ORDINANCE NO. 2011-3-3

An Ordinance of the City of Plano, Texas, amending City of Plano Ordinance No. 2011-1-7 codified as Article II, Building Code, of Chapter 6 of the Code of Ordinances; adding amendments for Chapter 9 of the 2009 International Building Code, Fire Protection Systems, to mirror the amendments adopted with the 2009 International Fire Code; and providing, a severability clause, a savings clause, a penalty clause, a publication clause and an effective date.

WHEREAS, on January 10, 2011, by Ordinance No. 2011-1-7 the City Council of the City of Plano established a Building Code and provided regulations thereunder, and such Ordinances were codified as Article II, Building Code, of Chapter 6 of the Code of Ordinances of the City of Plano ("City"); and

WHEREAS, on January 24, 2011, by Ordinance No. 2011-1-24 the City Council of the City of Plano established a new Article II, Fire Code, of Chapter 8 of the Code of Ordinances of the City of Plano ("City"); and

WHEREAS, The City Council hereby finds that it is necessary and in the best interest of the City and its citizens to amend Ordinance 2011-1-7 by amending Chapter 9 of the International Building Code, Fire Protection Systems, to mirror the 2009 International Fire Code adopted by the City Council on January 24, 2011 by Ordinance No. 2011-1-24.

Now, therefore, be it ordained by the City Council of the City of Plano, Texas that:

Section I. The following ordinances or sections thereof, all of which are codified as Article II, Building Code, of Chapter 6 of the Code of Ordinances of the City of Plano, are hereby amended.

Section II. Article II, Building Code, of Chapter 6 of the Code of Ordinances is hereby amended to include amendments for Chapter 9 of the International Building Code, Fire Protection Systems, as follows:

DIVISION 2. AMENDMENTS

Section 901 General

Sec. 901.5 is amended by the addition of the following:

Sec. 901.5 Installation acceptance testing. All required tests shall be conducted by and at the expense of the owner or his representative. The Fire Department shall not be held responsible for any damages incurred in such test. Where it is required that the Fire Department witness any such test, such test shall be scheduled with a minimum of 48 hour notice to the Fire Chief or his representative.

Section 902 Definitions

Sec. 902.1 "Standpipe, Types of" definition, the term "manual dry" is amended to read as follows:

Manual Dry. A dry standpipe system that does not have a permanent water supply attached to the system. Manual dry standpipe systems require water from a fire department pumper to be pumped into the system through the fire department connection in order to supply the system demand. The system must be supervised as specified in Section 905.2.

Section 903 Automatic Sprinkler Systems

Sec. 903.1.1 is amended to read as follows:

Sec. 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 and approved by the *fire code official.*

Sec. 903.2 is amended to read as follows:

Sec. 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 machines spaces, and elevator hoistways.

Sec. 903.2 is amended by the deletion of the following:

Exception: Spaces or areas in telecommunications buildings used exclusively for telecommunications equipment, associated electrical power distribution equipment, batteries and standby engines, provided those spaces or areas are equipped throughout with an automatic smoke detection system in accordance with Section 907.2 and are separated from the remainder of the building by not less than 1-hour *fire barriers* constructed in accordance with Section 707 of the *International Building Code* or not less than 2-hour horizontal assemblies constructed in accordance, with Section 712 of the *International Building Code*, or both.

Sec. 903.2.1.1, 903.2.1.3, 903.2.1.4, 903.2.3, 903.2.4 903.2.7, 903.2.9, and 903.2.9.1 are amended to read as follows:

Sec. 903.2.1.1 Group A-1. An automatic sprinkler system shall be provided for Group A-1 Occupancies where one of the following conditions exists:

1. The fire area exceeds 6,000 square feet (557.4m^2).

2. The fire area has an occupant load of 300 or more.

3. The fire area is located on a floor other than the level of exit discharge.

4. The fire area contains a multi theater complex.

Sec. 903.2.1.3 Group A-3. An automatic sprinkler system shall be for Group A-3 Occupancies where one of the following conditions exists:

1. The fire area exceeds 6,000 square feet (557.4m2).

2. The fire area has an occupant load of 300 or more.

3. The fire area is located on a floor other than the level of exit discharge.

   Exception: Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.

