ORDINANCE NO. 4044

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF CARROLLTON ADOPTING THE 2021 EDITION OF THE INTERNATIONAL BUILDING CODE WITH LOCAL AMENDMENTS THERETO; ADOPTING THE 2021 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE WITH LOCAL AMENDMENTS THERETO; ADOPTING THE 2021 EDITION OF THE INTERNATIONAL FIRE CODE WITH LOCAL AMENDMENTS THERETO; ADOPTING THE 2021 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE WITH LOCAL AMENDMENTS THERETO; ADOPTING THE 2021 EDITION OF THE INTERNATIONAL EXISTING BUILDING CODE, WITH LOCAL AMENDMENTS THERETO; ADOPTING THE 2021 EDITION OF THE INTERNATIONAL SWIMMING POOL AND SPA CODE WITH LOCAL AMENDMENTS THERETO; ADOPTING THE 2021 EDITION OF THE INTERNATIONAL PLUMBING CODE WITH LOCAL AMENDMENTS THERETO; ADOPTING THE 2021 EDITION OF THE INTERNATIONAL FUEL GAS CODE WITH LOCAL AMENDMENTS THERETO; ADOPTING THE 2021 EDITION OF THE INTERNATIONAL MECHANICAL CODE WITH LOCAL AMENDMENTS THERETO; ADOPTING THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE WITH LOCAL AMENDMENTS THERETO; PROVIDING SAVINGS, PENALTY, SEVERABILITY AND REPEALING CLAUSES; AND ESTABLISHING THE EFFECTIVE DATE OF FEBRUARY 1, 2022.

WHEREAS, the City Council, after determining all legal requirements of notice and hearing have been met, has further determined the following amendments to the construction codes would provide for and would be in the best interest to safeguard life, health, property and public welfare.

NOW, THERFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CARROLLTON, TEXAS THAT:

SECTION 1

The Code of Ordinances of the City of Carrollton, Texas is hereby amended by repealing Sections 150.090, 150.091, 150.120, 150.121, 150.130, 150.131, 150.060, 150.061, 150.062, 150.075, 150.076, 150.077 and 150.092 in their entirety and amending the following sections:

SECTION 2.

Section 150.010 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.010. THE 2021 EDITION OF THE INTERNATIONAL BUILDING CODE ADOPTED.

(a) The International Building Code, 2021 Edition, as published by the International Code Council, is hereby adopted, and designated as the building code of the City of Carrollton, and is made a part hereof, as amended.

(b) One (1) copy of the 2021 edition of the International Building Code, marked Exhibit "A", is incorporated herein by reference, and shall be filed in the office of the City Secretary for permanent record and inspection.

(c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said International Building Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former."

SECTION 3.

Section 150.011 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.011. AMENDMENTS.

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

101.1 Title. These regulations shall be known as the *Building Code* of the City of Carrollton, hereinafter referred to as "this code."

***Section 101.4; amend to read as follows:**

101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.8 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.

***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.

***Sections 103 and 103.1; amend to read as follows:**

SECTION 103
BUILDING INSPECTION

103.1 Creation of enforcement agency. The Building Inspection Division of the Development Services Department is hereby created and the official in charge thereof shall be known as the *building official. [Remainder unchanged]*

***Section 104.2.1; delete.**

***Section 104.10.1; delete.**

***Section 105.2; under sub-title entitled "Building" amend as follows:**

***Section 105.2, Item 1; delete.**

***Section 105.2, Item 2; amend to read as follows:**

2. Fences less than 20 feet in length.

Section 105.2, Item 10; delete.

Section 105.2, Item 11; delete.

Add Section 109.7 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. City 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.

Section 110.3.6; delete Exception.

****Section 110.3.12.1; delete.***

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

AMBULATORY CARE FACILITY. Buildings or portions thereof used to provide medical, surgical, psychiatric, nursing, or similar care on a less than 24-hour basis to ~~individuals~~ 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

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.

HIGH-RISE BUILDING. A building with an occupied floor located more than ~~75~~ 55 feet ~~(22 860 mm)~~ (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.

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

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

Section 303.1.3; amend to read as follows:

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

Section 304.1; add the following to the list of occupancies:

Fire stations
Police stations with detention facilities for 5 or less

Section 307.1.1; add the following sentence to Exception 4:

4. *[Text unchanged]* See also IFC Chapter 21, Dry Cleaning Plant provisions.

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

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

Section 403.3, Automatic Sprinkler System; delete Exception.

Section 403.3.2; amend to read as follows:

[F] 403.3.2 Water supply to required fire pumps. In buildings that are more than ~~420~~ 120 feet (36.5 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: *[Text unchanged]*

****Section 403.3.2; amend to read as follows:***

Section 404.10 Exit Stairways in an atrium. Where an atrium contains an ~~interior~~ exit access stairway all the following shall be met: *[Remainder unchanged]*

Section 406.3.3.1 Carport separation; add sentence to read as follows:

A fire separation is not required between a Group R-2 and U carport provided that the carport is entirely open on all sides and that the distance between the two is at least 10 feet (3048 mm).

****Section 423.5.1; 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~~ 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 the Group E occupancy.~~

Exceptions:

1. *[Text unchanged]*
2. *[Text unchanged]*
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.; add sentence to read as follows:***

503.1. General. *[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, except as allowed in Section 510.

*****Table 506.2; delete footnote i.***

*****Section 506.3.1; add sentence to read as follows:***

506.3.1 Minimum percentage of perimeter. *[Existing text to remain]*

In order to be considered as accessible, if not in direct contact with a street or fire lane, a minimum 10-foot-wide pathway meeting fire department access from the street or approved fire lane shall be provided.

******Section 708.4.2; add sentence to Exception 1 to read as follows:***

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

Exceptions:

1. *[Existing text to remain]* 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]

*****Section 718.3; amend 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.

*****Section 718.4; amend to read as follows:***

718.4 Draftstopping in attics. *[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 attic space.

*****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 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*.

***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*.

***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 903.2.4.2; 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 903.2.9.3; amend 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.

***Section 903.2.9.4 and 903.2.9.5; delete Exception to 903.2.9.4 and add 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 903.2.11.3 and add 903.2.11.7, 903.2.11.8, and 903.2.11.9 as follows:**

903.2.11.3 Buildings ~~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*, 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.

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

Exception: Open parking garages in compliance with Section 406.5 of the International Building Code where all of the following conditions apply:

1. The structure is freestanding.
2. The structure does not contain any mixed uses, accessory uses, storage rooms, electrical rooms, elevators or spaces used or occupied for anything other than motor vehicle parking.
3. The structure does not exceed 3 stories.
4. An approved fire apparatus access road is provided around the entire structure.

*****Section 903.3.1.1.1; amend to read as follows:***

903.3.1.1.1 Exempt Locations. When approved by the *fire code official*, automatic sprinklers shall not be required… *[text unchanged]*.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.
2. Any room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the *fire code 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. *[Delete]*
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]*

******Section 903.3.1.2; 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 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.

[Remaining text unchanged]

******Section 903.3.1.2.2; 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:~~ *[Delete the remainder of this section]*

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

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

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

***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.

***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.

***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.

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.

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.

****Section 905.3.9; add 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.

Section 905.4; amend Items 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.
   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 an ~~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 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.

****Section 905.8; amend 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.

****Section 906.1 Item 1; delete Exception 3.***

***** Section 907.1.4; add 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.

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.

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. 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]

******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 907.2.13, Exception 3; amend 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.

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

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

*****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.

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

*****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.

*****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 Sections 910.2.1, ~~and~~ 910.2.2, and 910.2.3.

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.

*****Section 910.2.3; add 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.

*****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.

***** Section 912.2.3; add 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.

******Section 913.2.1.1; add 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.

******Section 1006.2.1 amend Exception 3 to read as follows:***

1006.2.1 Egress based on occupant load and common path of egress travel distance.
[Existing text to remain]

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

*****Section 1009.8; add Exception 7 as follows:***

1009.8 Two-way communication.
[Existing text to remain]

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.

