street Address:

Minimum 12" high numbers with a 2" stroke with contrasting background.

- ***12" high numbers with a 2" stroke are only acceptable when placed within approximately 75' of the road in which the property is addressed.***

Building Numbers:

Minimum 18" high numbers with a 3" stroke with contrasting background.

- Buildings under 100' long: a minimum of one number per building.
- Buildings over 100' in length require a minimum of two numbers per building.

Apartment Spread Numbers/ Corridor Spread Numbers:

- Apartment spread numbers are to be a minimum 7" high numbers with a 1" stroke with contrasting background.
- Corridor spread numbers are to be a minimum 4" high number with a 5/8" brush stroke with contrasting background.
- Number example format:
  301-310 3rd Floor
  201-210 2nd Floor
  101-110 1st Floor

Apartment Numbers:

Minimum 4" high numbers with a 5/8" stroke with contrasting background and visible from access road.

Large Office and Warehouse Buildings

Minimum 24" high numbers with a 4" stroke with contrasting background.
Address must be visible from all access directions.

- Buildings over 500' long will have two address locations if more than one access point is visible.
- Suite numbers are required for multi tenant complexes and shall be located over the ***front door and on the rear door*** with a 6" high x 1" brush stroke.

Shopping Centers, High Rise Buildings and Other Applications

Minimum 12" high numbers with a 2" stroke with contrasting background. Be visible from all access directions. Suite numbers are required over the door with a 6" high x 1" brush stroke.

- Buildings beyond 100' from the street and 10,000 square feet or more would need to install 18" x 3" address numbers.

Marquee and Monument

Addresses installed on a marquee or monument located next to the street will require numbers 12" high x 2" brush stroke to be located a minimum of 3 feet above grade. Numbers shall contrast with the background.

End

The following sections, paragraphs, and sentences of the *2021 International Swimming Pool and Spa Code* (ISPSC) are hereby amended as follows: Standard type is text from the ISPSC. Underlined type is text inserted. ~~Lined through type is deleted text from IECC.~~

Section 102.9; amend to read as follows:

102.9 Other laws. The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law, to include but not limited to:

1. Texas Department of State Health Services (TDSHS); Standards for Public Pools and Spas; § 285.181 through § 285.208, (TDSHS rules do not apply to pools serving one- and two-family dwellings or townhouses).
2. Texas Department of Licensing and Regulation (TDLR); 2012 Texas Accessibility Standards (TAS), TAS provide the scoping and technical requirements for accessibility for Swimming Pool, wading pools and spas and shall comply with 2012 TAS, Section 242. (TAS rules do not apply to pools serving one- and two-family dwellings or townhouses).

Exception: Elements regulated under Texas Department of Licensing and Regulation (TDLR) and built in accordance with TDLR approved plans, including any variances or waivers granted by the TDLR, shall be deemed to be in compliance with the requirements of this Chapter.

Section 103.1; amend to read as follows:

103.1 Creation of enforcement agency. The ~~[NAME OF DEPARTMENT]~~ Town of Bartonville Department of Community Development is hereby created and the official in charge ~~thereof~~ of plan reviews and inspections shall be known as the ~~code official~~ building official. ~~The function of the agency shall be the implementation, administration and enforcement of the provisions of this code.~~

Section 113.4; delete in its entirety

(Reason: covered by general provisions in the Town's Code of Ordinances.)

Section 114; delete in its entirety and replace with Section 114.1 to read as follows:

114.1 Stop work orders. Upon notice from the code official, work on any systems that is being done contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, or to the owner's agent, or to the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Any person who shall continue any work in or about the structure 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 in violation of this code.

(Reason: covered by general provisions of the Town's Code of Ordinances.)

Section 113.4; amend to read as follows:

113.4 Violation penalties. Any person who shall violate a provision of this code or shall fail to comply with any of the requirements thereof or who shall erect, install, alter or repair a pool or spa in violation of the *approved* construction documents or directive of the *code official*, or of a permit or certificate issued under the provisions of this code ~~shall be guilty of a [SPECIFY OFFENSE,] punishable by a fine of not more than [AMOUNT] dollars or by imprisonment not exceeding [NUMBER OF DAYS], or both such fine and imprisonment~~ may be punishable for each day of the violation set forth by the authority having jurisdiction. ~~Each day that a violation continues after due notice has been served shall be deemed a separate offense.~~

Section 202 "Definitions," insert definition to read as follows:

The Town of Bartonville regulates the operation of public pools. Routine inspections on pools and spas open to the public are conducted to document compliance with the standards set forth in State law.

Section 305.1; amend to read as follows:

305.1 General. The provisions of this section shall apply to the design of barriers for restricting entry into areas having pools and spas. In only one-and two-family dwellings and townhouses, where spas or hot tubs are equipped with a lockable *safety cover* complying with ASTM F1346 and swimming pools are equipped with a powered *safety cover* that complies with ASTM F1346, the areas where those spas, hot tubs or pools are located shall not be required to comply with Sections 305.2 through 305.7.

Section 305.2; amend to read as follows:

305.2 Outdoor swimming pools and spas. Outdoor pools and spas and indoor swimming pools shall be surrounded by a barrier that complies with Sections 305.2.1 through 305.7 and in accordance with the Texas Administrative Code, Texas Health and Safety Code 757 for public pools.

(Reason: to clarify specific Texas statutes which regulate public pools and spas.)

Section 305.2.7; amend by replacing Section to read as follows:

305.2.7 Chain link ~~dimensions~~ fencing prohibited. Chain link fencing is not permitted as a barrier in public pools built before January 1, 1994. ~~The maximum opening formed by a chain link fence shall be not more than 1 ¾ inches (44 mm). Where the fence is provided with slats fastened at the top and bottom tat reduce the openings, such openings shall be not greater than 1 ¾ inches (44 mm).~~

Section 305.4; amend to read as follows:

305.4 Structure wall as a barrier. Where a wall of a dwelling or structure of a one- and two-family dwelling or townhouse or its accessory structure serves as part of a barrier and where doors ~~gates~~ or windows provide direct access to the pool or spa through that wall, one of the following shall be required:

1. {Remainder unchanged.}
2. {Remainder unchanged.}
3. {Remainder unchanged.}
4. {Remainder unchanged.}
5. {Remainder unchanged.}
6. {Remainder unchanged.}

The wall of a building with windows in accordance with 2021 International Building Code, Section 1030 in Group R2 occupancies shall not be used as part of pool enclosure. Other windows that are part of a pool yard enclosure shall be permanently closed and unable to be opened for public pools.

(Reason: to clarify specific Texas Health and Safety Code Chapter 757.007 and 2015 IBC, Section 1030.)

Section 305.6; amend to read as follows:

305.6 Natural barriers used in a one- and two-family dwelling or townhouse. In the case where the pool or spa area abuts the edge of a lake or other natural body of water, public access is not permitted or allowed along the shoreline, and required barriers extend to and beyond the water's edge ~~not less than~~ a minimum of eighteen (18) inches ~~(457 mm)~~, a barrier is not required between the natural body of water shoreline and the pool or spa.

Section 307.1.4; amend to add "Exception," to read as follows:

Exception: Components of projects regulated by and registered with Architectural Barriers Division of Texas Department of Licensing and Regulation shall be deemed to be in compliance with the requirements of this chapter.

Section 307.2.2; amend to create Section 307.2.2.2 to read as follows:

307.2.2.2 Adjacency to structural foundation. Depth of the swimming pool and spa shall maintain a ratio of 1:1 from the nearest building foundation or footing of a retaining wall.

Exception: A sealed engineered design drawing of the proposed new structure shall be submitted for approval.

Section 310.1; amend to read as follows:

310.1 General. Suction entrapment avoidance for pools and spas shall be provided in accordance with APSP 7 (ANSI/PHTA/ICC 7) or for public swimming pools in accordance with State of Texas Rules for Public Swimming Pools and Spas, Title 25 TAC Chapter 265 Subchapter L, Rule § 265.190.

Exceptions: [Remainder unchanged.]

Section 313.7; amend to read as follows:

313.7 Emergency shutoff switch for spas and hot tubs. A~~n~~ clearly labeled emergency shutoff or control switch for the purpose of stopping the motor(s) that provide power to the recirculation system and jet system shall be ~~provided to disconnect power to recirculation and jet system pumps and air blowers~~ installed at a point readily accessible to the users and not less than 1.5 m (5 ft.) away, adjacent to, and within sight of the spa or hot tub. ~~Emergency shutoff switches shall be: provided with access; located within sight of the pool or spa; and located not less than 5 feet (1524 mm) horizontally from the inside walls of the pool or spa.~~ This requirement shall not apply to one and two family dwellings and townhouses.