Sec. 903.2.1.4 Group A-4. An automatic sprinkler system shall be provided for Group A-4 Occupancies where one of the following conditions exists:

1. The fire area exceeds 6,000 square feet (557.4m^2).

2. The fire area has an occupant load of 300 or more

3. The fire area is located on a floor other than the level of exit discharge.

   Exception: Areas used exclusively as participant sports areas where the main floor area is located at the same level as the level of exit discharge of the main entrance and exit.

Sec. 903.2.3 Group E. An automatic sprinkler system shall be provided for Group E Occupancies where one of the following conditions exists:

1. Throughout all Group E fire areas greater than 6,000 square feet (557.4m^2) in area;

2. Throughout every portion of educational building below the level of exit discharge.

   Exception: An automatic sprinkler system is not required in any fire area or area below the level of exit discharge where every classroom throughout the building has at least one exterior exit door at ground level.

Sec. 903.2.4 Group F-1. An automatic sprinkler system shall be provided for Group F-1 Occupancies where one of the following conditions exists:

1. Where a Group F-1 fire area exceeds 6,000 square feet (557.4m^2);

2. Where a Group F-1 fire area is located more than three stories above grade plane; or

3. Where combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230m^2).

Sec. 903.2.7 Group M. An automatic sprinkler system shall be for Group M Occupancies where one of the following conditions exists:

1. Where a Group M fire area exceeds 6,000 square feet (557.4m^2);

2. Where a Group M fire area is located more than three stories above grade plane; or

3. Where the combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230m^2).

Sec. 903.2.9 Group S-1. An automatic sprinkler system shall be for Group S-1 Occupancies where one of the following conditions exists:

1. A Group S-1 fire area exceeds 6,000 square feet (557.4m^2);

2. A Group S-1 fire area is located more than three stories above grade plane; or

3. The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230m^2).

Sec. 903.2.9.1 Repair Garages. An automatic sprinkler system shall be for Repair Garages where one of the following conditions exists:

1. Buildings two or more stories in height, including basements, with a fire area containing a repair garage exceeding 6,000 square feet (557.4m^2);

2. One-story buildings with a fire area containing a repair garage exceeding 6,000 square feet (557.4m^2);

3. Buildings with a repair garage servicing vehicles parked in the basement.

Sec. 903.2.9 is amended by the addition of the following:

Sec. 903.2.9.3 Self-service storage facility. An automatic sprinkler system shall be installed throughout all self-service storage facilities. A screen shall be installed at eighteen (18) inches below the level of the sprinkler heads to restrict storage above that level. This screen shall be a mesh of not less than one (1) inch nor greater than six (6) inches in size. The screen and its supports shall be installed such that all elements are at least eighteen (18) inches below any sprinkler heads.

Sec. 903.2.11. 3 is amended to read as follows:

903.2.11.3 Buildings more than 35 feet in height. An automatic sprinkler system shall be installed throughout buildings with a floor level, other than penthouses in compliance with Section 1509 of the *International Building Code*, that are located 35 feet (10,668 mm) or more above the lowest level of fire department vehicle access.

Exception: Open parking structures in compliance with Section 406.3 of the *International Building Code.*

Sec. 903.2.11 is amended by the addition of the following:

Sec. 903.2.11.7 High Piled Combustible Storage. For any building with a clear height exceeding 12 feet (4,572 mm), see Chapter 23 to determine if those provisions apply.

Sec. 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.

Sec. 903.2.11.9 Buildings Over 6,000 sq. ft. An automatic sprinkler system shall be installed throughout all buildings over 6,000 sq. ft. and greater, and in all existing buildings that are enlarged to be 6,000 square feet or greater, and in buildings greater than 6,000 square feet which are enlarged. For the purpose of this provision, fire walls shall not define separate buildings.

Exceptions:

1. Open parking garages in compliance with Section 406.3 of the *International Building Code.*

2. When of non-combustible construction, the area of awning extension or free-standing canopies, both sides, and not used for display or storage shall not be considered for requiring sprinkler protection for areas greater than 6,000 square feet but less than otherwise required in this code.

