CITY OF BELLMEAD, TEXAS
ORDINANCE 2021-05

AN ORDINANCE OF THE CITY OF BELLMEAD, TEXAS AMENDING CHAPTER 4 – BUILDINGS AND BUILDING REGULATIONS, ARTICLE II. – BUILDING CODE; PROVIDING FOR THE ADOPTION OF THE *INTERNATIONAL BUILDING CODE 2018 EDITION*; PROVIDING FOR THE ADOPTION OF LOCAL AMENDMENTS AND APPENDICES THERETO; PROVIDING FOR RECORDING OF SUCH CODE AS A PUBLIC RECORD; PROVIDING THAT THIS ORDINANCE SHALL BE CUMULATIVE OF ALL ORDINANCES; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A SAVINGS CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City of Bellmead is a home rule city acting under its charter adopted by the electorate pursuant to Article XI, Section 5 of the Texas Constitution and Chapter 9 of the Local Government Code; and,

WHEREAS, the *International Building Code, 2018 Edition*, regulates the erection, construction, enlargement, alteration, repair, moving, removal, demolition, conversion, occupancy, equipment, use, height, and maintenance of all buildings or structures, except one – and – two – family dwellings and multiple single-family dwellings, and including the National Electrical Code; and,

WHEREAS, the *ICC Electrical Code* is no longer published as a separate document but the electrical provisions are included in Appendix K of the IBC, 2018 Edition; and,

WHEREAS, Chapter 214 of the Local Government Code authorizes a municipality to regulate substandard buildings and establishes procedures thereof; and,

WHEREAS, the City Council desires to update, revise and clarify the standards and regulations that apply to substandard buildings in conformance with legislative amendments and to provide for civil penalty as permitted by law; and,

WHEREAS, the City Council of the City of Bellmead deems it necessary to adopt this ordinance providing minimum standards to safeguard the health, property, and welfare of the citizens of Bellmead by regulating and controlling the use, occupancy, maintenance, repair, design, construction, and quality of materials for buildings and structures within the City.

NOW THEREFORE BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF BELLMEAD, TEXAS:

SECTION 1

Sec. 4-27. – Code Adopted.

There are hereby adopted by the city, for the purpose of establishing rules and regulations for the construction, alteration, removal, demolition, equipment, use and occupancy, location and

maintenance of buildings and structures, including permits. The following codes which are adopted by reference as though they were fully copied herein:

(1) 2018 International Building Code, including Appendices D, E, F, G, H, I, J, and K, including Amendments.

a) The ICC Electrical Code is no longer published as a separate document but the electrical provisions are included in Appendix K of the IBC, 2018 Edition.

SECTION 2

Sec. 4-30. - Building Code Amendments. (Addition to Chapter 4 – BUILDINGS AND BUILDING REGULATIONS, ARTICLE II. – BUILDING CODE)

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.

(Reason: Legal wording to recognize locally adopted codes and amendments adopted with referenced codes. The former ICC Electrical Code is now Appendix K of this code but no longer called by that name.)

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.

[A] 105.2 Work exempt from permit.

6. Sidewalks and driveways not more than 30 inches (762mm) above adjacent grade, and not over any basement or *story* below and are not part of an *accessible route* and not in the right-of-way.

110.3.5. Lath, gypsum board and gypsum panel product inspections. Delete exception:

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

SECTION 202
DEFINITIONS

[BG] 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 to care recipients already incapable. This group may include but not limited to the following:

- Dialysis centers

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

*(Reason: To clarify the range of uses included in the definition. [Explanatory note related to **Ambulatory Care Facilities**: This group of uses includes medical or dental offices where persons are sedated for dental surgery or other services. Section 903.2.2 will now require such uses to be sprinkled if on other than the floor or exit discharge or if four or more persons are administered moderate sedation and/or general anesthesia on the level of exit discharge. Recommend (1.) Jurisdictions documents any pre-existing non-conforming conditions prior to issuing a new C of O for a change of tenant and, (2.) On any medical or dental office specify on C of O the maximum number of persons permitted to be administered general anesthesia.*

It is recommended that before a Certificate of Occupancy is issued, a letter of intended use from the business owner shall be included and a C of O documenting the maximum number of care recipient's incapable of self-preservation allowed.)

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 services. The occupants are capable of responding to an emergency situation without physical assistance from staff.

(Reason: The code references Assisted Living facilities and definition was deleted. Corresponds with IFC 202.)