~~**Exception:** Onground storable pools, permanent inground residential swimming pools, residential spas and residential water features.~~

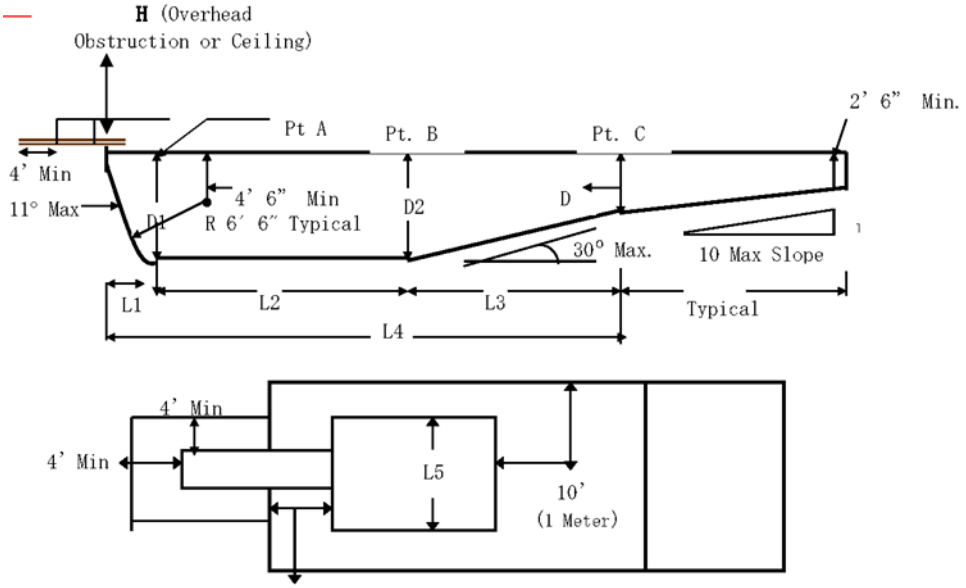
Section 402.12; amend to delete figure 402.12 and table 402.12, and to read as follows:

402.12 Water envelopes. The minimum diving water envelopes shall be in accordance with Texas Department of State Health Services, Administrative Code Title 25, Chapter 265, Section 186(e) and Figure: 25 TAC 256.186(e)(6).

Figure: 25 TAC § 265.186(e)(6)

Maximum Diving Board Height Over Water	¾ Meter	1 Meter	3 Meters
Max. Diving Board Length	12 ft.	16 ft.	16 ft.
Minimum Diving Board Overhang	2 ft. 6 in.	5 ft.	5 ft.
D1 Minimum	8 ft. 6 in.	11 ft. 2 in.	12 ft. 2 in.
D2 Minimum	9 ft.	10 ft. 10 in.	11 ft. 10 in.
D3 Minimum	4 ft.	6 ft.	6 ft.
L1 Minimum	4 ft.	5 ft.	5 ft.
L2 Minimum	12 ft.	16 ft. 5 in.	19 ft. 9 in.
L3 Minimum	14 ft. 10 in.	13 ft. 2 in.	13 ft. 11 in.
L4 Minimum	30 ft. 10 in.	34 ft. 7 in.	38 ft. 8 in.
L5 Minimum	8 ft.	10 ft.	13 ft.
H Minimum	16 ft.	16 ft.	16 ft.

From Plummet to Pool Wall at Side	9 ft.	10 ft.	11 ft. 6 in.
From Plummet to Adjacent Plummet	10 ft.	10 ft.	10 ft.



Section 402.13; amend to read as follows:

402.13 Ladders for diving equipment. Ladders shall be provided with two grab rails or two handrails. There shall be a uniform distance between ladder treads, with a 7-inch (178 mm) minimum distance and 12 inch (305 mm) maximum distance. Supports, platforms, steps, and ladders for diving equipment shall be designed to carry the anticipated loads. Steps and ladders shall be of corrosion-resistant material, easily cleanable and with slip-resistant tread.

~~**Exception:** The distance between treads for the top and bottom riser can vary but shall be not less than 7 inches (178 mm) and not greater than 12 inches (305 mm).~~

(Reason: to avoid conflict with 25 TAC Chapter 265.186(c)(8)(d).)

Section 411.2.1; amend to read as follows:

411.2.1 Tread dimensions and area. Treads shall ~~be not less than 24 inches (607 mm) at the leading edge Treads shall~~ have a~~n~~ minimum unobstructed horizontal depth (i.e., horizontal run) of ~~not less than 10 inches (254 mm) at the centerline~~ 12 inches and a minimum width of 20 inches.

Section 411.2.2; amend to read as follows:

411.2.2 Risers. Risers ~~except for the bottom riser~~ for steps shall have a maximum uniform height of ~~not greater than 12 inches (305 mm)~~ 10 inches ~~measured at the centerline~~, with the bottom riser height allowed to taper to zero. ~~The bottom riser height is allowed to vary to the floor.~~

Section 411.5.1; amend to read as follows:

411.5.1 Swimouts. Swimouts, located in either the deep or shall area of a pool, shall comply with all of the following:

1. [Remainder unchanged.]
2. [Remainder unchanged.]

3. [Remainder unchanged.]
4. The leading edge shall be visibly set apart and provided with a horizontal solid or broken stripe at least 1 inch wide on the top surface along the front leading edge of each step. This stripe shall be plainly visible to the persons on the pool deck. The stripe shall be a contrasting color to the background on which it is applied, and the color shall be permanent in nature and shall be a slip-resistant surface.

Section 411.5.2; amend to read as follows:

411.5.2 Underwater seats and benches. Underwater seats and benches, whether used alone or in conjunction with pool stairs, shall comply with all of the following:
1. [Remainder unchanged.]
2. [Remainder unchanged.]
3. [Remainder unchanged.]
4. [Remainder unchanged.]
5. The leading edge shall be visually set apart and provided with a horizontal solid or broken stripe at least 1 inch wide on the top surface along the front leading edge of each step. This stripe shall be plainly visible to persons on the pool deck. The stripe shall be a contrasting color to the background on which it is applied, and the color shall be permanent in nature and shall be a slip-resistant surface.
6. [Remainder unchanged.]
7. [Remainder unchanged.]

Section 603.2; amend to read as follows:

603.2 Class ~~D-2~~ A and B pools. ~~Where a Class D-2 pool has a bather-accessible depth greater than 4 ½ feet (1372 mm), the floor shall have a distinctive marking at the 4 ½ feet (1372 water depth.~~ Class A and B pools over 5 feet deep: the transition point of the pool from the shallow area to the deep area of the pool shall be visually set apart with a 4-inch minimum width row of floor tile, a painted line, or similar means using a color contrasting with the bottom; and a rope and a float line shall be provided between 1 foot and 2 feet on the shallow side of the 5-foot depth along and parallel to this depth from one side of the pool to the other side. The floats shall be spaced at not greater than 7-foot intervals; and the floats shall be secured so they will not slide or bunch up. The stretched float line shall be of sufficient size and strength to offer a good handhold and support loads normally imposed by users. If the owner or operator of the pool knows or should have known in the exercise of ordinary care that a rope or float is missing, broke, or defective, the problem shall be promptly remedied.

Section 610.5.1; amend to read as follows:

610.5.1 Uniform height of ~~9~~ 10 inches. Except for the bottom riser, risers at the centerline shall have a maximum uniform height of ~~9~~ 10 inches (~~229~~ 254 mm). The bottom riser height shall be permitted to vary from the other risers.

Section 804.1; amend to read as follows:

804.1 General. The minimum diving water envelopes shall be in accordance with Table 804.1 and Figure 804.1, or the manufacturer's specifications, whichever is greater. Negative construction tolerances shall not be applied to the dimensions of the minimum diving water envelopes given in Table 804.1.

END

The following sections, paragraphs, and sentences of the *2021 International Energy Conservation Code* (IECC) are hereby amended as follows: Standard type is text from the IECC. Underlined type is text inserted. ~~Lined through type is deleted text from IECC.~~ Section numbers in parenthesis represent the corresponding numbers of the energy provisions of the 2021 *International Residential Code* for parallel amendments.

Section C102/R102; amend by adding Sections C102.1.2 and R102.1.2 (N1101.4.1) to read as follows:

C102.1.2 Alternative compliance. A building certified by a national, state, or local accredited energy efficiency program and determined by the Energy Systems Laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the Code Official, be considered in compliance. The United States Environmental Protection Agency's Energy Star Program certification of energy code equivalency shall be considered in compliance.

R102.1.2 (N1101.4.1) Alternative compliance. A building certified by a national, state, or local accredited energy efficiency program and determined by the Energy Systems Laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the Code Official, be considered in compliance. The United States Environmental Protection Agency's Energy Star Program certification of energy code equivalency shall be considered in compliance. Regardless of the program or the path to compliance, each 1- and 2-family dwelling shall be tested for air and duct leakage as prescribed in Section R402.4.1.2 (N1102.4.1.2) and R403.3.3 (N1103.3.3) respectively.

(Reason: This amendment is added to allow alternative compliance in accordance with Texas HB 1365, 78th Legislature. Codified in Chapter 388 Texas Building Energy Performance Standards: §388.003(i). The last sentence to Section R102.1.2 (N1101.4.1) was added to insure that every house is tested in accordance with the mandatory provisions of the code.)

Section R105.2.1; amend to read as follows:

R105.2.1 Footing and foundation inspection. Inspections ~~shall verify the~~ associated with footings and foundations shall verify compliance with the code as to ~~insulation~~ *R*-value, location, thickness, depth of burial, and protection of insulation as required by the code and *approved* plans and specifications.

Section R105.2.2; amend to read as follows:

R105.2.2 Framing and Air Barrier Rough-in Inspection. Inspections at framing and rough-in shall be made before application of ~~interior finish~~ insulation and shall verify compliance with the code as to: ~~types of insulation and corresponding *R*-values and their correct location and proper installation; fenestration properties such as *U*-factor and SHGC and proper installation;~~ air leakage controls as required by the code; and *approved* plans and specifications.