*****Section 1010.2.5; amend Exceptions 3 and 4 as follows:***

1010.2.5 Bolt locks.
[Existing text to remain]

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]*

*****Section 1020.2; add Exception 6 as follows:***

1020.2 Construction.
[Existing text to remain]

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.

*****Section 1030.1.1.1; delete.***

*****Section 1101.1; add Exception as follows:***

1101.1 Scope.
[Existing text to remain]

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 1612; delete.*

***Section 1809.5.1; delete.*

***Add Section 2702.5 to read as follows:*

2702.5 Designated Critical Operations Areas (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; add 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.

**Section 2902.1; add a second paragraph to read as follows:*

2902.1 Minimum number of fixtures.
[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*.

**Table 2902.1; add 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.

**Section 2902.1; add 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 Environmental Services department.

**Section 2902.2; delete Exception 6.*

**Section 3002.1; add Exceptions as follows:*

3002.1 Hoistway enclosure protection.
[Existing text to remain]

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.

******Section 3005.4; delete Exceptions and add two new Exceptions to read as follows:***

3005.4 Machine rooms, control rooms, machinery spaces and control spaces.
[Existing text to remain]

Exceptions:

1. Elevator machine rooms, control rooms, machinery spaces and control spaces completely located within atriums shall not require enclosure protection.
2. 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.

******Section 3005.5.1; add 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.

*****Add Section 3005.7 to read as follows:***

3005.7 Storage. Storage shall not be allowed within the elevator machine room, control room, machinery spaces and or control spaces. Provide approved signage at each entry to the above listed locations stating: "No Storage Allowed.

*****Section 3006.2, Item 5; amend 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 (16 764 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.

***Section 3007.3; amend to read as follows:**

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

***Section 3114; delete.**

***END"**

SECTION 4.

"Section 150.015 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

SECTION § 150.015. THE 2021 EDITION OF THE INTERNATIONAL RESIDENTIAL CODE ADOPTED.

(a) The International Residential Code, 2021 Edition, as published by the International Code Council, is hereby adopted, and designated as the residential code of the City of Carrollton, and is made a part hereof, as amended.

(b) One (1) copy of the 2021 edition of the International Residential Code, marked Exhibit "B", is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.

(c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said International Residential Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former."

SECTION 5.

Section 150.016 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.016. AMENDMENTS.

*****Section R101.1; amend to read as follows:***

R101.1 Title. These regulations shall be known as the *Residential Code for One- and Two-family Dwellings* of the City of Carrollton, and shall be cited as such and will be referred to herein as "this code."

*****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.

*****Sections R103 and R103.1; amend to read as follows:***

SECTION 103
BUILDING INSPECTION

R103.1 Creation of enforcement agency. The Building Inspection Division of the Development Services Department is hereby created and the official in charge thereof shall be known as the *building official*. *[Remainder Unchanged]*

Section R104.10.; delete.

****Section R105.2, Item 1; amend to read as follows:***

1. Other than *storm shelters*, one-*story* detached *accessory structures*, provided that the floor area does not exceed 120 square feet (11.15 m^2).

****Section 105.2, Item 2; amend to read as follows:***

2. Fences less than 20 feet in length.

****Section 105.2, Item 5; amend to read as follows:***

5. Sidewalks not more than 30 inches (762 mm) above adjacent grade and not over any basement below.

****Section R105.3.1.1; delete.***

****Section R106.1.4; delete.***

****Section R110; delete.***

*****Section R202; amend definition of "Townhouse Unit" to read as follows:***

TOWNHOUSE UNIT. A single-family dwelling unit <u>separated by property lines</u> in a townhouse that extends from foundation to roof and that has a yard or public way on not less than two sides.

*****Table R301.2 (1); fill in as follows:***

GROUND SNOW LOAD	**WIND DESIGN**				**SEISMIC DESIGN CATEGORY[f]**	**SUBJECT TO DAMAGE FROM**			**WINTER DESIGN TEMP[e]**	**ICE BARRIER UNDERLAYMENT[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 psf	115 (3-sec gust) / 76 fastest mile	No	No	No	A	Moderate	6”	Very Heavy	22°F	No	Local Code	150	64.9°F

Delete remainder of table Manual J Design Criteria and footnote N

****Section R302.1; add Exception 6 to read as follows:***

R302.1 Exterior walls.
[Existing text to remain]

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

*****Section R302.2.6; delete Exception 6.***

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

R302.3 Two-family dwellings.
[Existing text to remain]

3. Two-family dwelling units that are also divided by a property line through the structure shall be separated as required for townhouses.

****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.~~

****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.

*****Section R307.3; add to read as follows:***

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

*****Section R307.4; add to read as follows and insert Figure R307.4:***

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

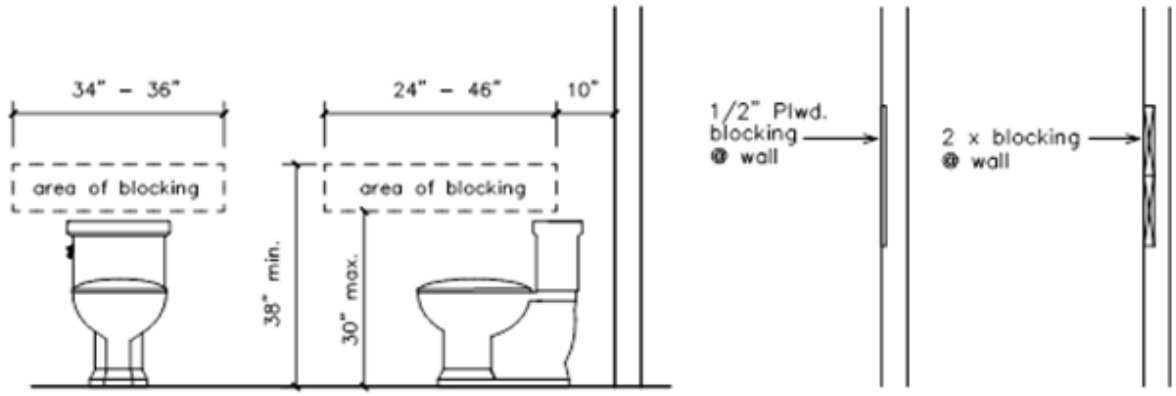


FIGURE R307.4 BLOCKING AT WATER CLOSET

***Section R313.2 and R313.2.1; delete.*

****Section R315.2.2; amend to read as follows:*

R315.2.2 Alterations, repairs and additions.
[Existing text to remain]

Exceptions:
1. *[Existing text to remain]*
2. Installation, alteration or repairs <u>of all electrically powered mechanical systems or plumbing appliances.</u>
3. *[Delete]*

***Section R322; delete.*

****Section R327.1.1; add to read as follows:*

<u>**R327.1.1 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.</u>

> <u>**Exception:** A ratio of less than 1:1 may be *approved* where supported by sealed engineered design drawings of the proposed new structure.</u>

****Section R401.2; amend to read as follows:**

R401.2. Requirements. *[Existing text unchanged]*

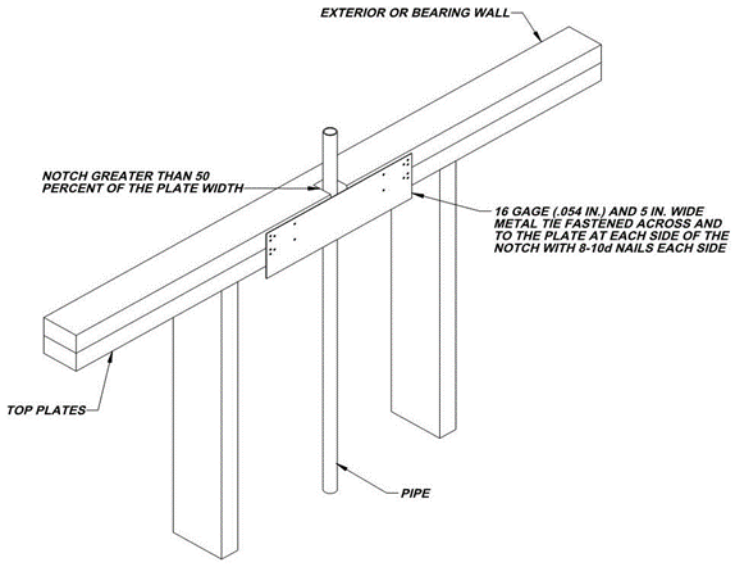
<u>Every foundation and/or footing, or any size addition to an existing post-tension foundation regulated by this code shall be designed and sealed by a Texas-registered engineer.</u>