Sec. 903.2.11.10 Expanded Tenant Spaces. Fire sprinklers shall be installed in all tenant spaces where the total fire area exceeds 6,000 square feet. For the purpose of fire sprinklers, fire walls shall not be used to separate single tenant fire areas.

Sec. 903.3.1.1.1 is amended to read as follows:

Sec. 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 rooms or areas are protected with an approved automatic fire detection system in accordance with Section 907.2 that will respond to visible or invisible particles of combustion. Sprinklers shall not be omitted from any room merely because it is damp, of fire-resistance-rated construction or contains electrical equipment.

1. Any room where the application of water, or flame and water, constitutes a serious life or fire hazard.

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

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

Sec. 903.3.1.2 is amended to read as follows:

Sec. 903.3.1.2 NFPA 13 R sprinkler systems. Where allowed in buildings of Group R, up to and including four stories in height, automatic sprinklers shall be installed throughout in accordance with NFPA 13R. Sprinkler systems installed in accordance with 13R shall include sprinkler protection in combustible attics of buildings two (2) or more stories in height.

Section903.3.1.3; add the following:

Sec.903.3.1.3 NFPA 13D sprinkler systems. Where allowed, automatic sprinkler systems installed in one- and two- family dwellings and townhouses shall be installed throughout in accordance with NFPA 13D or in accordance with state law.

Sec. 903.3.1 is amended by the addition of the following:

Sec. 903.3.1.4 Installation. Automatic sprinkler and standpipe systems shall be installed with the following:

1. A single underground supply from a looped water main and point for the Fire Department Connection (FDC) shall be provided for all buildings.

2. Fire department connections serving more than 500 GPM shall be provided with one 5-inch Storz connection and one 2-1/2 inch connection.

3. All inspectors' test, ball-drips, and main-drains shall be piped directly to the outside of the building.

4. At least one inspection test valve shall be located at the remote system area.

5. Risers shall be equipped with a properly sized test header.

6. Fire pumps shall be equipped with a properly sized test header.

7. Underground piping shall have a 10-foot minimum separation from all other utilities and placed in a separate trench. Underground piping within 5 feet of the building may be combined with other utilities for entrance to the building.

8. Porches and balconies shall be sprinklered on all Group R-2 and R-3 occupancies.

9. A minimum of 4-feet of pipe between the check valve and inside wall of the Fire Department Connection.

Sec. 903.3.5 is amended to include a second paragraph to read as follows:

Sec. 903.3.5 Water supplies. Water supply as required for such systems shall be provided in conformance with the supply requirements of the respective standards; however, every fire protection system shall be designed with a 10 psi safety factor.

Sec. 903.4 is amended to include a second paragraph after the exceptions to read as follows:

Sec. 903.4 Sprinkler system monitoring and alarms. 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 a minimum of 45 seconds and not more than 90 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.

Sec. 903.4.2 in amended to include second paragraph to read as follows:

Sec. 903.4.2 Alarms. 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.

Sec. 903.4.3 is amended to read as follows:

903.4.3 Floor control valves. Approved supervised indicating control valves shall be provided at the point of connection to the riser on each floor.

Sec. 903.6.1 and 903.6.2 are amended to read as follows:

Sec. 903.6.1 Spray booths and rooms. New and existing spray booths and spray rooms shall be protected by an approved automatic fire-extinguishing system in accordance with Section 1504.

Sec. 903.6.2 Existing R-1, 2, 3, and 4 Occupancies: In R-1, 2, 3, and 4 occupancies where a fire has occurred and displaces one or more occupants, the affected building shall be fire-sprinkled prior to re-occupancy of the unit/building.

Section 905 Standpipe Systems

Sec. 905.2 is amended to read as follows:

Sec. 905.2 Installation standards. Standpipe system shall be installed in accordance with this section and NFPA 14. 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.

Sec. 905.3.2 is amended to read as follows:

Sec. 905.3.2 Group A; delete exceptions 1 and 2.