ATRIUM. An opening connecting three or more stories… {Balance remains unchanged}

(Reason: Accepted practice in the region based on legacy codes. Section 1019 permits unenclosed two-story stairways under certain circumstances. Corresponds with IFC 202.)

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

(Reason: The code references align with IFC 202.)

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 this assembly requirements of Chapter 10 and 11.

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

304.1 Business Group B add to read as follows:

- Fire stations
- Police stations with detention facilities for 5 or less.

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

307.1.1 High-Hazard Group H amend to read as follows:

Exception:

(previous exceptions unchanged)

4. Cleaning establishments… *{text unchanged}* … with Section 707 or 1-hour horizontal assemblies constructed in accordance with Section 711 or both. See also IFC Chapter 2. Dry Cleaning Plant provision.

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

403.1 High-Rise Building; amend to read as follows:

Exception:

(previous exceptions unchanged)

3. The open-air portion of a building *{remainder unchanged}*

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

403.3 Automatic sprinkler system; delete Exception 2.

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

[F] 403.3.2 Water supply to required fire pumps. In buildings that are more than 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: {No change to exception.}

(*Reason: The 2009 edition of the IFC added this requirement based on a need for redundancy of the water supply similar to the redundancy of the power supply to the fire pumps required for such tall buildings, partially due to the fact that these buildings are rarely fully evacuated in a fire event. More commonly, the alarm activates on the floor of the event, the floor above and the floor below. Back-up power to the fire pump becomes critical for this reason. Certainly, the power is pointless if the water supply is impaired for any reason, so a similar requirement is provided here for redundant water supplies. The 2015 edition changes the requirement to only apply to very tall buildings over 420 ft. This amendment modifies/lowers the requirement to 120 ft., based on this same height requirement for fire service access elevators. Again, the language from the 2009 and 2012 editions of the code applied to any high-rise building.*

This compromise at 120 ft. is based on the above technical justification of defend -in-place scenarios in fire incidents in such tall structures.)

406.3.3.1 Carport separation; add 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 a least 10 feet (3,048 mm).

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

502. 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 contract with their background. Address numbers shall be Arabic numerals or alphabet letters. Numbers shall not be spelled out. Each character shall be a minimum of 6 inches (152.4 mm) high with a minimum stroke width of ½ inch (12.7 mm). (Remainder of text unchanged).

(Reason: Call attention to addressing ordinance. Also matches amendment to IFC 505.1)

Table 506.2; delete sentence from table

(Reason: To eliminate the need for Appendix C adoption and remain consistent with 6,000 sq. ft. sprinklering provision.)

506. 3. 1 Minimum percentage of perimeter. To qualify for an area factor, increase based on frontage, a building shall have not less than 25 percent of its perimeter on a public way or open space. Such open space shall be either on the same lot or dedicated for public use and shall be accessed from a street or approved fire lane. 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.

(Reason: To define what is considered accessible. Consistent with regional amendment to IFC 504. 1.)

602.1.1 Minimum Requirements. *{Existing Text to remain}* Where a building contains more than one distinct type of construction, the building shall comply with the most restrictive area height and stories, for the lesser type of construction or be separated by fire walls.

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

708.4.2 Fire blocks and draft stops in combustible construction. *{Body of text unchanged}*

Exceptions:

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

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

712.1.9; Two-story openings; amend to read as follows:

4. Is not open to a corridor in Group I and H occupancies.

(Reason: To be consistent with amended definition of an atrium.)

718. 3 Draft stopping in floors. *{Body of text unchanged}*

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

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

718.4 Draft stopping 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.

(Reason: To remain consistent with changes in 708.4. 2 code.)

[F] 903.1.1 Alternative protection. Alternative automatic fire-extinguishing systems complying with Section 904 shall be permitted in addition to automatic sprinkler protection, where recognized by the applicable standard or as approved by the fire code official.

(Reason: Such alternative systems do not provide the reliability of automatic sprinkler protection in general. An applicant could pursue an Alternate Method request to help mitigate the reliability issues with these alterative systems with the fire code official if so desired, or there may be circumstances in which the fire code official is acceptable to allowing an alternate system in lieu of sprinklers, such as kitchen hoods or paint booths. This also meets with local practices in the region.)