****Section R602.6.1; amend to read as follows:*

R602.6.1 Drilling and notching of top plate. When 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~~ <u>5 inches (127 mm)</u> 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) nails having a minimum

length of 1 ½ inches (38 mm) at each side or equivalent. Fasteners shall be offset to prevent splitting of the top plate material. The metal tie must extend not less than 6 inches past the opening. See Figure R602.6.1. *[Remainder unchanged]*

*****Figure R602.6.1; delete the figure and insert the following figure:***



*****Add Section R703.8.4.1.2 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.

*****Section R902.1; amend 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 *jurisdictions* designated by law as requiring their use or where the edge of the roof is less than 3 feet (914 mm) from a *lot line*~~. *[Remainder unchanged]*

Exceptions:

1. *[Existing text unchanged]*
2. *[Existing text unchanged]*
3. *[Existing text unchanged]*
4. *[Existing 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 120 square feet (11.15 m^2).

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

***Section M1305.1.2; amend to read as follows:**

M1305.1.2 Appliances in attics. *[Existing text to remain]* 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]*

***Section M1411.3; amend to read as follows:**

M1411.3 Condensate disposal. Condensate from all cooling coils 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]*

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

M1411.3.1 Auxiliary and secondary drain systems.
[Existing text to remain]

1. *[Existing text unchanged]*
2. *[Existing text unchanged]*
3. *[Existing text to remain]* A water level detection device may be installed only with prior approval of the *building official*.
4. *[Existing text to remain]* A water level detection device may be installed only with prior approval of the *building official*.

***Section M1411.3.1.1; add text to read as follows:**

M1411.3.1.1 Water-level monitoring devices. *[Existing text unchanged]* A water level detection device may be installed only with prior approval of the *building official.*

***Section M1503.6; amend 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.

***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.

***Section G2408.3 (305.5); delete.**

***Section G2415.2 (404.2); add a second paragraph 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"

***Section G2415.12 (404.12); 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~~.

*** Section G2415.12.1 (404.12.1); delete.**

***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 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.

***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.~~

***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 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.

***Section G2417.4.2; change 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.

***Section G2420.1 (406.1); add 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*.

***Section G2420.5.1 (409.5.1); add text to read as follows:**

G2420.5.1 (409.5.1) Located within the same room. *[Existing text to remain]* A secondary shutoff valve must be installed within 3 feet (914 mm) of the firebox if appliance shutoff is located in the firebox.

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

G2421.1 (410.1) Pressure regulators. *[Existing text to remain]* 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.

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

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*.

Section P2603; add 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 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.

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 a minimum of 12 inches (304 mm) below finished grade at the point of septic tank connection. Building sewers shall be a minimum of 12 inches (304 mm) below grade.

****Section P2604.2.1; add 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.

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~~.

***Section P2801.6.1; amend to read as follows:**

Section P2801.6.1 Pan size and drain. The pan shall be not less than 11/2 inches (38 mm) 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). 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. *[Remainder unchanged]*

***Section P2804.6.1; amend 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. *[Existing text to remain]*

2. Discharge through an air gap ~~located in the same room as the water heater~~.

3. *[Existing text to remain]*

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]

***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, 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.

***Section P3003.9; amend to read as follows:**

P3003.9.2 Solvent cementing. Joint surfaces shall be clean and free from moisture. A purple primer that conforms to ASTM F 656 shall be applied. Solvent cement not purple in color and conforming

to ASTM D 2564, CSA B137.3, 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 D 2855. 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.~~

***Section P3111; delete.**

***Section P3112.2 Vent Connection; delete and replace with the following:**

P3112.2 Installation. 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.

***END"**

SECTION 6.

Section 150.020 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.020. THE 2021 EDITION OF THE INTERNATIONAL FIRE CODE ADOPTED.

(a) The International Fire Code, 2021 Edition, as published by the International Code Council, is hereby adopted, and designated as the fire code of the City of Carrollton, and is made a part hereof, as amended.

(b) One (1) copy of the 2021 edition of the International Fire Code, marked Exhibit "C", is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.

(c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said International Fire Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former."

SECTION 7.

Section 150.021 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.021. AMENDMENTS.

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

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

*****Sections 103 and 103.1; amend to read as follows:***

SECTION 103
FIRE PREVENTION

103.1 Creation of agency. The Fire Prevention Division of the Fire Department is hereby created and the official in charge thereof shall be known as the *fire code official*. *[Remainder unchanged]*

*****Section 102.1; amend #3 to read as follows:***

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

*****Section 105.3.3; amend 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.

***Section 105.6.25; add 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 for 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 107.3; delete.*

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

****[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

****[B] ATRIUM.** An opening connecting ~~two~~ three or more stories… *[remaining text unchanged]*

****[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.

****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.

****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]*

****HIGH-PILED COMBUSTIBLE STORAGE.** *[Existing text to remain]* Any building classified as a group S Occupancy or Speculative Building exceeding 6,000 sq. ft. that has a clear height in excess of 14 feet, making it possible to be used for storage in excess of 12 feet, shall be considered to be high-piled storage. When a specific product cannot be identified (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 ~~75~~ 55 feet (~~22 860~~ 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.

****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.

****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.

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

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

The following are not considered an upgrade or replacement:

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

****Section 307.1.1; amend 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]*

****Section 307.2; amend to read as follows:***

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

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

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

****Section 307.3; amend 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.

******Section 307.4; amend 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]*

******Section 307.4.1; amend to read as follows:***

307.4.1 Bonfires. A bonfire shall not be conducted within 50 feet (15 240 mm), or greater distance as determined by the *fire code official*, of a structure or combustible material unless the fire is contained in a barbecue pit. Conditions that could cause a fire to spread within the required setback ~~50 feet (15 240 mm)~~ of a structure shall be eliminated prior to ignition.

*****Section 307.4.3; add Exception 2 to read as follows:***

Exceptions:

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.

*****Section 307.4.4; add 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 Residential Code* or *International Building Code*.

*****Section 307.4.5; add to read as follows:***

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

*****Section 307.5; amend to read as follows:***

307.5 Attendance. *Open burning*, trench burns, bonfires, *recreational fires*, and use of portable outdoor fireplaces… *[Remainder unchanged]*

*****Section 308.1.4; amend to read as follows:***

308.1.4 Open-flame Cooking Devices. ~~Charcoal burners and other~~ Open-flame cooking devices, charcoal grills and other similar devices used for cooking shall not be ~~operated~~ located or used on combustible balconies, decks, or within 10 feet (3048 mm) of combustible construction.

Exceptions:

1. One- and two-family dwellings where 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). All LP-gas containers shall be stored outside, as per Chapter 61.
2. Where buildings, balconies and decks are protected by an *approved automatic sprinkler system*, and LP-gas containers are limited to a water capacity not greater than 50 pounds (22.68 kg) [nominal 20-pound (9.08 kg) LP-gas capacity], with an aggregate LP-gas capacity not to exceed 40 lbs. (2 containers). All LP-gas containers shall be stored outside, as per Chapter 61.
3. LP-gas cooking devices having LP-gas container with a water capacity not greater than 2-1/2 pounds [nominal 1 pound (0.454 kg) LP-gas capacity].

Section 308.1.6.2, Exception 3; amend to read as follows:

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

Section 308.1.6.3; amend 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*.