1. Open-air-seating spaces without enclosed spaces.

2. Class I automatic dry and semiautomatic dry standpipes or manual wet standpipes are allowed in buildings where the highest floor surface used for human occupancy is 75 feet (22,860 mm) or less above the lowest level of fire department vehicle access.

Sec. 905.3.4 is deleted.

Sec. 905.4 is amended to section 5 as follows:

Sec. 905.4 Location of Class I standpipe hose connections.

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 hose connection located either on the roof or at the highest landing of stairways with stair access to the roof. An additional hose connection shall be provided at the top of the most hydraulically remote standpipe for testing purposes.

Sec. 905.4 is amended to add section 7 as follows:

Sec. 905.4 Location of Class I standpipe hose connections.

7. Class I standpipes shall also be required on all occupancies in which the distance from accessible points for Fire Department ingress to any point in the structure exceeds two hundred fifty feet (250') along the route that a fire hose is laid as measured from the fire lane. 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.

Sec. 905.5 is deleted.

Sec. 905.6 is deleted.

Sec. 905.9 is amended to add a second paragraph after the exceptions to read as follows:

Sec. 905.9 Valve Supervision. 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 a minimum of 45 seconds and not more than 90 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 Portable Fire Extinguishers

Sec. 906.1 exception is amended to read as follows:

Exception: In R-2 occupancies, portable fire extinguishers shall be required only in locations specified in Items 2 through 6 where each dwelling unit is provided with a portable fire extinguisher having a minimum rating of 1-A:10-B:C.

Section 907 Fire Alarm and Detection Systems

Sec. 907.1.1 is amended by the addition of the following:

Sec. 907.1.1 Construction documents. Plans for fire alarm systems shall be in accordance with Plano Fire Department Fire Alarm Submittal Guidelines.

Sec. 907.1 is amended by the addition of the following:

Sec. 907.1.4 Design Standards. All alarm systems new or replacement shall be addressable. Alarm systems serving more than 20 smoke detectors shall be analog addressable.

Exception: Existing systems need not comply unless the total building remodel or expansion initiated after January 1, 1998, as adopted, exceeds 30% of the building. When cumulative building remodel or expansion exceeds 50% of the building, compliance must take place within 18 months of permit application.

Sec. 907.2.1 is amended to read as follows:

Sec. 907.2.1 Group A. A manual fire alarm system 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. Portions of Group E occupancies occupied for assembly purposes shall be provided with a fire alarm system as required for the Group E occupancy. Activation of fire alarm notification appliances shall:

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

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

Sec. 907.2.3 is amended to read as follows:

Sec. 907.2.3 Group E. A manual fire alarm system shall be installed in Group E 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. Where automatic fire sprinklers are not provided, a full-coverage smoke detection system shall be provided in all Group E occupancies. Unless separated by a minimum of 100 feet 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.

Sec. 907.2.3 is amended to change exception 1 and 1.1 to read as follows:

Group E educational and day care occupancies with an occupant load of less than 50 when provided with an approved automatic sprinkler system.

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 ½ or less years of age, see Section 907.2.6)

Sec. 907.2.6 is amended by the addition of the following:

Sec. 907.2.6.4 Group I-4 Occupancies. An approved smoke detection system shall be installed in Group I 4 occupancies. Where automatic fire sprinklers are not provided, a full-coverage smoke detection system shall be provided in all Group I-4 occupancies.

Sec. 907.2.13 is amended to read as follows:

Sec. 907.2.13 High-rise buildings. Buildings having floors used for human occupancy located more than 55 feet (16,764 mm) above the lowest level of fire department vehicle access shall be provided with an automatic fire alarm system and an emergency voice/alarm communication system in accordance with Section 907.2.12.2.

Sec. 907.2.13, exception 3 is amended to read as follows:

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

Sec. 907.5 is amended by the addition of the following:

Sec. 907.5.2.6 Manual alarm actuating devices shall be an approved double action type.