Section R105.2.3; amend to read as follows:

R105.2.3 ~~Plumbing Rough-in Inspection.~~ ~~Inspections at plumbing rough-in shall verify compliance as required by the code and *approved* plans and specifications as to types of insulation and corresponding *R*-values and protection, and required controls.~~ **Insulation and Fenestration Rough-in Inspection.** Inspections at framing and rough-in shall be made before application of interior finish and shall verify compliance with the code as to: types of insulation and corresponding R-values and their correct location and proper installation; fenestration properties such as U-factor and SHGC and proper installation.

Section R105.2.4; change to read as follows:

R105.2.4 ~~Mechanical Rough-in Inspection.~~ ~~Inspections at mechanical rough-in shall verify compliance as required by the code and *approved* plans and specifications as to installed HVAC equipment type and size, required controls, system insulation and corresponding *R*-value, system air leakage control, programmable thermostats, dampers, whole-house ventilation, and minimum fan efficiency.~~ **~~Exception:~~**

~~Systems serving multiple dwelling units shall be inspected in accordance with Section C105.2.4.~~ **Plumbing Rough-in Inspection.** Inspections at plumbing rough-in shall verify compliance as required by the code and approved plans and specifications as to types of insulation and corresponding *R*-values and protection and required controls.

Section R105.2.5; change to read as follows:

R105.2.5 ~~Final Inspection.~~ ~~The *building* shall have a final inspection and shall not be occupied until *approved*. The final inspection shall include verification of the installation of all required *building* systems, equipment and controls and their proper operation and the required number of high-efficacy lamps and fixtures.~~ **Mechanical Rough-in Inspection.** Inspections at mechanical rough-in shall verify compliance as required by the code and approved plans and specifications as to installed HVAC equipment type and size, required controls, system insulation and corresponding *R*-value, system air leakage control, programmable thermostats, dampers, whole-house ventilation, and minimum fan efficiency. **Exception:** Systems serving multiple dwelling units shall be inspected in accordance with Section C105.2.4.

Section 105.2.6; change to read as follows:

R105.2.6 Final Inspection. The building shall have a final inspection and shall not be occupied until approved. The final inspection shall include verification of the installation of all required building systems, equipment, and controls and their proper operation and the required number of high-efficacy lamps and fixtures.

Section R202 (N1101.6); *add the following definition:*

PROJECTION FACTOR. The ratio of the horizontal depth of the overhang, eave or permanently attached shading device, divided by the distance measured vertically from the bottom of the fenestration glazing to the underside of the overhang, eave or permanently attached shading device.

*(Reason: The amendment to **Section 402.3.2 (N1102.3.2) Glazed fenestration SHGC** was proposed by the TAB. ESL determined the proposal to be not less restrictive than the 2015 IECC. This added definition is necessary as part of that amendment. The amendment will provide additional options for SHGC selection.)*

Section R202 (N1101.6); *add the following definition:*

DYNAMIC GLAZING. Any fenestration product that has the fully reversible ability to change its performance properties, including *U*-factor, solar heat gain coefficient (SHGC), or visible transmittance (VT).

(Reason: This term is referenced in Section R402.3.2. This definition of DYMANIC GLAZING is also found in the Commercial provisions of the code.)

Section R401.2.5; delete this section in its entirety.

~~**R401.2.5 Additional energy efficiency.** This section establishes requirements applicable to all compliance approaches to achieve additional energy efficiency.~~

~~1. For buildings complying with Section R401.2.1, one of the additional efficiency package options shall be installed according to Section R408.2.~~
~~2. For buildings complying with Section R401.2.2, the building shall meet one of the following:~~
~~2.1. One of the additional efficiency package options in Section R408.2 shall be installed without including such measures in the proposed design under Section R405; or~~

~~2.2. The proposed design of the building under Section R405.2 shall have an annual energy cost that is less than or equal to 95 percent of the annual energy cost of the standard reference design.~~

~~3. For buildings complying with the Energy Rating Index alternative Section R401.2.3, the Energy Rating Index value shall be at least 5 percent less than the Energy Rating Index target specified in Table R406.5.~~

~~The option selected for compliance shall be identified in the certificate required by Section R401.3.~~

Table R402.1.2; amend by changing the WOOD FRAME WALL U-FACTOR for CLIMATE ZONE 3 to read "0.082."

Table R402.1.2; amend to read as follows:

CLIMATE ZONE	FENESTRATION *U*-FACTOR[f]	CEILING *U*-Factor
2	0.40	0.29 ~~0.026~~
3	0.32 ~~0.30~~	0.29 ~~0.026~~

(Reason: Carries forward the value in the 2015 IECC/IRC.)

Table R402.1.2 (N1102.1.2) in Section R402.1.2 is amended by amending the Fenestration U-factor for Climate Zone 3 to read "0.35."

CLIMATE ZONE	FENESTRATION U-FACTOR
3	~~0.30~~ 0.35

Table R402.1.2; amended by amending the Fenestration U-factor for Climate Zone 3 to read "0.35."

CLIMATE ZONE	FENESTRATION U-FACTOR
3	~~0.32~~ 0.35

Table R402.1.3 is amended to read as follows:

Climate Zone	*Fenestration U-Factor[b,i]*	*Ceiling R-Value*	*Wood Frame Wall R-Value*	*Slab R-Value & Depth*
2	.40	42 ~~49~~	~~13 or 0&10ci~~ 13 or 0 + 10	0
3	0.32 ~~0.30~~	42 ~~49~~	~~20 or 13&5ci[h] or 0&15ci[h]~~ 19 or 13+3ci, 0+15	0

Section C402.2/R402.2; is amended by adding Sections C402.2.8/R402.2.13 to read as follows:

Section C402.2.8/R402.2.13 Insulation installed in walls. To ensure that insulation remains in place, insulation installed in walls shall be totally enclosed on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing, netting, or other equivalent material approved by the building official.

Section R402.3.2 (N1102.3.2) is amended by adding a paragraph and table following the exception to read as follows:

Where vertical fenestration is shaded by an overhang, eave, or permanently attached shading device, the SHGC required in Table R402.1.2 shall be reduced by using the multipliers in Table R402.3.2 SHGC Multipliers for Permanent Projections.

Projection Factor	SHGC Multiplier (all Other Orientation)	SHGC Multiplier (North Oriented)
0—0.10	1.00	1.00
>0.10—0.20	0.91	0.95
>0.20—0.30	0.82	0.91
>0.30—0.40	0.74	0.87
>0.40—0.50	0.67	0.84
>0.50—0.60	0.61	0.81
>0.60—0.70	0.56	0.78
>0.70—0.80	0.51	0.76
>0.80—0.90	0.47	0.75
>0.90—1.00	0.44	0.73

Section R402.4.1.2 (N1102.4.1.2) is amended by amending the first sentence to read as follows:

R402.4.1.2 Testing. The building or dwelling unit shall be tested ~~for air leakage~~ and verified as having an air leakage rate of not exceeding 5 air changes per hour in *Climate Zone* 3. {Remainder of text unchanged.}

Section R402.4.1.2 (N1102.4.1.2) is further amended by adding the following paragraph to the end of the Section to read as follows:

Mandatory testing shall only be performed by individuals that are certified to perform air infiltration testing certified by national or state organizations as approved by the building official. The certified individuals must be an independent third-party entity and may not be employed, or have any financial interest in, the company that constructs the structure.

Section R402.4 is amended by adding Section 402.4.1.4 and table to read as follows:

R402.4.1.4 Testing option—ACH tradeoff. As an option to the air leakage rate set out in Section R402.4.1.2 (N1102.4.1.2), 1-and-2-family homes meeting all of the listed criteria below and the thermal envelope requirements in Table R402.4.1.3 (N1102.4.1.3) will be considered compliant when tested and verified as having an air leakage rate to not less than or equal to four air changes per hour when tested and reported in accordance with the testing standards and reporting criteria listed in Section R402.4.1.2 (N1102.4.1.2).

The compliance equivalency is limited as follows:

1. Limited to a conditioned floor area between 1,000 and 6,000 square feet,
2. Limited to between 2 and 6 bedrooms,
3. Assumes all ductwork and mechanical equipment is located in the unconditioned attic,
4. Assumes typical wood framing in the walls and roof, and
5. Assumes one of the following heating/cooling systems:
    a. All electric system with a heat pump for heating, or
    b. A system with electric cooling and natural gas heating.

Dwellings using electric resistance strip heating do not qualify for this tradeoff.

TABLE R402.4.1.4 (N1102.4.1.3)[a]

Envelope Component	Option #1	Option #2
R402.4 Air Leakage	≤ 4 ACH50	≤ 4 ACH50
Wall Insulation R-value	R13 + R3b	R13 + R3b
Fenestration U-factor	≤ 0.32	≤ 0.32
Fenestration SHGC	≤ 0.25	≤ 0.25
Ceiling R-value	≥ R49	≥ R49
Duct Insulation R-value	R8	R6
Radiant Barrier Required	No	Yes

[a] Except for the values listed in the table, all other mandatory code provisions are applicable.

The first value listed is the R-value of cavity insulation, the second value is the R-value of the continuous insultation or insulated siding.