Section 311.5; amend to read as follows:

311.5 Placards. The *fire code official* is authorized to require marking of any vacant or abandoned buildings or structures determined to be unsafe pursuant to Section 114 of this code relating to structural or interior hazards ~~shall be marked~~ as required by Section 311.5.1 through 311.5.5.

Section 403.4; amend to read as follows:

403.4 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 403.4.1 through 403.4.3.

Section 404.2.2; add Item 4.10 to read as follows:

4.10. Fire extinguishing system controls.

****Section 405.5; amend to read as follows:***

405.5 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:

1. *[No change]*

2. *[No change]*
3. 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.

***Section 501.4; amend to read as follows:**

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

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

Except for one- or two-family *dwellings*, the path of measurement shall be along a minimum of a 10 feet (3048 mm) wide unobstructed pathway around the external walls of the structure.

***Section 503.2.1; amend 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)~~ 14 feet (4267 mm).

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

***Section 503.2.2; amend to read as follows:**

503.2.2 Authority. The *fire code official* shall have the authority to require ~~or permit modifications to the required~~ 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.

****Section 503.2.3; amend to read as follows:**

503.2.3 Surface. Fire apparatus access roads shall be designed and maintained to support imposed loads of 85,000 Lbs. for fire apparatus and shall be surfaced so as to provide all-weather driving capabilities.

***Section 503.3; amend 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.

***Section 503.4; amend to read as follows:**

503.4 Obstruction of Fire Apparatus Access Roads. Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. The minimum widths and clearances established in Section 503.2.1 and 503.2.2 and any area marked as a fire lane as described in Section 503.3 shall be maintained at all times.

***Section 505.1; amend 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 1/2 inch (12.7 mm). Where required by the fire code official, address numbers shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road, buildings do not immediately front a street, and/or the building cannot be viewed from the public way, a monument, pole or other sign with approved 6 inch (152.4 mm) height building numerals or addresses and 4 inch (101.6 mm) height suite/apartment numerals of a color contrasting with the background of the building or other approved means shall be used to identify the structure. Numerals or addresses shall be posted on a minimum 20 inch (508 mm) by 30 inch (762 mm) background on border. Address identification shall be maintained.

Exception: R-3 Single Family occupancies shall have approved numerals of a minimum 3 ½ inches (88.9 mm) in height and a color contrasting with the background clearly visible and legible from the street fronting the property and rear alleyway where such alleyway exists.

***Section 507.4; amend 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.

*****Section 507.5.4; amend 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.

*****Section 509.1.2; add 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.

******Section 605.4 through 605.4.2.2; amend 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, above-ground tanks. Where connected to a fuel-oil piping system, the maximum amount of fuel oil storage allowed outside above ground without additional protection shall be 660 gallons (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 ~~or~~ 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 (2498 L) in unsprinklered buildings, where stored in a tank complying with UL 80, UL 142 or UL 2085, and also listed as a double-wall/secondary containment tank for Class II liquids.

2. 1,320 gallons (4996 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. 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. 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.

Section 807.5.2.2 and 807.5.2.3; amend 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.

Section 807.5.5.2 and 807.5.5.3; amend 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.

Section 901.6.1.1; add 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*.

Section 901.6.4; add 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.

Section 901.7; amend 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… *[Remainder unchanged]*

***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*.

***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 903.2.4.2; 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 903.2.9.3; amend 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.

***Section 903.2.9.4 and 903.2.9.5; delete Exception to 903.2.9.4 and add 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 903.2.11.3 and add 903.2.11.7, 903.2.11.8, and 903.2.11.9 as follows:**

903.2.11.3 Buildings ~~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 1511 of the *International Building Code*, 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.

~~**Exception:**~~
~~1. 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 6,000 sq. ft. An automatic sprinkler system shall be installed throughout all buildings with a building area 6,000 sq. ft. or greater and in all existing buildings that are enlarged to be 6,000 sq. ft. or greater. For the purpose of this provision, fire walls shall not define separate buildings.

Exception: Open parking garages in compliance with Section 406.5 of the *International Building Code where all of the following conditions apply:*

a. The structure is freestanding.
b. The structure does not contain any mixed uses, accessory uses, storage rooms, electrical rooms, elevators or spaces used or occupied for anything other than motor vehicle parking.
c. The structure does not exceed 3 stories.
d. An *approved* fire apparatus access road is provided around the entire structure.

*****Section 903.3.1.1.1; amend 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, where 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. *[Delete]*
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]*

******Section 903.3.1.2; 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 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.

[Remaining text unchanged]

******Section 903.3.1.2.2; 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:~~ *[Delete the remainder of this section]*

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

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

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

***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.

***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.

***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.

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.

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.

****Section 905.3.9; add 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.

Section 905.4; amend Items 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.
   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 an ~~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 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.

****Section 905.8; amend 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.

****Section 906.1 Item 1; delete Exception 3.***

***** Section 907.1.4; add 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.

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:

3. Cause illumination of the *means of egress* with light of not less than 1 foot-candle (11 lux) at the walking surface level, and;
4. Stop any conflicting or confusing sounds and visual distractions.

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. 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:

2. *[No change]*

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 1/2 or less years of age, see Section 907.2.6.)
[No change to remainder of exceptions]

******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 907.2.13, Exception 3; amend to read as follows:***

4. 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.

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

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

*****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.

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

*****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.

*****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 Sections 910.2.1, ~~and~~ 910.2.2, and 910.2.3.

Exceptions:

4. Frozen food warehouses used solely for storage of Class I and II commodities where protected by an *approved automatic sprinkler system*.
5. 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.
6. 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.

*****Section 910.2.3; add to read as follows:***

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

4. 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.

5. 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.

*****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.

***** Section 912.2.3; add 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.

******Section 913.2.1.1; add 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.

***Section 914.3.1.2; amend to read as follows:**

914.3.1.2 Water Supply to required Fire Pumps. In all buildings that are more than ~~420~~ 120 feet (~~128~~ 36.6 m) in *building height*, ~~and buildings of Type IVA and IVB construction that are more than 120 feet (36.6 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]*

****Section 1006.2.1 amend Exception 3 to read as follows:**

1006.2.1 Egress based on occupant load and common path of egress travel distance.
[Existing text to remain]

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

***Section 1009.8; add Exception 7 as follows:**

1009.8 Two-way communication.
[Existing text to remain]

8. 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.

***Section 1010.2.5; amend Exceptions 3 and 4 as follows:**

1010.2.5 Bolt locks.
[Existing text to remain]

6. 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]*
7. Where a pair of doors serves a Group A, B, F, M or S occupancy… *[Remainder unchanged]*

***Section 1020.2; add Exception 6 as follows:**

1020.2 Construction.
[Existing text to remain]

7. 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.

***Section 1030.1.1.1; delete.**

***Section 1032.2; amend to read as follows:**

1032.2 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.

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

Provide emergency signage as required by Section 604.4.

***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*.

***Section 1103.5.6; add to read as follows:**

1103.5.6 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.

****Section 1103.7.7; add 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.

****Section 1203; amend and add to read as follows:**

***1203.1** *[No change]*

1203.1.1 *[No change]*

1203.1.2 *[No change]*

1203.1.3 Installation. 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 change]*

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 907.2.20 and 914.2
Group A Occupancies, Sections 907.2.1 and 907.5.2.2
Special Amusement Areas, Section 907.2.12 and 914.7
High-rise Buildings, Section 907.2.13 and 914.3
Atriums, Section 907.2.14 and 914.4
Deep Underground Buildings, Section 907.2.19 and 914.5

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
Special Amusement Areas (as applicable to Group A's), *International Building Code*, Section 411
Smoke Protected Seating, Section 1030.6.2

1203.2.19 *[No change]*

1203.2.20 Covered and Open Mall Buildings. Emergency power shall be provided in accordance with Section 907.2.20 and 914.2.

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 909.20.7.2.

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 504.11, 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]*

*****Section 2304.1; amend 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.

***Section 2401.2; delete.**

***Section 3103.3.1; delete.**

***Table 3206.2, footnote h; amend 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; 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.