Sec. 907.7.1 is amended by the addition of the following:

Sec. 907.7.1.1 Wiring. 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 initiating circuit conductors shall be Class "A" wired with a minimum of six feet separation between supply and return circuit conductors. IDC – Class "A" Style D; SLC – Class "A" Style 6; NAC – Class "B" Style Y. The IDC from an addressable device used to monitor the status of a suppression system may be wired Class B, Style B provided the distance from the addressable device is within 10-feet of the suppression system device.

Sec. 907.5.3 Flow detectors and electronic monitoring. Sprinkler and standpipe system water flow detectors shall be provided for each floor zone to the sprinkler system and shall cause an alarm upon detection of water flow for a minimum of 45 seconds and not more than 90 seconds. All control valves in the sprinkler and standpipe systems except for fire department hose connection valves shall be electrically supervised to initiate a trouble signal at the central station upon tampering.

Section 910 Smoke and Heat Vents
Sec. 910.2 is amended by the addition of the following:

Sec. 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 (1394m^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.

Sec. 910.2.4 Exit access travel distance increase. Buildings and portions thereof used as a Group F-1 or S-2 occupancy where the maximum exit access travel distance is increased in accordance with Section 1016.3.

Sec. 910.3 is amended as follows:

Sec. 910.3 Design and installation. Change the title of the first row of the table from "Group F-1 and S-1" to include "Group H" and to read as follows:

Group H, F-1, S-1

Table 910.3; Change the title of the first row of the table to read as follows:

[F] TABLE 910.3
REQUIREMENTS FOR DRAFT CURTAINS AND SMOKE AND HEAT VENTS[a]

OCCUPANCY GROUP AND COMMODITY CLASSIFICATION	DESIGNATED STORAGE HEIGHT (feet)	MINIMUM DRAFT CURTAIN DEPTH (feet)	MAXIMUM AREA FORMED BY DRAFT CURTAINS (square feet)	VENT-AREA TO-FLOOR-AREA RATIO[c]	MAXIMUM SPACING OF VENT CENTERS (feet)	MAXIMUM DISTANCE TO VENTS FROM WALL OR DRAFT CURTAINS[b] (feet)
Group F-1, H and S-1	—	0.2 × Hd but ≥ 4	50,000	1:100	120	60
(Balance of table remains unchanged)						

Sec. 910.3.2.1 is deleted.

Sec. 910.3.2.2 is amended by the addition of the following:

Section 910.3.2.2 Sprinkled buildings. Where installed in buildings equipped with an approved automatic sprinkler system, smoke and heat vents shall operate automatically. The automatic operating mechanism of the smoke and heat vents shall operate at a temperature rating at least 100°F (38°C) greater than the temperature rating of the sprinklers installed.

Section 912 Fire Department Connections

Section 912 is amended by the addition of the following:

Section 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.

Section 913 Fire Pumps

Sec. 913 is amended to include the following:

Sec. 913.1 General. When located on the ground level, 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. in height, regardless of any interior doors that are provided. A key box shall be provided at this door, as required by Section 506.1.

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

Sec. 913.4 is amended to add a second paragraph to read as follows:

The fire-pump system shall also be supervised for "loss of power", and "phase reversal" on supervisory circuits, and "pump running" as an alarm condition and shall report individually to the monitoring station.

Section III. All other portions of Article II, Building Code, of Chapter 6 of the City of Plano Code of Ordinances not in conflict with the provisions of this Ordinance, shall remain in full force and effect.

Section IV. It is the intention of the City Council that this Ordinance, and every provision thereof, shall be considered severable, and the invalidity or unconstitutionality of any section, clause, provision or portion of this Ordinance shall not affect the validity or constitutionality of any other portion of this Ordinance.

Section V. Any person, firm or corporation found to be violating any term or provision of this Ordinance, shall be subject to a fine in accordance with Section 1-4(a) of the City Code of Ordinances for each offense. Every day a violation continues shall constitute a separate offense.

Section VI. This Ordinance shall become effective from and after its passage and publication as required by law.

DULY PASSED AND APPROVED this, the 9th day of March, 2011.

Phil Dyer, MAYOR

ATTEST:

Diane Zucco, CITY SECRETARY

APPROVED AS TO FORM:

for Diane C. Wetherbee, CITY ATTORNEY