[F] 903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in Sections 903.2.1 through 903.2.12. Automatic Sprinklers shall not be installed in elevator machine rooms, elevator machine spaces, and elevator hoist ways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances. Storage shall not be allowed within the elevator machine room. Signage shall be provided at the entry doors to the elevator machine room indicating "ELEVATOR MACHINERY - NO STORAGE ALLOWED."

(Reason: Firefighter and public safety. This amendment eliminates the shunt trip requirement of the International Building Code Section 3006.5 for the purpose of elevator passenger and firefighter safety. This amendment is contingent on the Building Code amendment eliminating the Exceptions to Section 3006.4, such that passive fire barriers for these areas are maintained. This also meets with local practices in the region.)

[F] 903.2; Automatic Sprinkler Systems Where required; delete Exception.

(Reason: The exception deletion is due to the fact that such telecom areas pose an undue fire risk to the structural integrity of the building. This also meets with local practices in the region.)

[F] 903.2.9.3 Self-service storage facility. An automatic sprinkler system shall be installed throughout all self-service storage facilities.

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

903.2.11.7 High-Piled Combustible Storage. For any building with a clear height exceeding 12 feet (4,572 mm), see Chapter 32 of the IFC 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 Square Feet. An automatic sprinkler system shall be installed throughout all buildings over 6,000 sq. ft. For the purpose of this provision, fire walls shall not define separate buildings. For this section only, area measurement shall be based on outside dimensions of exterior walls, exclusive of vent shafts and courts, without deduction for corridors, stairways, closets, and the thickness of interior walls columns or other features. The floor area of a building, or portion thereof, not provided with surrounding exterior walls shall be the usable area under the horizontal projection of the roof or floor above. For upper-level attic type rooms, areas where the ceiling height is less than five feet (5' 0") shall not be considered. Unfinished space framed to permit future expansion of floor area shall be considered as part of the area. Joists designed to support floor loads shall be assumed to be for future area.

Exceptions:

1. Open parking garages in compliance with IBC Section 406.3.

2. Building regulated under the International Residential Code as amended.

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

[F] 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. A room where the application of water, or flame and water, constitutes a serious life or fire hazard.

2. A room or space where sprinklers are considered undesirable because of the nature of the contents, when approved by the code official.

3. Generator and transformer rooms, under the direct control of a public utility, separated from the remainder of the building by walls and floor/ceiling or roof/ceiling assemblies having a fire - resistance rating of not less than 2 hours.

4. {Delete}

5. Elevator machine rooms, and machinery spaces, and hoist ways, other than pits where such sprinklers would not necessitate shunt trip requirements under any circumstances.

6. {Delete}

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

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

1. {Remainder Unchanged}

2. {Remainder Unchanged}

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:

{Remainder Unchanged}

(Reason: Attic protection is required due to issues with fire exposure via soffit vents, as well as firefighter safety. Several jurisdictions indicated experience with un -protected attic fires resulting in displacement of all building occupants. NFPA 13 provides for applicable attic sprinkler protection requirements, as well as exemptions to such, based on noncombustible

construction, etc. Attached garages already require sprinklers via NFPA 13R — this amendment just re-emphasizes the requirement.)

[F] 903.3. 1. 3 NFPA 13D sprinkler systems. Automatic sprinkler systems installed in one- and two-family dwellings; Group R- 3; Group R- 4 Condition 1 and townhouses shall be permitted to be installed throughout in accordance with NFPA 13D or in accordance with state law.

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

[F] 903. 3. 1. 4 Freeze protection. Freeze protection systems for automatic fire sprinkler systems shall be in accordance with the requirements of the applicable referenced NFPA standard and this section.

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

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

1. The attic sprinklers are supplied by a separate floor control valve assembly to allow ease of draining the attic system without impairing sprinklers throughout the rest of the building, and,

2. Adequate heat shall be provided for freeze protection as per the applicable referenced NFPA standard, and,

3. The attic space is a part of the building' s thermal, or heat, envelope, such that insulation is provided at the roof deck, rather than at the ceiling level.

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

(Reason: In the last few years, severe winters brought to light several issues with current practices for sprinklering attics, not the least of which was wet -pipe sprinklers in ventilated attics provided with space heaters, etc. for freeze protection of such piping. This practice is not acceptable for the protection of water -filled piping in a ventilated attic space as it does not provide a reliable means of maintaining the minimum 40 degrees required by NFPA, wastes energy, and presents a potential ignition source to the attic space. Listed antifreeze is specifically included because NFPA currently allows such even though there is no currently listed antifreeze at the time of development of these amendments. The intent of this amendment is to help reduce the large number of freeze breaks that have occurred in the past with water-filled wet-pipe sprinkler systems in the future, most specifically in attic spaces.)