Section R402.4 is amended by adding Section R402.4.1.5 to read as follows:

Section R402.4.1.5 Sampling options for R2 multifamily dwelling units. For buildings with eight or more testing units that must be tested as required by R402.4.1.2 or R402.4.1.3, the greater of seven units or 20 percent of the testing units in the building shall be tested, including a top floor unit, a ground floor unit, a middle floor unit, and a unit with the largest testing unit enclosure area. For each tested unit that exceeds the maximum air leakage rate, an additional three units shall be tested, including a mixture of testing unit types and locations. Where buildings have fewer than eight testing units, each testing unit shall be tested.

Section R402.4 is amended by adding Sections R402.4.1.6 and R402.4.1.7 to read as follows:

R402.4.1.6 Testing options for R2 multifamily dwelling units. As an option to the air leakage rate set out in Section R402.4.1.2, multifamily dwelling units will be considered compliant when tested and verified as having an air leakage rate to the air leakage rate set out in either Section R402.4.1.4.1 or Section R402.4.1.4.2 when tested and reported in accordance with the testing standards and reporting criteria listed in Section R402.4.1.2.

R402.4.1.6.1 Total air leakage rate for interior multifamily dwelling units. Interior multifamily dwelling units with a measured, “unguarded” total air leakage result of 5.3 ACH50 or less shall be considered compliant.

R402.4.1.6.2 Total air leakage rate for corner multifamily dwelling units. Corner multifamily units with a measured, “unguarded” total leakage result of less than 5.0 shall be considered compliant.

R402.4.1.7 Sampling options for R2 multifamily dwelling units. For buildings having three or more dwelling units, a minimum of 15% of the dwelling units in each building must be tested as required by Section R402.4.1.2. Prior to beginning sampling for testing, “Initial Testing” is required for each multifamily property. “Initial Testing” shall consist of the 3rd party testing contractor performing the required tests on at least three consecutive dwelling units. Test results from the “Initial Testing” must satisfy minimum code requirements before sampling is permitted. Dwelling units selected for the “Initial Testing” must be within the same building. Dwelling units selected for “Initial Testing” shall not be included in a “sample group” or counted toward the minimum 15% of dwelling units tested. The building official shall randomly select the three dwelling units for “Initial Testing.” The building official may delegate the random selection to the designated 3rd party testing contractor.

R402.4.1.7.1 Sample group Identification and Sampling. The builder shall identify a “sample group” which may be a building, floor, fire area, or portion thereof. All of the dwelling units within the “sample group” must be at the same stage of construction and must be ready for testing. The building official shall randomly select at least 15% of dwelling units from each “sample group” for testing. The building official may delegate the random selection to the designated 3rd party testing contractor.

If each tested dwelling unit within a "sample group" meets the minimum code requirements, then all dwelling units in the "sample group" are considered to meet the minimum code requirements.

Before a building may be deemed compliant with the testing as required, each "sample" group must be deemed compliant with the minimum code requirements. The sum total of all of the tested dwelling units across all "sample groups" shall not be less than a minimum of 15% of the dwelling units in a building.

R402.4.1.7.2 Failure to Meet Code Requirement(s). If any dwelling units within the identified "sample group" fail to meet a code requirement as determined by testing, the builder will be directed to correct the cause(s) of failure, and 30% of the remaining dwelling units in the "sample group" will be randomly selected for testing by the building official, or third-party testing contractor, regarding the specific cause(s) of failure.

If any failures occur in the additional dwelling units, all remaining dwelling units in the sample group must be individually tested for code compliance.

A multifamily property with three failures within a 90-day period is no longer eligible to use the sampling protocol in that community or project until successfully repeating "Initial Testing." Sampling may be reinstated after at least three consecutive dwelling units are individually verified to meet all code requirements.

A Certificate of Occupancy may not be issued for any building until testing has been performed and deemed to satisfy the minimum code requirements on the dwelling unit(s) identified for testing.

Section C402.5.2 is amended to read as follows:

Section C402.5.2 Dwelling and sleeping unit enclosure testing. The *building thermal envelope* shall be tested in accordance with ASTM E779, ANSI/RESNET/ICC 380, ASTM E1827 or an equivalent method approved by the *code official*. The measured air leakage shall not exceed 0.30 cfm/ft^2 (1.5 L/s m^2) of the testing unit enclosure area at a pressure differential of 0.2 inch water gauge (50 Pa). Where multiple dwelling units or sleeping units or other occupiable conditioned spaces are contained within one *building thermal envelope*, each unit shall be considered an individual testing unit, and the building air leakage shall be the weighted average of all testing unit results, weighted by each testing unit's enclosure area. Units shall be tested separately with an unguarded blower door test as follows:

1. Where buildings have fewer than eight testing units, each testing unit shall be tested.
2. For buildings with eight or more testing units, the greater of seven units or 20 percent of the testing units in the building shall be tested, including a top floor unit, a ground floor unit, a middle floor unit, and a unit with the largest testing unit enclosure area. For each tested unit that exceeds the maximum air leakage rate, an additional two three units shall be tested, including a mixture of testing unit types and locations.

Section R402.4.6 is amended to read as follows:

Section R402.4.6 Electrical and communication outlet boxes (air-sealed boxes). Electrical and communication outlet boxes installed in the building thermal envelope shall be sealed to limit air leakage between conditioned and unconditioned spaces. ~~Electrical and communication outlet boxes shall be tested in accordance with NEMA OS 4, *Requirements for Air-Sealed Boxes for Electrical and Communication Applications*, and shall have an air leakage rate of not greater than 2.0 cubic feet per minute (0.944 L/s) at a pressure differential of 1.57 psf (75 Pa). Electrical and communication outlet boxes shall be marked "NEMA OS 4" or "OS 4" in accordance with NEMA OS 4. Electrical and communication outlet boxes shall be installed per the manufacturer's instructions and with any supplied components required to achieve compliance with NEMA OS 4.~~

Section R403.3.3 (N1103.3.3) is amended by adding the following to the end of the section:

Mandatory testing shall only be performed by individuals that are certified to perform duct testing leakage testing certified by national or state organizations as approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed, or have any financial interest in the company that constructs the structure.

Section R403.3.3 is amended by adding Section R403.3.8 to read as follows:

R403.3.8 Sampling options for R2 multifamily dwelling units. For buildings with eight or more testing units that must be tested as required by R403.3.5, the greater of seven units or 20 percent of the testing units in the building shall be tested, including a top floor unit, a ground floor unit, a middle floor unit, and a unit with the largest testing unit floor area. For each tested unit that exceeds the maximum duct leakage rate, an additional three units shall be tested, including a mixture of testing unit types and locations. Where buildings have fewer than eight testing units, each testing unit shall be tested.

Section R403.3.4 is amended by adding Section R403.3.4.2 to read as follows:

R403.3.4.2 Sampling options for R2 multifamily dwelling units. For buildings having three or more dwelling units, a minimum of 15% of the dwelling units in each building must be tested as required by Section R403.3.3. Prior to beginning sampling for testing, "Initial Testing" is required for each multifamily property. "Initial Testing" shall consist of the 3rd party testing contractor performing the required tests on at least three consecutive dwelling units. Test results from the "Initial Testing" must satisfy minimum code requirements before sampling is permitted. Dwelling units selected for "Initial Testing" shall not be included in a "sample group" or counted toward the minimum 15% of dwelling units tested. The building official shall randomly select the three dwelling units for "Initial Testing." The building official may delegate the random selection to the designated 3rd party testing contractor.

R403.3.4.2.1 Sample group Identification and Sampling. The builder shall identify a "sample group" which may be a building, floor, fire area, or portion thereof. All of the dwelling units within the "sample group" must be at the same stage of construction and must be ready for testing. The building official shall randomly select at least 15% of dwelling units from each "sample group" for testing. The building official may delegate the random selection to the designated 3rd party testing contractor.

If each tested dwelling unit within a "sample group" meets the minimum code requirements, then all dwelling units in the "sample group" are considered to meet the minimum code requirements.

Before a building may be deemed compliant with the testing as required, each "sample group" must be deemed compliant with the minimum code requirements. The sum total of all of the tested dwelling units across all "sample groups" shall not be less than a minimum of 15% of the dwelling units in a building.

R403.3.4.2.2 Failure to Meet Code Requirement(s). If any dwelling units within the identified "sample group" fail to meet a code requirement as determined by testing, the builder will be directed to correct the cause(s) of failure, and 30% of the remaining dwelling units in the "sample group" will be randomly selected for testing by the building official, or third-party testing contractor, regarding the specific cause(s) of failure. If any failures occur in the additional dwelling units, all remaining dwelling units in the sample group must be individually tested for code compliance.

A multifamily property with three failures within a 90-day period is no longer eligible to use the sampling protocol in that community or project until successfully repeating "Initial Testing." Sampling may be reinstated after at least three consecutive dwelling units are individually verified to meet all code requirements.

A Certificate of Occupancy may not be issued for any building until testing has been performed and deemed to satisfy the minimum code requirements on the dwelling unit(s) for testing.

Section R403.6 is amended by adding Section R403.6.4 to read as follows:

R403.6.4 Sampling options for R2 multifamily dwelling units. For buildings with eight or more testing units that must be tested as required by R403.6.3, the greater of seven units or 20 percent of the testing units in the building shall be tested, including a top floor unit, a ground floor unit, a middle floor unit, and a unit with the largest testing unit floor area. For each tested unit that does not meet the minimum ventilation rate, an additional three units shall be tested, including a mixture of testing unit types and locations. Where buildings have fewer than eight testing units, each testing unit shall be tested.