****Section 3311.1; amend to read as follows:**

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~~ 50 feet (~~30 480~~ 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 which construction has progressed beyond 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 5601.1.3; amend 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, the storage and handling of fireworks as allowed in Section 5604 and 5608.
2. *[Delete]*
3. The use of fireworks for *approved* fireworks displays as allowed in Section 5608.
4. *[Delete]*

***Section 5703.6; add sentence to end of paragraph to read as follows:**

An *approved* method of secondary containment shall be provided for underground tank and piping systems.

***Section 5704.2.11.4; amend 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.

***Section 5704.2.11.4.2; amend 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.

***Section 5704.2.11.4.3; add 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.

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

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

***Section 6103.2.1.8; add 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.

***Section 6104.2; add Exception 2 to read as follows:**

Exceptions:

1. *[Existing text to remain]*

2. Except as permitted in Sections 308 and 6104.3.3, LP-gas containers are not permitted in residential areas.

***Section 6104.3.3; add 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.

***Section 6107.4; amend 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.

***Section 6109.13; delete Exception.*

END"

SECTION 8.

Section 150.025 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.025. THE 2021 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE ADOPTED.

(a) The International Energy Conservation Code, 2021 Edition, as published by the International Code Council, is hereby adopted, and designated as the energy conservation code of the City of Carrollton, and is made a part hereof, as amended.

(b) One (1) copy of the 2021 edition of the International Energy Conservation Code, marked Exhibit "D", is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.

(c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said International Energy Conservation Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former."

SECTION 9.

Section 150.026 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.026. AMENDMENTS.

*****Section C101.1; amend to read as follows:***

C101.1 Title. These regulations shall be known as the *Energy Conservation Code* of the City of Carrollton and shall be cited as such. It is referred to herein as "this code."

*****Add Section C102.1.2 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.

******Section C402.5.2; amend to read as follows:***

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/ft2 (1.5 Us m2) 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 R101.1; amend to read as follows:***

R101.1 Title. These regulations shall be known as the *Energy Conservation Code* of the City of Carrollton and shall be cited as such. It is referred to herein as "this code."

*****Add Section R102.1.2 (N1101.4.1) to read as follows:***

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.

******Section R105.2.1 through R105.2.6; amend and re-number to read as follows:***

R105.2.1 Footing and foundation inspection. Inspections associated with footings and foundations shall verify compliance with the code as to R-value, location, thickness, depth of burial and protection of insulation as required by the code and approved plans and specifications.

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 instillation; fenestration properties such as U-factor and SHGC and proper instillation;~~ air leakage controls as required by the code~~;~~ and approved plans and specifications.

R105.2.3 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.

~~**R105.2.3**~~ **R105.2.4 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.

~~**R105.2.4**~~ **R105.2.5 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.

~~**R105.2.5**~~ **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; add definitions to read as follows:***

DYNAMIC GLAZING. Any fenestration product that has the fully reversible ability to change it performance properties, including *U*-factor, solar heat gain coefficient (SHGC), or visible transmittance (VT).

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.

******Table R402.1.2; amend to read as follows:***

TABLE R402.1.2 MAXIMUM ASSEMBLY *U*-FACTORS[a] AND FENESTRATION REQUIREMENTS

CLIMATE ZONE	FENESTRATION *U*-FACTOR[f]	CEILING *U*-FACTOR
2	0.40	~~0.26~~ 0.29
3	~~0.30~~ 0.32	~~0.26~~ 0.29

******Table R402.1.3; amend to read as follows:***

TABLE R402.1.3 INSULATION MINIMUM *R*-VALUES AND FENESTRATION REQUIREMENTS BY COMPONENT[a]

CLIMATE ZONE	FENESTRATION *U*-FACTOR[b,i]	CEILING *R*-VALUE	WOOD FRAME WALL *R*-VALUE	SLAB *R*-VALUE & DEPTH
2	0.40	~~49~~ 42	13 or 0 + 10ci	0
3	~~0.30~~ 0.32	~~49~~ 42	~~20~~19 or 13+~~5~~3ci or 0+15ci	~~10ci, 2 ft~~ 0

******Add Section R402.4.1.4 to read as follows:***

R402.4.1.4 Sampling options for R2 multifamily dwelling units. For buildings with eight or more testing units that must be tested as required by R402.1.2 or R402.1.3, 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.

******Add 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.

******Add 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 R405.2; amend to read as follows:***

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 Expenditures reports. Code officials shall be permitted to require time-of-use pricing in energy cost calculations.

   Exception: The energy use 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.

******Section R401.2.5; delete.***

****** Section R402.4.6; amend to read as follows:***

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 R404.2; delete.***

*****Table R406.5 (N1106.4); amend to read as follows:***

TABLE R406.5 *(N1106.5)*[1]
MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
2	~~52~~ **63**
3	~~52~~ **63**

[1] This table is effective until August 31, 2022.

TABLE R406.5 *(N1106.5)*[2]
MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
2	~~52~~ **59**
3	~~52~~ **59**

[2] This table is effective from September 1, 2022 until August 31, 2025.

TABLE R406.5 *(N1106.5)*[3]
MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
2	~~52~~ **57**
3	~~52~~ **57**

[3] This table is effective from September 1, 2025 until August 31, 2028.

TABLE R406.5 *(N1106.5)*[4]
MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
2	~~52~~ **55**
3	~~52~~ **55**

[4] This table is effective on or after September 1, 2028.

******Section R408; delete.***

END"

SECTION 10.

Section 150.030 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.030. THE 2021 EDITION OF THE INTERNATIONAL EXISTING BUILDING CODE ADOPTED.

(a) The International Existing Building Code, 2021 Edition, as published by the International Code Council, is hereby adopted, and designated as the existing building code of the City of Carrollton, and is made a part hereof, as amended.

(b) One (1) copy of the 2021 edition of the International Existing Building Code, marked Exhibit "E", is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.

(c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said International Existing Building Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former."

SECTION 11.

Section 150.031 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

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

101.1 Title. These regulations shall be known as the *Existing Building Code* of the City of Carrollton, hereinafter referred to as "this code."

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. *[Remainder unchanged]*

Sections 103 and 103.1; amend to read as follows:

SECTION 103
BUILDING INSPECTION

103.1 Creation of agency. The Building Inspection Division of the Development Services Department is hereby created and the official in charge thereof shall be known as the *building official*. *[Remainder unchanged]*

Section 110.2, Item 11; delete.

****Section 202; amend definitions to read as follows:***

EXISTING BUILDING. A building, 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 ~~erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued~~.

EXISTING STRUCTURE. A building, 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 ~~erected prior to the date of adoption of the appropriate code, or one for which a legal building permit has been issued~~.

******Section 306.1; add 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 $50K, 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; add Exception to read as follows:***

Exception: Projects subject to the Texas Accessibility Standards as adopted by the Texas Department of Licensing and Regulation are exempt from this section. Projects with a valuation of less than $50,000.00 (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 306.5.1; add 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:

3. Not fewer than one accessible building entrance.
4. Not fewer than one accessible route from an accessible building entrance to *primary function* areas.
5. Signage complying with Section 1111 of the *International Building Code*.
6. Accessible parking, where parking is being provided.
7. Not fewer than one accessible passenger loading zone, where loading zones are provided.
8. Not fewer than one accessible route connecting accessible parking and accessible passenger loading zones to an accessible entrance.
9. 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.

***Section 401.3; delete.**

***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.

***Section 502.3; delete.**

***Section 503.2; delete.**

****Section 503.16; add 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.

***Section 504.1.3; delete.**

***Section 507.3; delete.**

***Section 701.3; delete.**

****Section 702.4; add Exception 2 to read as follows:**

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, 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.

***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.

***Section 803.1; 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 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.