903.3.5; Water supplies; add to read as follows:

[F] Water supply as required for such systems shall be provided in conformance with the supply requirements of the respective standards; however, every water-based fire protection

system shall be designed with a 10-psi safety factor. Reference Section 507.4 for additional design requirements.

(Reason: To define uniform safety factor.)

903.4; Sprinkler system supervision and alarms; add after the exceptions to read as follows:

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

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

903.4.2; Alarms; add to read as follows:

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

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

905.1.1 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 when foreign material is present, 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 are no required pressure criteria at the outlet. Verify that check valves function properly and that there are no closed control valves on the system.

3. Any pressure relief, reducing, or control valves shall be tested in accordance with the requirements of NFPA 25. All hose valves shall be exercised.

4. If the FDC is not already provided with approved caps, the contractor shall install such caps for all FDC' s as required by the fire code official.

5. Upon successful completion of standpipe test, place a blue tag (as per Texas Administrative Code, Fire Sprinkler Rules for Inspection, Test and Maintenance Service (ITM) Tag at the bottom of each standpipe riser in the building. The tag shall be check -marked as "Fifth Year" for Type of ITM, and the note on the back of the tag shall read " 5 Year Standpipe Test" at a minimum.

6. The procedures required by Texas Administrative Code Fire Sprinkler Rules with regard to Yellow Tags and Red Tags or any deficiencies noted during the testing, including the required notification of the local Authority Having Jurisdiction (fire code official) shall be followed.

7. Additionally, records of the testing shall be maintained by the owner and contractor, if applicable, as required by the State Rules mentioned above and NFPA 25.

8. Standpipe system tests where water will be flowed external to the building shall not be conducted during freezing conditions or during the day prior to expected night time freezing conditions.

9. Contact the fire code official for requests to remove existing fire hose from Class II and III standpipe systems where employees are not trained in the utilization of this firefighting equipment. All standpipe hose valves must remain in place and be provided with an approved cap and chain when approval is given to remove hose by the fire code official.

(Reason: Increases the reliability of the fire protection system and re-emphasizes the requirements of NFPA 25 relative to standpipe systems, as well as ensuring that FDC connections are similarly tested/maintained to ensure operation in an emergency incident. Corresponds to IFC 901.6.1.)

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

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

[F] 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 (60,960 mm) of travel, vertically and horizontally, from the nearest point of fire department vehicle access, Class I automatic wet or manual wet standpipes shall be provided.

Exceptions:

1. Automatic dry and semi-automatic dry standpipes are allowed as provided for in NFPA 14.

2. R- 2 occupancies of four stories or less in height having no interior corridors.

(Reason: Allows for the rapid deployment of hose lines to the body of the fire.)

905.4 Location of Class I standpipe hose connections; amend to read as follows:

[F] 1. In every required stairway, a hose connection shall be provided for each story above and below grade. Hose connections shall be located at an intermediate landing between stories, unless otherwise approved by the fire code official.

2. {No change.}

3. In every exit passageway, at the entrance from the exit passageway to other areas of a building.

Exception: Where floor areas adjacent to an exit passageway are reachable from an exit stairway hose connection by a ... No change to rest.}

4. {No change.}

5. Where the roof has a slope less than four units vertical in 12 units horizontal (33.3 -percent slope), each standpipe shall be provided with a two-way a -hose connection located to serve the roof or at the highest landing of an exit stairway with stair access to the roof provided in accordance with Section 1011.12.

6. {No change.}

7. When required by this Chapter, standpipe connections shall be placed adjacent to all required exits to the structure and at two hundred feet (200') intervals along major corridors thereafter, or as otherwise approved by the fire code official.

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

905.9; Valve supervision; add after the exceptions to read as follows:

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

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

[F] 907.1.4 Design standards. Where a new fire alarm system is installed, the devices shall be addressable. Fire alarm systems utilizing more than 20 smoke detectors shall have analog initiating devices.

(Reason: Provides for the ability of descriptive identification of alarms, and reduces need for panel replacement in the future. Updated wording to match the language of the new

requirement at 907.5.2.3. Change of terminology allows for reference back to definitions of NFPA 72.)