Section C403.7.4 is amended to read as follows:

C403.7.4 Energy recovery ventilation systems (Mandatory). ~~Energy recovery ventilation systems shall be provided as specified in either Section C403.7.4.1 or C403.7.4.2, as applicable.~~ Where the supply airflow rate of a fan system exceeds the values specified in Tables C403.7.4(1) and C403.7.4(2), the system shall include an energy recovery system. The energy recovery system shall be configured to provide a change in the enthalpy of the outdoor air supply of not less than 50 percent of the difference between the outdoor air and return air enthalpies, at design conditions. Where an air economizer is required, the energy recovery system shall include a bypass or controls that permit operations of the economizer as required by Section C403.5.

Exception: An energy recovery ventilation system shall not be required in any of the following conditions:

1. Where energy recovery systems are prohibited by the International Mechanical Code.
2. Laboratory fume hood systems that include not fewer than one of the following features:
   2.1 Variable-air-volume hood exhaust and room supply systems configured to reduce exhaust and makeup air volume to 50 percent or less of design values.
   2.2 Direct makeup (auxiliary) air supply equal to or greater than 75 percent of the exhaust rate, heated not warmer than 2°F (1.1°C) above room setpoint, cooled to not cooler than 3°F (1.7°C) below room setpoint, with no humidification added, and no simultaneous heating and cooling used for dehumidification control.
3. Systems serving spaces that are heated to less than 60°F (15.5°C) and that are not cooled.
4. Where more than 60 percent of the outdoor hearing energy is provided from site-recovered or site-solar energy.
5. Heating energy recovery in Climate Zones 1 and 2.
6. Cooling energy recovery in Climate Zones 3C, 4C, 5B, 5C, 6B, 7 and 8.
7. Systems requiring dehumidification that employ energy recovery in series with the cooling coil.
8. Where the largest source of air exhausted at a single location at the building exterior is less than 75 percent of the design outdoor air flow rate.
9. Systems expected to operate less than 20 hours per week at the outdoor air percentage covered by Table C403.7.4(1).
10. Systems exhausting toxic, flammable, paint or corrosive fumes or dust.
11. Commercial kitchen hoods used for collecting and removing grease vapors and smoke.
12. Individual ventilation systems that serve an individual dwelling unit or sleeping unit.

Section C403.11. is amended by adding Section C403.11.2 to read as follows:

Section C403.11.2 Duct and plenum insulation and sealing (Mandatory). Supply and return air ducts and plenums shall be insulated with not less than R-6 insulation where located in unconditioned spaces and where located outside the building with not less than R-8 insulation in *Climate Zones* 1 through 4 and not less than R-12 insulation in *Climate Zones* 5 through 8. Where located within a building envelope assembly, the duct or plenum shall be separated from the building exterior or unconditioned or exempt spaces by not less than R-8 insulation in *Climate Zones* 1 through 4 and not less than R-12 insulation in *Climate Zones* 5 through 8.

Exceptions:

1. Where located within equipment.
2. Where the design temperature difference between the interior and exterior of the duct or plenum is not greater than 15°F (8°C).

Ducts, air handlers, and filter boxes shall be sealed. Joints and seams shall comply with Section 603.9 of the *International Mechanical Code*.

Environmental ducts and plenums installed in vertical chases, both supply and exhaust, where the ducts or plenums will not be accessible after construction completion, shall be leak tested in accordance with the SMACNA HVAC Air Leakage Test Manual to the installed ductwork class and pressure requirements.

Documentation shall be furnished demonstrating that representative sections totaling not less than 25 percent of the duct area have been tested and that all tested sections comply with the requirements of this section.

Section R404.1 (N1104.1) is amended in its entirety to read as follows:

Section R404.1 (N1104.1) ~~General~~ Lighting equipment (Mandatory). ~~This section covers the minimum efficiency of, and controls for, service water-heating equipment and insulation of service hot water piping.~~ Not less than 75 percent of the lamps in permanently installed lighting fixtures or not less than 75 percent of the permanently installed lighting fixtures shall contain only high-efficacy lamps.

Section R404.2 is deleted.

Section R405.2 (N1105.2) is amended to read as follows:

Section R405.2 Performance-based compliance. Compliance based on total building performance requires that a *proposed design* meets all of the following:

1. The requirements of the sections indicated within Table R405.2.
2. The *building thermal envelope* greater than or equal to levels of efficiency and solar heat gain coefficients in Table R402.1.1 or R402.1.3 of the 2009 *International Energy Conservation Code*.
3. An annual energy cost that is less than or equal to the annual energy cost of the 2021 *standard reference design* or 8% less than the annual energy cost of the 2018 *standard reference design*. Energy prices shall be taken from a source *approved* by the *code official*, such as the Department of Energy, Energy Information Administration's State Energy Data System Prices and Expenditure reports. Code officials shall be permitted to require time-of-use pricing in energy cost calculations.

Exceptions:

1. The energy used based on source energy expressed in Btu or Btu per square foot of conditioned floor area shall be permitted to be substituted for the energy cost. The source energy multiplier for electricity shall be 3.16. The source energy multiplier for fuels other than electricity shall be 1.1.

2. For one- and two-family dwellings, the maximum envelope leakage of 4 ACH50 is permitted provided the envelope leakage in the Standard Reference Design is 3 ACH50 and all other requirements of Section R405 are met, including all other mandatory measures. The annual energy cost or source energy usage of the Proposed Design must be equal to or less than that of the Standard Reference Design.

3. For multifamily or townhomes and buildings classified as Group R2 and Group R4 of three stories or less, the maximum envelope leakage of less than 5 ACH50 is permitted provided the envelope leakage in the Standard Reference Design is 3 ACH50 and all other requirements of Section R405 are met, including all other mandatory measures. The annual energy cost or source energy usage of the Proposed Design must be equal to or less than that of the Standard Reference Design.

Section R405.5.2 is amended to read as follows:

Section R405.5.2 Specific approval. Performance analysis tools meeting the applicable provisions of Section R405 shall be permitted to be *approved*. Tools are permitted to be *approved* based on meeting a specified threshold for a jurisdiction. The *code official* shall be permitted to approve such tools for a specified application or limited scope. Acceptable performance software simulation tools may include, but are not limited to, REM Rate™, Energy Gauge, and IC3. Other performance software programs accredited by RESNET BESTEST and having the ability to provide a report as outlined in R405.4.2 may also be deemed acceptable performance simulation programs and may be considered by the building official.

Section C405.9 is deleted:

Table R406.5 is amended to read as follows:

TABLE R406.5[1]

Maximum Energy Rating Index

Climate Zone	Energy Rating Index
3	~~57~~ 65

[1]This table is effective until August 31, 2019.

TABLE R406.5[2]

Maximum Energy Rating Index

Climate Zone	Energy Rating Index
3	~~57~~ 63

[2]This table is effective from September 1, 2019 to August 31, 2022.

TABLE R406.5[3]

Maximum Energy Rating Index

Climate Zone	Energy Rating Index
3	~~57~~ 59

[3]This table is effective on or after September 1, 2022.

MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
2	~~57~~ 63
3	~~57~~ 63

[1]This table is effective until August 31, 2022.

TABLE R406.5 (N1106.4)[2]

MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
2	~~57~~ 59
3	~~57~~ 59

[2]The table is effective from September 1, 2022 to August 31, 2025.

TABLE R406.5 (N1106.4)[3]

MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
2	57
3	57

[3]The table is effective from September 1, 2025 to August 31, 2028.

TABLE R406.5 (N1106.4)[4]

MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
2	~~57~~ 55
3	~~57~~ 55

[4]This table is effective on or after September 1, 2028.

Section R408 is deleted

END

The following sections, paragraphs, and sentences of the *2021 International Fuel Gas Code* are hereby amended as follows: Standard type is text from the IFGC. Underlined type is text inserted. ~~Lined through type is deleted text from IFGC.~~

Section 102.2 is amended by adding a paragraph titled "Exception" to read as follows:

Section 102.2 Existing installations. Except as otherwise provided for in this chapter, a provision in this code shall not require the removal, *alteration* or abandonment of, nor prevent the continued utilization and maintenance of, existing installations lawfully in existence at the time of the adoption of this code.

Exception: Existing dwelling units shall comply with Section 621.2.

Section 102.8 is amended to read as follows:

Section 102.8 Referenced codes and standards. The codes and standards referenced in this code shall be those that are listed in Chapter 8 and such codes ~~and standards~~, when specifically adopted, and standards shall be considered part of the requirements of this code to the prescribed extent of each such reference ~~and as further regulated in Sections 102.8.1 and 102.8.2~~. Where differences occur between provisions of this code and the referenced standards, the provisions of this code shall apply. Whenever amendments have been adopted to the referenced codes and standards, each reference to said code and standard shall be considered to reference the amendments as well. Any reference to NFPA 70 or the *National Electrical Code* shall mean the Electrical Code as adopted.