***Section 803.2.6; amend Exception to read as follows:**

Exception: Supervision is not required where the *International 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.~~

***Section 803.3; amend to read as follows:**

803.3 Standpipes. Refer to Section 1103.6 of the *International Fire Code* for retroactive standpipe requirements. *[Delete remainder]*

***Section 804.2; delete 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 805.3.1.2.1 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. Fire escapes shall comply with all of the following requirements:

1. *[Remain unchanged]*
2. Access to a ~~new~~ fire escape shall be through a door… *[Remainder unchanged]*
3. *[Delete]*
4. *[Remain unchanged]*
5. In all buildings of Group E occupancy up to and including the 12th grade, buildings of Group I occupancy, ~~rooming~~ boarding 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]*

***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.

***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~~.

****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. Nonrated permanent partition and horizontal assemblies.~~
~~2. Fire partition.~~
~~3. Smoke partition.~~
~~4. Smoke barrier.~~
5. Fire barrier, as required by Section 707 of the *International Building Code*.
6. Fire wall, as required by Section 706 of the *International Building Code*.

Exceptions: *[Remain unchanged]*

****Section 1102.2.1; add to read as follows:**

1102.2.1 Fire Separations. Where fire separations are utilized to allow additions without exceeding the allowable area provisions of Chapter 5 of the *International Building Code* 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; delete.**

***Section 1201.4; delete.**

***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*~~.

***Section 1301.3.3; delete.**

***Section 1402.6; delete.**

****Section 1509; amend Section 1509.1 to read as follows and delete Section 1509.2 through 1509.5:***

1509.1 When required. An *approved* water supply for fire protection, either temporary or permanent, shall be made available as soon as combustible ~~building~~ material arrives on the site. The water supply design and the timing of the water supply installation relative to building construction shall comply with the *International Fire Code*. *[Remainder deleted]*

END"

SECTION 12.

Section 150.035 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.035. THE 2021 EDITION OF THE INTERNATIONAL SWIMMING POOL AND SPA CODE ADOPTED.

(a) The International Swimming Pool and Spa Code, 2021 Edition, as published by the International Code Council, is hereby adopted, and designated as the swimming pool and spa code of the City of Carrollton, and is made a part hereof, as amended.

(b) One (1) copy of the 2021 edition of the International Swimming Pool and Spa Code, marked Exhibit "F", is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.

(c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said International Swimming Pool and Spa Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former."

SECTION 13.

Section 150.036 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.036. AMENDMENTS.

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

101.1 Title. These regulations shall be known as the Swimming Pool and Spa Code of the City of Carrollton, hereinafter referred to as "this code."

*****Section 102.9; amend to read as follows:***

Section 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), provides the scoping and technical requirements for accessibility for Swimming Pools, 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 TDLR, shall be deemed to be in compliance with the requirements of this Chapter.

Sections 103 and 103.1; amend to read as follows:

SECTION 103
BUILDING INSPECTION

103.1 Creation of agency. The Building Inspection Division of the Development Services Department is hereby created and the official in charge thereof shall be known as the *building official*. *[Remainder unchanged]*

****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, may be punishable for each day of the violation set forth by the *authority having jurisdiction.* ~~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 a fine and imprisonment. Each day that a violation continues after due notice has been served shall be deemed a separate offense.~~

****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 305.2.7.1; add to read as follows:***

305.2.7.1 Chain link fencing prohibited. Chain link fencing is not permitted as a barrier in public pools built after January 1, 1994.

****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 or windows provide direct access to the pool or spa through that wall, one of the following shall be required: *[Remainder unchanged]*

****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 a minimum of eighteen (18) inches, a barrier is not required between the natural body of water shoreline and the pool or spa.

Section 307.1.4; 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 307.2.2.2; add 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 ratio of less than 1:1 may be *approved* where supported by sealed engineered design drawings of the proposed new structure.

Section 310; amend to read as follows:

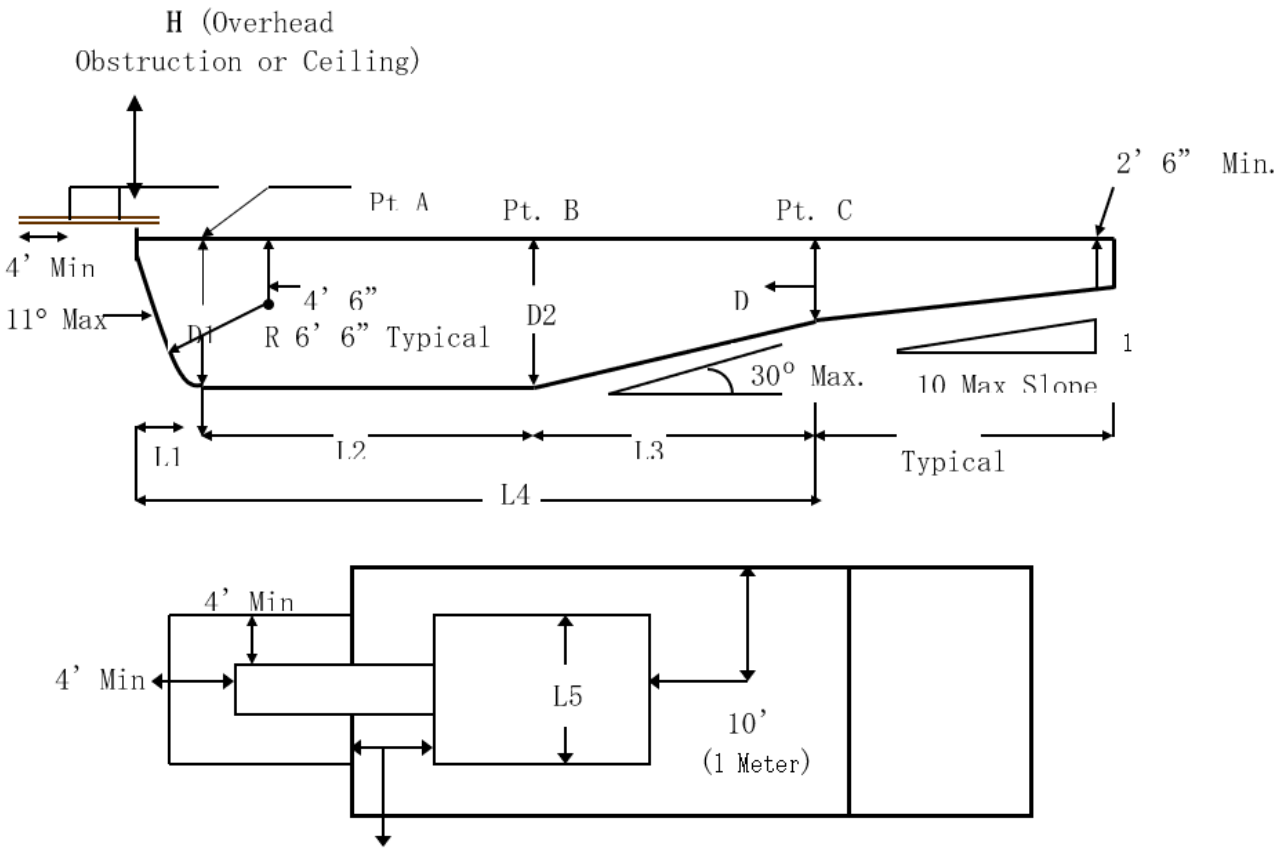
310.1 General. Suction entrapment avoidance for pools and spas shall be provided in accordance with APSP 7 (ANSI/PHTA/ICC 7) or for public swimming pools in accordance with State of Texas Rules for Public Swimming Pools and Spas, Title 25 TAC Chapter 265 Subchapter L, Rule §265.190. *[Remainder unchanged]*

Section 402.12; amend to read as follows:

402.12 Water envelopes. The minimum diving water envelopes shall be in accordance with ~~Table 402.12~~ Texas Department of State Health Services, Administrative Code Title 25, Chapter 265, Section 186 (e) and Figure: 25 TAC 256.186 (e) (6). *[Delete Table 402.12 and Figure 402.12]*

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 411.2.1; amend to read as follows:**

411.2.1 Tread dimensions and area. Treads shall have a minimum unobstructed horizontal depth (i.e., horizontal run) of 12 inches and a minimum width of 20 inches. ~~not be less than 24 inches (607mm) at the leading edge. Treads shall have an unobstructed surface area of not less than 240 square inches (154838mm2) and an unobstructed horizontal depth of not less than10 inches (254 mm) at the center line.~~

***Section 411.2.2; amend to read as follows:**

411.2.2 Risers. Risers for steps shall have a maximum uniform height of 10 inches, with the bottom riser height allowed to taper to zero ~~except for the bottom riser, shall have a uniform height of not greater than 12 inches (305 mm) measured at the center line. The bottom riser height is allowed to vary to the floor.~~

***Section 411.5.1, Item 4; amend to read as follows:**

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 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, Item 5; amend to read as follows:**

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.