[F] 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 having an occupant load of 300 or more persons or more than 100 persons above or below the lowest level of exit discharge. Group A occupancies not separated from one another in accordance with Section 707. 3.- 10 of the *International Building Code* shall be considered as a single occupancy for the purposes of applying this section. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy.

Exception: {No change.}

Activation of fire alarm notification appliances shall:

1. Cause illumination of the means of egress with light of not less than 1 foot-candle (11 lux) at the walking surface level, and

2. Stop any conflicting or confusing sounds and visual distractions.

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

[F] 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 2½ or less years of age, see Section 907.2.6.)

{No change to remainder of exceptions.}

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

907.2.12; High-rise buildings; amend to read as follows:

Exception:

{Previous exceptions unchanged}

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

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

[F] 907.4.2. 7 Type. Manual alarm initiating devices shall be an approved double action type.

(Reason: Helps to reduce false alarms.)

[F] 907. 6.1.1 Wiring Installation. All fire alarm systems shall be installed in such a manner that a failure of any single initiating device or single open in an initiating circuit conductor will not interfere with the normal operation of other such devices. All signaling line circuits (SLC) shall be installed in such a way that a single open will not interfere with the operation of any addressable devices (Class A). Outgoing and return SLC conductors shall be installed in accordance with NFPA 72 requirements for Class A circuits and shall have a minimum of four feet separation horizontal and one foot vertical between supply and return circuit conductors. The initiating device circuit (IDC) from a signaling line circuit interface device may be wired Class B, provided the distance from the interface device to the initiating device is ten feet or less.

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

907.6.3; Initiation device identification; delete all four Exceptions.

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

907.6. 6; Monitoring; add sentence at end of paragraph to read as follows:

[F] See 907.6. 3 for the required information transmitted to the supervising station.

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

[F] 909.22 Stairway or ramp pressurization alternative. Where the building is equipped throughout with an automatic sprinkler system in accordance with Section 903. 3. 1. 1 and the stair pressurization alternative is chosen for compliance with Building Code requirements for a smokeproof enclosure, interior exit stairways or ramps shall be pressurized to a minimum of 0. 10 inches of water (25 Pa) and a maximum of 0. 35 inches of water (87 Pa) in the shaft relative to the building measured with all interior exit stairway and ramp doors closed under maximum

anticipated conditions of stack effect and wind effect. Such systems shall comply with Section 909, including the installation of a separate fire-fighter's smoke control panel as per Section 909. 16, and a Smoke Control Permit shall be required from the Fire Department as per Section 105.7.

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

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

1. Equipment, control wiring, power wiring and ductwork shall be located exterior to the building and directly connected to the smokeproof enclosure or connected to the smokeproof enclosure by ductwork enclosed by not less than 2- hour fire barriers constructed in accordance with Section 707 of the Building Code or horizontal assemblies constructed in accordance with Section 711 of the Building Code, or both.

2. Equipment, control wiring, power wiring and ductwork shall be located within the smokeproof enclosure with intake or exhaust directly from and to the outside or through ductwork enclosed by not less than 2- hour barriers constructed in accordance with Section 707 of the Building Code or horizontal assemblies constructed in accordance with Section 711 of the Building Code, or both.

3. Equipment, control wiring, power wiring and ductwork shall be located within the building if separated from the remainder of the building, including other mechanical equipment, by not less than 2- hour fire barriers constructed in accordance with Section 707 of the Building Code or horizontal assemblies constructed in accordance with Section 711 of the Building Code, or both.

Exceptions:

1. Control wiring and power wiring utilizing a 2- hour rated cable or cable system.

2. Where encased with not less than 2 inches (51 mm) of concrete.

3. Control wiring and power wiring protected by a listed electrical circuit protective system with a fire-resistance rating of not less than 2 hours.

[F] 909.22.1.2 Standby power. Mechanical vestibule and stairway and ramp shaft ventilation systems and automatic fire detection systems shall be provided with standby power in accordance with Section 2702 of the Building Code.

[F] 909.22.1.3 Acceptance and testing. Before the mechanical equipment is approved, the system shall be tested in the presence of the fire code official to confirm that the system is operating in compliance with these requirements.

(Reason: To assist with enforcement of such as a smoke control system, as per Section 909.6.3, especially since a permit is now specifically required for such systems in the Fire Code. Also ensures that a firefighter's override panel is provided as per 909. 16 for such systems. The above amendment copies the applicable requirements for such systems from Section 909.20 of the Building Code into the Fire Code. Although the published code did copy the elevator pressurization requirements into the Fire Code, it did not copy over the stair pressurization requirements.)