> ~~**Exception:** Where enforcement of a code provision would violate the conditions of the listing of the equipment or appliance, the conditions of the listing and the manufacturer's installation instructions shall apply.~~

Sections 109.5 and 109.6 are amended to read as follows:

Section 109.5 ~~Related~~ Fees. ~~The payment of the fee for the construction, alteration, removal or demolition for work done in connection to or concurrently with the work authorized by a permit shall not relieve the applicant or holder of the permit from the payment of other fees that are prescribed by law.~~ Fees for the issuance of permits and performance of inspections as required by this code shall be as established from time to time by resolution of the Town Council and set forth in the Town's Fee Schedule.

Section 109.6 ~~Fee~~ Refunds. The ~~code~~ building official ~~is authorized to~~ shall establish a ~~refund~~ policy for authorizing the refunding of fees.

Section 113 is amended in its entirety to read as follows:

Section 113 MEANS OF APPEAL

113.1 ~~General~~ Application for appeal. ~~In order to hear and decide appeals of orders, decisions or determinations made by the code official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the applicable governing authority and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business and shall render all decisions and findings in writing to the appellant with a duplicate copy to the code official.~~ Any person shall have the right to appeal a decision of the building official to the Board of Adjustment as provided in Section 2.02 of the Denton County Emergency Services District No. 1 Land Development Code.

~~**114.2 Limitations on authority.** An application for an appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equivalent or better form of construction is proposed. The board shall not have authority to waive requirements of this code or interpret the administration of this code.~~

~~**113.3 Qualifications.** The board of appeals shall consist of members who are qualified by experience and training and are not employees of the jurisdiction.~~

~~**113.4 Administration.** The code official shall take immediate action in accordance with the decision of the board.~~

Section 306.3 is amended to read in its entirety as follows:

[M] 306.3 Appliances in attics. Attics containing appliances shall be provided with an opening and unobstructed passageway large enough to allow removal of the largest *appliance*. The passageway shall be not less than 30 inches (762 mm) high and 22 inches (559 mm) wide and not more than 20 feet (6096 mm) in length measured along the centerline of the passageway from the opening to the *appliance*. The passageway shall have continuous solid flooring not less than 24 inches (610 mm) wide. A level service space not less than 30 inches (762 mm) deep and 30 inches (762 mm) wide shall be present at the front or service side of the *appliance*. The clear *access* opening dimensions shall be ~~not less than~~ a minimum of 20 inches by 30 inches (508 mm by 762 mm) ~~and large enough to allow removal of the largest *appliance*~~ or larger where such dimensions are not large enough to allow removal of the largest appliance. A walkway to an appliance shall be rated as a floor as approved by the building official, shall have continuous solid flooring with a minimum thickness of 1/2" plywood or 5/8" wafer board, and shall be placed over a load bearing wall or with engineered approval. As a minimum, for access to the attic space, provide one of the following:

1. A permanent stair.
2. A pull-down stair with a minimum 300 lbs (136 kg) capaTown.
3. An access door from an upper floor level.
4. Access panel may be used in lieu of items 1, 2, and 3 with prior approval of the code official due to building conditions.

Exceptions:

1. The passageway and level service space are not required where the *appliance* is capable of being serviced and removed through the required opening.
2. Where the passageway is not less than 6 feet (1829 mm) high for its entire length, the passageway shall be not greater than 50 feet (15,250 mm) in length.

A receptacle outlet shall be provided at or near the equipment and appliance location within 25 feet and in accordance with the Electrical Code.

(Reason: To provide a safe means of accessibility to appliances in attics and to allow for different types of construction limitations. Consistent with regional amendment to IMC 306.3.)

Section 306.5 is amended to read as follows:

[M] 306.5 Equipment and Appliances on Roofs or Elevated Structures. Where *equipment* requiring *access* or appliances are located on an elevated structure or the roof of a building such that personnel will have to climb higher than 16 feet (4877 mm) above grade to access ~~such *equipment* or appliances~~, an interior or exterior means of access shall be provided. Exterior ladders providing roof *access* need not extend closer than 12 feet (2438 mm) to the finish grade or floor level below and shall extend to the *equipment* and appliances' level service space. Such *access* shall not require climbing over obstructions greater than 30 inches (762 mm) in height or walking on roofs having a slope greater than four (4) units vertical in twelve (12) units horizontal (33-percent slope). Such access shall not require the use of portable ladders.

Permanent ladders installed to provide the required *access* shall comply with the following minimum design criteria:

1. The side railing shall extend above the parapet or roof edge not less than 30 inches (762 mm).
2. Ladders shall have rung spacing not to exceed 14 inches (356 mm) on center. The upper-most rung shall be not more than 24 inches (610 mm) below the upper edge of the roof hatch, roof, or parapet, as applicable.

3. Ladders shall have a toe spacing not less than 6 inches (152 mm) deep.
4. There shall be not less than 18 inches (457 mm) between rails.
5. Rungs shall have a diameter not less than 0.75-inch (19 mm) and be capable of withstanding a 300-pound (1136.1 kg) load.
6. Ladders over 30 feet (9144 mm) in height shall be provided with offset sections and landings capable of withstanding 100 pounds per square foot (488.2 kg/m^2). Landing dimensions shall be not less than 18 inches (457 mm) and not less than the width of the ladder served. A guard rail shall be provided on all open sides of the landing.
7. Climbing clearance. The distance from the centerline of the rungs to the nearest permanent object on the climbing side of the ladder shall be not less than 30 inches (762 mm) measured perpendicular to the rungs. This distance shall be maintained from the point of ladder access to the bottom of the roof hatch. A minimum clear width of 15 inches (381 mm) shall be provided on both sides of the ladder measured from the midpoint of and parallel with the rungs, except where cages or wells are installed.
8. Landing required. The ladder shall be provided with a clear and unobstructed bottom landing area having a minimum dimension of 30 inches by 30 inches (762 mm by 762 mm) centered in front of the ladder.
9. Ladders shall be protected against corrosion by *approved* means.
10. Access to ladders shall be provided at all times.

Catwalks installed to provide the required *access* shall be not less than 24 inches (610 mm) wide and shall have railings as required for service platforms.

Exception: This section shall not apply to Group R-3 *occupancies*.

(Reason: To assure safe access to roof appliances. Consistent with IMC amendments.)

Section 306.5.1 is amended to read as follows:

[M] 306.5.1 Sloped roofs. Where appliances, *equipment*, fans, or other components that require service are installed on a roof having a slope of 3 units vertical in 12 units horizontal (25-percent slope) or greater and having an edge more than 30 inches (762 mm) above grade at such edge, ~~a level platform shall be provided on each side of the *appliance* or *equipment* to which *access* is required for service, repair or maintenance~~ a catwalk at least 16 inches in width with substantial cleats spaced not more than 16 inches apart shall be provided from the roof *access* to a level platform at the appliance. The level platform shall be provided on each side of the appliance to which *access* is required for service, repair, or maintenance. The platform shall be not less than 30 inches (762 mm) in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches (1067 mm) above the platform, shall be constructed so as to prevent the passage of a 21-inch-diameter (533 mm) sphere and shall comply with the loading requirements for guards specified in the *International Building Code*. ~~*Access* shall not require walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope). Where *access* involves obstructions greater than 30 inches (762 mm) in height, such obstructions shall be provided with ladders installed in accordance with Section 306.5 or stairways installed in accordance with the requirements specified in the *International Building Code* in the path of travel to and from appliances, fans or *equipment* requiring service.~~

(Reason: To assure safe access to roof appliances. Consistent with IMC amendments.)

Section 306 is amended by adding Section 306.7 and Subsection 306.7.1 to read as follows:

Section 306.7 Water heaters above ground floor. When the attic, roof, mezzanine, or platform in which a water heater is installed is more than eight (8) feet (2438 mm) above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

306.7.1 Illumination and convenience outlet. Whenever the mezzanine or platform is not adequately lighted or access to a receptacle outlet is not obtainable from the main level, lighting and a receptacle outlet shall be provided in accordance with Section 306.3.1.

Section 401.5 is amended to read as follows:

Section 401.5 Identification. For other than steel pipe and CSST, *exposed piping* shall be identified by a yellow label marked "Gas" in black letters. The marking shall be spaced at intervals not exceeding 5 feet (1524 mm). The marking shall be spaced at intervals not exceeding 5 feet (1524 mm). The marking shall not be required on *piping* located in the same room as the *appliance* served. CSST shall be identified as required by ANSI LC 1/CSA 6.26. Both ends of each section of medium pressure gas piping shall identify its operating gas pressure with an *approved* tag. The tags are to be composed of aluminum or stainless steel and the following wording shall be stamped into the tag: "WARNING ½ TO 5 psi gas pressure Do Not Remove"

(Reason: To protect homeowners and plumbers.)

Section 404.12 is amended to read as follows:

Section 404.12 Minimum burial depth. Underground *piping* systems shall be installed a minimum depth of ~~12~~ 18 inches (~~305~~ 458 mm) top of pipe below grade~~, except as provided for in Section 404.12.1~~.

(Reason: To provide increased protection to piping systems and address reference number change.)

Section 404.12.1 is deleted:

(Reason: To provide increased protection to piping systems and address reference number change.)

Section 406.4 is amended to read as follows:

Section 406.4 Test pressure measurement. Test pressure shall be measured with a monometer or with a pressure-measuring device designed and calibrated to read, record, or indicate a pressure loss caused by leakage during the pressure test period. The source of pressure shall be isolated before the pressure tests are made. Mechanical gauges used to measure test pressures shall have a range such that the highest end of the scale is not greater than five times the test pressure. Spring type gauges do not meet the requirement of a calibrated gauge.