***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"**

SECTION 14.

Section 150.040 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.040. THE 2021 EDITION OF THE INTERNATIONAL PLUMBING CODE ADOPTED.

(a) The International Plumbing Code, 2021 Edition, as published by the International Code Council, is hereby adopted, and designated as the plumbing code of the City of Carrollton, and is made a part hereof, as amended.

(b) One (1) copy of the 2021 edition of the International Plumbing Code, marked Exhibit "G", is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.

(c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said International Plumbing Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former."

SECTION 15.

Section 150.041 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.041. AMENDMENTS.

******Table of Contents, Chapter 7, Section 713; amend to read as follows:***

713 Engineered ~~Computerized~~ Drainage Design

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

101.1 Title. These regulations shall be known as the *Plumbing Code* of the City of Carrollton, hereinafter referred to as "this code."

******Section 102.8; amend 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. 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.

*****Sections 103 and 103.1; amend to read as follows:***

SECTION 103
BUILDING INSPECTION

103.1 Creation of agency. The Building Inspection Division of the Development Services Department is hereby created and the official in charge thereof shall be known as the *building official*. *[Remainder unchanged]*

******Section 305.1; amend 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.

*****Section 305.4.1; amend to read as follows:***

305.4.1 Sewer depth. ~~Building sewers that connect to private sewage disposal systems shall be a minimum of [number] inches (mm) below finished grade at the point of septic tank connection.~~ Building sewers shall be a minimum of 12 inches (304 mm) below grade.

******Section 306.2.4; add 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.

*****Section 403.2; delete Exception 6.***

*****Section 413.4; amend 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 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.

*****Section 608.17.5; amend 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-type vacuum breaker, a pressure-type vacuum breaker, a double-check assembly or a reduced pressure principal 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 principal backflow preventer.

***Section 703.6; delete.**

***Section 704.5; add 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.

**** Section 712.4.3; add 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.

***Sections 713 and 713.1; amend 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.

****Section 903.1.1; amend to read as follows:**

903.1.1 Roof extension unprotected. Open vent pipes that extend through a roof shall terminate not less than six (6) inches (152 mm) above the roof. ~~Where a roof is to be used for assembly or as a promenade, observation deck, sunbathing deck or similar purposes, open vent pipes shall terminate not less than 7 feet (2134 mm) above the roof.~~

***Section 1109; delete.**

****Section 1202.1; delete Exceptions 1 and 2.**

***END"**

SECTION 16.

Section 150.045 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.045. THE 2021 EDITION OF THE INTERNATIONAL FUEL GAS CODE ADOPTED.

(a) The International Fuel Gas Code, 2021 Edition, as published by the International Code Council, is hereby adopted, and designated as the fuel gas code of the City of Carrollton, and is made a part hereof, as amended. Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding.

(b) One (1) copy of the 2021 edition of the International Fuel Gas Code, marked Exhibit "H", is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.

(c) In the event a conflict is determined to exist between said International Fuel Gas Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former."

SECTION 17.

Section 150.046 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.046. AMENDMENTS.

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

101.1 Title. These regulations shall be known as the *Fuel Gas Code* of the City of Carrollton, hereinafter referred to as "this code."

*****Section 102.2; add Exception to read as follows:***

Exception: Existing dwelling units shall comply with Section 621.2.

******Section 102.8; amend 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 8 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. 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.

*****Sections 103 and 103.1; amend to read as follows:***

SECTION 103

BUILDING INSPECTION

103.1 Creation of agency. The Building Inspection Division of the Development Services Department is hereby created and the official in charge thereof shall be known as the *building official*. *[Remainder unchanged]*

***Section 306.5; amend 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, 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… *[remainder of text unchanged]*.

***Section 306.5.1; amend 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 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*.

***Section 401.5; add a second paragraph 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"

***Section 404.12 and 404.12.1; amend to read as follows:**

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~~.

404.12.1 *[Delete]*

****Section 406.4; amend to read as follows:**

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.

******Section 406.4.1; amend to read as follows:***

406.4.1 Test pressure. The test pressure to be used shall be no less than ~~1 1/2 times the proposed maximum working pressure, but no less than 3~~ 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 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.

***** Section 409.1.4; add to read as follows:***

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.

*****Section 410.1; add a second paragraph and Exception to read as follows:***

410.1 Pressure regulators. *[Existing text to remain]*

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.

*****Section 621.2; add Exception as follows:***

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.

END"

SECTION 18.

Section 150.050 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.050. THE 2021 EDITION OF THE INTERNATIONAL MECHANICAL CODE ADOPTED.

(a) The International Mechanical Code, 2021 Edition, as published by the International Code Council, is hereby adopted, and designated as the mechanical code of the City of Carrollton, and is made a part hereof, as amended.

(b) One (1) copy of the 2021 edition of the International Mechanical Code, marked Exhibit "J", is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.

(c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said International Mechanical Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former."

SECTION 19.

Section 150.051 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.051. AMENDMENTS.

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

101.1 Title. These regulations shall be known as the *Mechanical Code* of the City of Carrollton, hereinafter referred to as "this code."

******Section 102.8; amend 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. 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 adopted amendments. Any reference to NFPA 70 shall mean the National Electrical Code as adopted.

*****Sections 103 and 103.1; amend to read as follows:***

SECTION 103
BUILDING INSPECTION

103.1 Creation of agency. The Building Inspection Division of the Development Services Department is hereby created and the official in charge thereof shall be known as the *building official*. *[Remainder unchanged]*

***Section 306.5; amend 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, 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… *[remainder of text unchanged]*.

***Section 306.5.1; amend 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 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 … *[Remainder of text unchanged]*.

***Section 501.3; add Exception 4 to read as follows:**

501.3 Exhaust Discharge. *[Exiting text to remain]*.

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

END"

SECTION 20.

Section 150.055 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.055. THE 2020 EDITION OF THE NATIONAL ELECTRICAL CODE ADOPTED.

(a) The National Electrical Code, 2020 Edition, as published by the National Fire Prevention Association, is hereby adopted, and designated as the electrical code of the City of Carrollton, and is made a part hereof, as amended.

(b) One (1) copy of the 2020 edition of the National Electrical Code, marked Exhibit "K", is incorporated herein by reference and shall be filed in the office of the City Secretary for permanent record and inspection.

(c) Unless deleted, amended, expanded, or otherwise changed herein, all provisions of such code shall be fully applicable and binding. In the event a conflict is determined to exist between said National Electrical Code as adopted and the other provisions of this ordinance, the latter provisions shall be construed as controlling and taking precedence over the former."

SECTION 21.

Section 150.056 of the Code of Ordinances of the City of Carrollton, Texas, is hereby amended to read as follows:

"SECTION § 150.056. AMENDMENTS.

*****Article 100; add the following to definitions:***

Engineering Supervision. Supervision by a Qualified State of Texas Licensed Professional Engineer engaged primarily in the design or maintenance of electrical installations.

*****Article 110.2; amend to read as follows:***

110.2 Approval. The conductors and equipment required or permitted by this Code shall be acceptable only if approved. Approval of equipment may be evident by listing and labeling of equipment by a Nationally Recognized Testing Lab (NRTL) with a certification mark of that laboratory or a qualified third-party inspection agency or a field evaluation by a Field Evaluation Body accredited by either the International Code Council International Accreditation Service AC354 or ANSI National Accreditation Board programs and approved by the AHJ.