910.2; Smoke and Heat Removal Where required; amend to read as follows:

Exceptions: {previous exceptions unchanged}

[F] 2. Only manual smoke and heat removal shall faet 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 aet be required in areas of buildings equipped with control mode special application sprinklers with a response time index of 50 (m* S) ½ or less that are listed to control a fire in stored commodities with 12 or fewer sprinklers. Automatic smoke and heat removal is prohibited.

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

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

1. In occupancies classified as Group H- 2 or H- 3, any of which are more than 15,000 square feet 1394 m^2) in single floor area.

Exception: Buildings of noncombustible construction containing only noncombustible materials.

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

Exception: Buildings of noncombustible construction containing only noncombustible materials.

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

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

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

Exception: Manual only system per 910.2

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

Exception: Listed gravity-operated drop out vents

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

[F] 910.4.3. 1 Makeup air. Makeup air openings shall be provided within 6 feet (1,829 mm) of the floor level. Operation of makeup air openings shall be automatic. The minimum gross area of makeup air inlets shall be 8 square feet per 1,000 cubic feet per minute (0.74 m2 per 0. 4719 m3/s) of smoke exhaust.

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

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

Exception: Manual only systems per Section 910.2.

(Reason: The provision of a manual only mechanical smoke removal system does not provide equivalency with automatic smoke and heat vents. This amendment clarifies that the primary intent is for automatic systems, unless exceptions are provided as in 910.2 — consistent with the charging statements of the section.)

[F] 912. 2.3 Hydrant distance. An approved fire hydrant shall be located within 100 feet of the fire department connection as the fire hose lays along an unobstructed path.

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

913.2.1; Protection of fire pump rooms; add second paragraph and exception to read as follows:

[F] When located on the ground level at an exterior wall, the fire pump room shall be provided with an exterior fire department access door that is not less than 3 ft. in width and 6 ft. — 8 in. in height, regardless of any interior doors that are provided. A key box shall be provided at this door, as required by Section 506.1.

3. **Exception:** When it is necessary to locate the fire pump room on other levels or not at an exterior wall, the corridor leading to the fire pump room access from the exterior of the building shall be provided with equivalent fire resistance as that required for the pump room, or as approved by the fire code official. Access keys shall be provided in the key box as required by Section 506. 1.

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

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

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

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

(Reason: Given discretion to Code Official in case of code conflict.)

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.

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

3005.7 Fire Protection in Machine rooms, control rooms, machinery spaces and control spaces.

3005.7.1 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 903.1.1.1 and as prohibited by Section 3005.1.7.1.

3005.7.2.1 Prohibited locations. Automatic sprinklers shall not be installed in machine rooms, elevator machinery spaces, control rooms, control spaces and elevator hoistways.

3005.7.2.2. 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.

3005.7.3 Water protection. An approved method to prevent water from infiltrating into the hoist way enclosure from the operation of the automatic sprinkler system outside the elevator lobby shall be provided.

3005.7.4 Shunt trip. Means for elevator shutdown in accordance with Section 3005.5 shall not be installed.

(Reason: Firefighters and public safety. This amendment eliminates the shunt trip requirement of the International Building Code Section 3005.5 for the purpose of elevator passenger and firefighter safety. The new section above is intended to be identical to Sections 3007.2, 3007.4 for Fire Service Access Elevators and Sections 3008.2, 3008.3, and 3008.4 for Occupant Evacuation Elevators.)

SECTION 3

This ordinance shall be cumulative of all provisions of ordinances of the City of Bellmead, Texas, except where the provisions of this ordinance are in direct conflict with the provisions of such ordinances, in which event the conflicting provisions of such ordinance are hereby repealed.

SECTION 4

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

SECTION 5

This ordinance shall be in full force and effect May 1, 2021.

PASSED AND APPROVED ON FIRST READING MARCH 9, 2021.

PASSED AND APPROVED ON SECOND READING APRIL 13, 2021.

PASSED AND APPROVED ON THIRD READING APRIL 13, 2021.

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James Cleveland, Mayor

ATTEST:

_____

Holly Owens, City Secretary

APPROVED AS TO FORM & LEGALITY:

_____

Charles Buenger, City Attorney