(Reason: To require the use of more accurate diaphragm gauges. Spring gauges do not provide accurate measurement below approximately 17 psig.)

Section 406.4.1 is amended to read as follows:

Section 406.4.1 Test pressure. The test pressure to be used shall be no less than ~~1 ½ times the proposed maximum working pressure, but not less than~~ 3 psig (20 kPa gauge),~~irrespective of design pressure~~ or at the discretion of the Code Official, the piping and values may be tested at a pressure of at least six (6) inches (152 mm) of mercury, measured with a manometer or slope gauge. ~~Where the test pressure exceeds 125 psig (862 kPa gauge), the test pressure shall not exceed a value that produces a hoop stress in the piping greater than 50 percent of the specified minimum yield strength of the pipe.~~ For tests requiring a pressure of 3 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three- and one-half inches (3 ½"), a set hand, 1/10-pound incrementation, and a pressure range not to exceed 15 psi for tests requiring a pressure of 3 psig. For tests requiring a pressure of 10 psig, diaphragm gauges shall utilize a dial with a minimum diameter of three and one-half inches (3 ½"), a set hand, a minimum of 2/10-pound incrementation, and a pressure range not to exceed 50 psi. For welded piping, and for piping carrying gas at pressures in excess of fourteen (14) inches water column pressure (3.48 kPa) (1/2 psi) and less than 200 inches of water column pressure (52.2 kPa) (7.5 psi), the test pressure shall not be less than ten (10) pounds per square inch (69.6 kPa). For piping carrying gas at a pressure that exceeds 200 inches of water column (52.2 kPa) (7.5 psi), the test pressure shall be not less than one and one-half times the proposed maximum working pressure.

Diaphragm gauges used for testing must display a current calibration and be in good working condition. The appropriate test must be applied to the diaphragm gauge used for testing.

(Reason: To provide for lesser pressures to coordinate with the use of more accurate diaphragm gauges.)

Section 409.1.3 is amended to read as follows:

Section 409.1.3 Access to shut off valves. Shut off valves shall be located in places so as to provide access for operation and shall be installed so as to be protected from damage. All shut off valves in commercial kitchen installments shall be located no more than 6' (feet) from floor level with a ball valve for emergency shutoff.

Section 409 is amended by adding Section 409.1.4 to read as follows:

Section 409.1.4 Valves in CSST installations. Shutoff valves installed with corrugated stainless steel (CSST) piping systems shall be supported with an *approved* termination fitting, or equivalent support, suitable for the size of the valves, of adequate strength and quality, and located at intervals so as to prevent or damp out excessive vibration but in no case greater than 12-inches from the center of the valve. Supports shall be installed so as not to interfere with the free expansion and contraction of the system's piping, fittings, and valves between anchors. All valves and supports shall be designed and installed so they will not be disengaged by movement of the supporting piping.

(Reason: To provide proper security to CSST valves. These standards were established in this region in 1999 when CSST was an emerging technology.)

Section 410.1 is amended to read as follows:

Section 410.1 Pressure regulators. A line pressure regulator shall be installed where the *appliance* is designed to operate at a lower pressure than the supply pressure. Line gas pressure regulators shall be *listed* as complying with ANSI Z21 .80/CSA 6.22. *Access* shall be provided to pressure regulators. Pressure regulators shall be protected from physical damage. Regulators installed on the exterior of the building shall be *approved* for outdoor installation. *Access* to regulators shall comply with the requirements for *access* to appliances as specified in Section 306.

Exception: A passageway or level service space is not required when the regulator is capable of being serviced and removed through the required attic opening.

(Reason: To require adequate access to regulators.)

Section 621.2 is amended to read as follows:

Section 621.2 Prohibited use. One or more unvented room heaters shall not be used as the sole source of comfort heating in a *dwelling unit*.

Exception: Existing *approved* unvented heaters may continue to be used in dwelling units, in accordance with the code provisions in effect when installed, when *approved* by the Code Official unless an unsafe condition is determined to exist as described in Section 108.7.

(Reason: Gives code official discretion.)

END

The following sections, paragraphs, and sentences of the *2021 International Existing Building Code* are hereby amended as follows: Standard type is text from the IEBC. Underlined type is text inserted. ~~Lined through type is deleted text from IEBC.~~

Section 102.4; amend to read as follows:

[A] 102.4 Referenced codes and standards. The codes, when specifically adopted, and standards referenced in this code shall be considered part of the requirements of this code to the prescribed extent of each such reference and as further regulated in Sections 102.4.1 and 102.4.2.

Exception: Where enforcement of a code provision would violation the conditions of the listing of the equipment or appliance, the conditions of the listing shall govern.

(Reason: To not inadvertently adopt other codes (i.e. Wildland Urban Interface Code etc…) by reference.)

Section 110.2; amend by deleting paragraph 11.

Section 202; amend definition of "Existing Building," and "Existing Structure," to read as follows:

Existing Building - A building, ~~erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued~~ structure, or space, with an approved final inspection issued under a code edition which is at least 2 published code editions preceding the currently adopted building code; a building, structure or space that is undergoing a change of occupancy or use.

Existing Structure- A building, structure, ~~erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued~~ or space, with an approved final inspection issued under a code edition which is at least 2 published code editions preceding the currently adopted building code; a building, structure or space that is undergoing a change of occupancy or use.

(Reason: To prevent potential abuses in new construction and shell buildings.)

***Section* 305*; amend by adding Section 305.2 to read as follows**:*

305.2 Complete change of occupancy. Where an entire building undergoes a change of occupancy, it shall comply with Section 305.4.1 and shall have all of the following accessible features:

1. Not fewer than one accessible building entrance.
2. Not fewer than one accessible route from an accessible building entrance to primary function areas.
3. Signage complying with Section 1111 of the International Building Code.
4. Accessible parking, where parking is being provided.
5. Not fewer than one accessible passenger loading zone, where loading zones are provided.
6. Not fewer than one accessible route connecting accessible parking and accessible passenger loading zones to an accessible entrance.
7. At least one accessible family or assisted use toilet room shall be provided in accordance with Chapter 11 of the International Building Code.

Where it is technically infeasible to comply with the new construction standards for any of these requirements for a change of group or occupancy, Items 1 through 7 shall conform to the requirements to the maximum extent technically feasible.

Exception: The accessible features listed in Items 1 through 7 are not required for an accessible route to Type B units.

(Reason: Accessible toilet rooms should be available for disabled occupants.)

Section 306.1; amend by adding "Exceptions," to read as follows:

Exceptions:

1. Components of projects regulated by and registered with Architectural Barriers Division of Texas Department of Licensing and Regulation shall be deemed to be in compliance with the requirements of this chapter.
2. If the cost of the project is less than $50,000, it must comply with ICC A117.1, or it shall be reviewed and inspected to the Texas Accessibility Standards by a Registered Accessibility Specialist.

Section 306.2; amend by adding "Exception," to read as follows:

Exception: Projects subject to the Texas Accessibility Standards as adopted by the Texas Department of Licensing and Regulations are exempt from this section. Projects with a valuation of less than $50,000 (which are subject to the Texas Accessibility Standards) may be accepted as equivalent to this section where reviewed and inspected to the Texas Accessibility Standards by a Texas Department of Licensing and Regulation Registered Accessibility Specialist when a plan review report and a compliant inspection report are provided to the building code official.

Section 306.5; amend by creating Section 306.5.1 to read as follows:

306.5.1 Complete change of occupancy. Where an entire building undergoes a *change of occupancy*, it shall comply with Section 305.4.1 and shall have all of the following accessible features:

1. Not fewer than one accessible building entrance.
2. Not fewer than one accessible route from an accessible building entrance to *primary function* areas.
3. Signage complying with Section 1111 of the *International Building Code*.
4. Accessible parking, where parking is being provided.
5. Not fewer than one accessible passenger loading zone, where loading zones are provided.
6. Not fewer than one accessible route connecting accessible parking and accessible passenger loading zones to an accessible entrance.
7. At least one accessible family or assisted use toilet room shall be provided in accordance with Chapter 11 of the International Building Code.

Where it is *technically infeasible* to comply with the new construction standards for any of these requirements for a change of group or occupancy, Items 1 through 6 shall conform to the requirements to the maximum extent technically feasible.

Exception: The accessible features listed in Items 1 through 6 are not required for an accessible route to Type B units.

(Reason: Accessible toilet rooms should be available for disabled occupants.)

Section 401.3 Flood hazard areas; delete this section:

(Reason: Flood hazard ordinances may be administered by other departments within the city.)

Section 405.2.6 Flood hazard areas; delete this section:

(Reason: Flood hazard ordinances may be administered by other departments within the city.)

Section* 406.1*; amend to read as follows:

406.1 Material. Existing electrical wiring and equipment undergoing *repair* shall be allowed to be repaired or replaced with like material, in accordance with the requirements of NFPA 70.

(Reason: To ensure compliance with the NEC relative to any electrical repairs/replacement.)

Section 502.3 Flood hazard areas; delete this section:

(Reason: Flood hazard ordinances may be administered by other departments within the city)

Section 503.2 Flood hazard areas; delete this section:

(Reason: Flood hazard ordinances may be administered by other departments within the city.)