Exception: Unlisted equipment that is relocated to another location within a jurisdiction or is field modified is subject to the approval by the AHJ. This approval may be by a field evaluation by a NRTL or qualified third-party inspection agency or a field evaluation by a Field Evaluation Body accredited by either the ICC IAS AC354 or ANAB programs and approved by the AHJ. ~~Manufacturer's self-certification of any equipment shall not be used as a basis for approval by the AHJ.~~

Informational Note No. 1: See 90.7, Examination of Equipment for Safety, and 110.3, Examination, Identification, Installation, and Use of Equipment. See definitions of *Approved, Identified, Labeled,* and *Listed*.

Informational Note No. 2: Manufacturer's self-certification of equipment may not necessarily comply with U.S. product safety standards as certified by an NRTL.

Informational Note No. 3: National Fire Protection Association (NFPA) 790 and 791 provide an example of an approved method for qualifying a third-party inspection agency.

******Article 400.8; amend to read as follows:***

408.4 Field Identification Required.

(A) Circuit Directory or Circuit Identification.
Every circuit and circuit modification shall be legibly identified as to its clear, evident, and specific purpose or use. The identification shall include an approved degree of detail that allows each circuit to be distinguished from all others. Spare positions that contain unused overcurrent devices or switches shall be described accordingly. The identification shall be included in a circuit directory that is located on the face or inside of, or in an approved location adjacent and *permanently affixed* the panel door in the case of a panelboard and at each switch or circuit breaker in a switchboard or switchgear. No circuit shall be described in a manner that depends on transient conditions of occupancy.

******Article 410.118; amend to read as follows:***

410.118 Access to other boxes.
Luminaires recessed in the ceilings, floors, or walls shall not be used to access outlet, pull, or junction boxes or conduit bodies, unless the box or conduit body is an integral part of the listed luminaire.

Exception: removable luminaires with a minimum measurement of 22 in. X 22 in. shall be permitted to be used as access to outlet, pull, junction boxes or conduit bodies.

******Article 422.31 (B); amend to read as follows:***

422.31 B Appliances Rated over 300 Volt-Amperes

(B) Appliances Rated over 300 Volt-Amperes. For permanently connected appliances rated over 300 volt-amperes, the branch-circuit switch or circuit breaker shall be permitted to serve as the disconnecting means where the switch or circuit breaker is within sight from and is readily accessible to the appliance it serves or is capable of being locked in the open position in accordance with 110.25 and is readily accessible to the appliance it serves.

Informational Note No. 1: For appliances employing unit switches, see 422.34.

Informational Note No 2: The following means of access are considered to constitute readily accessible for this code change when conforming to the additional access requirements of the I Codes:

(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.

Article 500.8 (A) (3); amend to read as follows:

500.8 Equipment.
Articles 500 through 504 require equipment construction and installation that ensure safe performance under conditions of proper use and maintenance.

Informational Note No. 1: It is important that inspection authorities and users exercise more than ordinary care with regard to installation and maintenance.

Informational Note No. 2: Since there is no consistent relationship between explosion properties and ignition temperature, the two are independent requirements.

Informational Note No. 3: Low ambient conditions require special consideration. Explosion proof or dust-ignition proof equipment may not be suitable for use at temperatures lower than -25°C (-13°F) unless they are identified for low-temperature service. However, at low ambient temperatures, flammable concentrations of vapors may not exist in a location classified as Class I, Division 1 at normal ambient temperature.

(A) Suitability. Suitability of identified equipment shall be determined by one of the following:

(1) Equipment listing or labeling;
(2) Evidence of equipment evaluation from a qualified testing laboratory or inspection agency concerned with product evaluation; or,
(3) Evidence acceptable to the authority having jurisdiction such as a manufacturer's self-evaluation or an ~~owner's engineering judgment~~ engineering judgment signed and sealed by a qualified Registered licensed Professional Engineer in the State of Texas.

Informational Note: Additional documentation for equipment may include certificates demonstrating compliance with applicable equipment standards, indicating special conditions of use, and other pertinent information.

Article 505.7 (A); amend to read as follows:

505.7 Special Precaution.
Article 505 requires equipment construction and installation that ensures safe performance under conditions of proper use and maintenance.

Informational Note No. 1: It is important that inspection authorities and users exercise more than ordinary care with regard to the installation and maintenance of electrical equipment in hazardous (classified) locations.

Informational Note No. 2: Low ambient conditions require special consideration. Electrical equipment depending on the protection techniques described by 505.8(A) may not be suitable for use at temperatures lower than -20°C (-4°F) unless they are identified for use at lower temperatures. However, at low ambient temperatures, flammable concentrations of vapors may not exist in a location classified Class I, Zones 0, 1, or 2 at normal ambient temperature.

(A) Implementation of Zone Classification System. Classification of areas, engineering and design, selection of equipment and wiring methods, installation, and inspection shall be performed by a qualified ~~persons~~ Registered licensed Professional Engineer in the State of Texas.

******Article 695.6 (A) (1); amend to read as follows:***

695.6 (A) Supply Conductors.

(1) Services and On-Site Power Production Facilities.
Service conductors and conductors supplied by on-site power production facilities shall be physically routed outside a building(s) and shall be installed as service-entrance conductors in accordance with 230.6, 230.9, and Parts III and IV of Article 230. Where supply conductors cannot be physically routed outside of buildings, the conductors shall be permitted to be routed through the building(s) where installed in accordance with
230.6(1) or (2).

~~Exception: The supply conductors within the fire pump room shall not be required to meet 230.6 (1) or (2)~~

******Article 710.15 (A); amend to read as follows***

710.15 General

710.15(A) Supply Output.
Power supply to premises wiring systems fed by stand-alone or isolated microgrid power sources shall ~~be permitted to have less capacity than the calculated load. The capacity of the sum of all sources of the stand-alone supply shall be equal to or greater than the load posed by the largest single utilization equipment connected to the system. Calculated general lighting loads shall not be considered as a single load~~ have adequate capacity to meet the calculated load in accordance with Article 220.

~~Informational Note: For general-use loads the system capacity can be calculated using the sum of the capacity of the firm sources, such as generators and ESS inverters. For specialty loads intended to be powered directly from a variable source, the capacity can be calculated using the sum of the variable sources, such as PV or wind inverters, or the combined capacity of both firm and variable sources.~~

END"

SECTION 22.

Section 150.022 of the Code of Ordinances of the City of Carrollton, Texas, is hereby added to read as follows:

"Sec. 150.022. Arson reward.

The city hereby offers a reward of $250.00 for the arrest and conviction of any person found guilty of committing the crime of arson within the corporate limits of the city. This reward is a standing offer and shall be paid out of the general fund of the city."

SECTION 23.

Save and except as amended by this ordinance, all other ordinances of the City of Carrollton, Texas, shall remain in full force and effect.

SECTION 24.

Violation of this ordinance shall be a misdemeanor punishable in accordance with Section 10.99 of the Code of Ordinances, City of Carrollton, Texas.

SECTION 25.

The terms and provisions of this ordinance are severable in accordance with Section 10.07 and are the Carrollton City Code.

SECTION 26.

To the extent of any prior ordinance of the City of Carrollton (or any provision, clause, phrase, sentence or paragraph contained therein) conflicts with this ordinance, said conflicting ordinance, provision, clause, phrase, sentence or paragraph is hereby repealed.

SECTION 27.

This ordinance, after its adoption and publication, shall become and be effective February 1, 2022 and henceforth.

DULY PASSED AND APPROVED by the City Council of the City of Carrollton, Texas, this 11th day of January, 2022.

By: _____
Kevin W. Falconer, Mayor

ATTEST:

_____
Laurie Wilson, City Secretary

CITY OF CARROLLTON TEXAS CARROLLTON, TEXAS

APPROVED AS TO FORM:

_____
Kanika Juneja, Assistant City Attorney

APPROVED AS TO CONTENT:

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Brett L. King, Building Official