Section 503.16; amend by adding "Exception," to read as follows:

Exception: Compliance with the Texas Accessibility Standards is not considered equivalent compliance for the purpose of enforcement of this code section.

Section 504.1.2; amend to read as follows:

504.1.2 Existing fire escapes. Existing fire escapes shall continue to be accepted as a component in the means of egress in *existing buildings* only. Existing fire escapes shall be permitted to be repaired or replaced.

(Reason: *To add clarity and help reduce confusion associated with the amendment preventing new fire escapes.*)

Section* 504.1.3; *delete entire section:

(Reason: *To generally require a higher level of egress protection.*)

Section 507.3 Flood hazard areas; delete this section:

(Reason: Flood hazard ordinances may be administered by other departments within the city.)

Section 701.3 Flood hazard areas; delete this section:

(Reason: Flood hazard ordinances may be administered by other departments within the city.)

Section 702.4; amend by adding paragraph 2 to "Exception," to read as follows:

Exceptions:

1. Operable windows where the bottom of the clear opening of the window opening is located more than 75 feet (22 860 mm) above the finished grade or other surface below, on the exterior of the room, space or building, and that are provided with window fall prevention devices that comply with ASTM F2006.
2. Operable windows with openings that are provided with window fall prevention devices that comply with ASTM F2090.

Section* 702.7*; amend to read as follows:

702.7 Materials and methods. All new work shall comply with the materials and methods requirements in the *International Building Code*, *International Energy Conservation Code*, *International Mechanical Code*, *National Electrical Code, International Fuel Gas Code,* and *International Plumbing Code*, as applicable, that specify material standards, detail of installation and connection, joints, penetrations, and continuity of any element, component, or system in the building.

(Reason: To provide a more complete list of potentially adopted codes.)

***Section 802.5.1;* amend to read as follows:**

802.5.1 Minimum requirement. Every portion of ~~a floor, such as a balcony or a loading dock,~~ open-sided walking surfaces, including *mezzanines*, *equipment platforms*, *aisles*, *stairs*, *ramps,* and landings that is more than 30 inches (762 mm) above the floor or grade below and is not provided with guards, or those in which the existing guards are judged to be in danger of collapsing, shall be provided with guards.

(Reason: To be consistent with Building Code requirements for guards and unsafe conditions.)

Section 803.1; amend by adding sentence to read as follows:

For the purpose of fire sprinkler protection and fire alarm requirements included in this section, the *work area* shall be extended to include at least the entire tenant space or spaces bounded by walls capable of resisting the passage of smoke containing the subject *work area*, and if the *work area* includes a corridor, hallway, or other exit access, then such corridor, hallway, or other exit access shall be protected in its entirety on that particular floor level.

(Reason: The intent is to avoid work area protection that would result in partial sprinkler or fire alarm protection. Partial sprinkler protection not delineated by walls would be a clear violation of NFPA 13 and would not allow the sprinkler to perform or function as intended. Also, partial fire alarm coverage is a clear violation of the Fire Code, NFPA 72, and ADA.)

Section 803.2.6; amend "Exception," to read as follows:

Exception: Supervision is not required where the Fire Code does not require such for new construction ~~for the following:~~

~~1.Underground gate valve with roadway boxes.~~
~~2. Halogenated extinguishing systems.~~
~~3.Carbon dioxide extinguishing systems.~~
~~4.Dry- and wet-chemical extinguishing systems.~~
~~5.Automatic sprinkler systems installed in accordance with NFPA 13R where a common supply main is used to supply both domestic and automatic sprinkler systems and a separate shutoff valve for the automatic sprinkler system is not provided.~~

(Reason: The published exceptions are over-reaching and will result in inconsistencies among supervised protection systems and cause confusion for first responders as well.)

Section 803.3; amend to read as follows:

803.3 Standpipes. Refer to Section 1103.6 of the Fire Code for retroactive standpipe requirements. {Delete rest of Section 803.3.}

(Reason: The Fire Code already requires standpipes in these buildings (greater than 50 ft.) retroactively in Section 1103.6. This new section would negate/lessen those retroactive provisions already contained in the Fire Code.)

Section 804.2; amend by deleting Exception 1.

Section 804.4.1.2; amend to read as follows:

804.4.1.2 Fire escapes required. For other than Group I-2, where more than one exit is required, an existing ~~or newly constructed~~ fire escape complying with section 804.4.1.2.1 shall be accepted as providing one of the required means of egress.

Section 804.4.1.2.1; amend to read as follows:

804.4.1.2.1 Fire escape access and details. [Remain unchanged.]

1. [Remain unchanged.]
2. Access to a ~~new~~ fire escape shall be through a door [remainder unchanged.]
3. {deleted.}
4. [Remain unchanged]
5. In all buildings of Group E occupancy, up to and including the 12th grade, buildings of Group I

occupancy, boarding ~~rooming~~ houses and childcare centers, ladders of any type are prohibited on fire escapes used as a required means of egress.

Section 804.6.2; amend to read as follows:

804.6.2 Transoms. In all buildings of Group B, E, I-1, I-2, R-1 and R-2 occupancies, [remainder unchanged].

(Reason: Transom windows were historically a common practice in school buildings and each jurisdiction should evaluate the impact on their stakeholders and their community with regards to section.)

Section **805.2; amend by *deleting Exception #1***

(Reason: NFPA 101 is not a commonly adopted code in the region and enforcement could be problematic.)

Section 904.1; add sentence to read as follows:

For the purpose of fire sprinkler protection and fire alarm requirements included in this section, the *work area* shall be extended to include at least the entire tenant space or spaces bounded by walls containing the subject *work area*, and if the *work area* includes a corridor, hallway, or other exit access, then such corridor, hallway, or other exit access shall be protected in its entirety on that particular floor level.

(Reason: The intent is to avoid work area protection that would result in partial sprinkler or fire alarm protection. Partial sprinkler protection not delineated by walls would be a clear violation of NFPA 13 and the Fire Code and would not allow the sprinkler system to perform or function as intended. Also, partial fire alarm coverage is a clear violation of the Fire Code, NFPA 72, and ADA.)

Section 904.1.1; amend to read as follows:

904.1.1 High-rise buildings. An automatic sprinkler system shall be provided in *work areas* of ~~where the~~ high-rise buildings. ~~has a sufficient municipal water supply for the design and installation of an automatic sprinkler system at the site~~.

(Reason: Level 3 alterations are affecting more than 50% of the existing high-rise building, and as such, sprinkler protection is more than justifiable, even when fire pumps, etc., are necessary. It is noted that the work area method is one of three different methods available to the designer/owner in the IEBC.)

Section 1011.2.1; amend to read as follows:

1011.2.1 Fire sprinkler system. Where a change in occupancy classification occurs or where there is a *change of occupancy* within a space where there is a different fire protection system threshold requirement in Chapter 9 of the *International Building Code* that requires an automatic fire sprinkler system to be provided based on the new occupancy in accordance with Chapter 9 of the *International Building Code*. The installation of the automatic sprinkler system shall be required within the area of the *change of occupancy* and areas of the building not separated horizontally and vertically from the change of occupancy by one of the following:

1. {Deleted.}
2. {Deleted.}
3. {Deleted.}
4. {Deleted.}
5. Fire barrier, as required by Section 707 of the IBC.
6. Fire wall, as required by Section 706 of the IBC.

Exceptions:

1. An automatic sprinkler system shall not be required in a one- or two-family dwelling constructed in accordance with the International Residential Code.
2. Automatic sprinkler system shall not be required in a townhouse constructed in accordance with the International Residential Code.
3. The townhouse shall be separated from adjoining units in accordance with Section R302.2 of the International Residential Code.

Section 1102.2.3; created to read as follows:

1102.2.3 Fire separations. Where fire separations are utilized to allow additions without exceeding the allowable area provisions of Chapter 5 of the IBC for either the existing building or the new addition, the decreased clear space where the two buildings adjoin shall be accounted for in such calculation relative to the allowable frontage increase.

Section 1103.3 Flood hazard areas; delete this section:

(Reason: Flood hazard ordinances may be administered by other departments within the city.)

Section 1201.4 Flood hazard areas; delete this section:

(Reason: Flood hazard ordinances may be administered by other departments within the city.)

Section 1301.3.2; amend to read as follows:

1301.3.2 Compliance with other codes. Buildings that are evaluated in accordance with this section shall comply with the *International Fire Code* and *International Property Maintenance Code*.

(Reason: NCTCOG does not currently review the IPMC for recommended amendments at this time.)

Section 1301.3.3 Compliance with flood hazard provisions; delete this section:

(Reason: Flood hazard ordinances may be administered by other departments within the city.)

Section 1402.6 Flood hazard areas; delete this section:

(Reason: Flood hazard ordinances may be administered by other departments within the city.)

Section 1509.1; amend to read as follows:

1509.1 When required. An *approved* water supply for fire protection, either temporary or permanent, shall be made available as soon as combustible material arrives on the site ~~on commencement of the vertical combustible construction, and on installation of a standpipe system in buildings under construction, in accordance with Sections 1509.1 through 1509.5~~. The water supply design and the timing of the water supply installation relative to building construction shall comply with the adopted Fire Code.

~~**Exception:** The fire code official is authorized to reduce the fire-flow requirements for isolated buildings or a group of buildings in rural areas or small communities where the development of full fire-flow requirements is impractical.~~

Sections 1509.2 through 1509.5; delete sections

END