ORDINANCE NO. ORD-2009-9138

AN ORDINANCE AMENDING ARTICLE I "IN GENERAL" OF CHAPTER 8 OF THE CODE OF CIVIL AND CRIMINAL ORDINANCES OF THE CITY OF IRVING, TEXAS, BY ADDING DEFINITIONS; AMENDING ARTICLE II "BUILDING CODES" OF CHAPTER 8 OF THE DEVELOPMENT STANDARDS AND CONSTRUCTION CODES OF THE CITY OF IRVING, TEXAS, BY ADOPTING AND AMENDING THE 2006 INTERNATIONAL BUILDING CODE, 2006 INTERNATIONAL RESIDENTIAL CODE, 2006 INTERNATIONAL ENERGY CONSERVATION CODE, 2006 INTERNATIONAL PLUMBING CODE, 2006 INTERNATIONAL FUEL GAS CODE, 2006 INTERNATIONAL MECHANICAL CODE, AND 2008 NATIONAL ELECTRICAL CODE; AMENDING ARTICLE IV "LICENSE, CERTIFICATE OF OCCUPANCY, AND PERMIT" OF CHAPTER 8 OF THE CODE OF CIVIL AND CRIMINAL ORDINANCES OF THE CITY OF IRVING, TEXAS, BY ADOPTING MANUFACTURED HOME SETBACKS; PROVIDING FOR SEVERABILITY, SAVINGS, PENALTY, AND AN EFFECTIVE DATE.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS:

SECTION 1. That Section 8-4 "Definitions" of Chapter 8 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, is hereby amended to read as follows:

Alteration. Any change, addition, or modification in construction; or replacing, adding, modifying, removing, or exchanging manufactured homes, recreational vehicles, or other structures, moving in a new or additional manufactured home, recreational vehicle, or other structure, changing or adding manufactured home community or recreational vehicle community plot or lot lines, and changing manufactured home community or recreational vehicle community property lines.

Back end. The end of a manufactured home or recreational vehicle which is the opposite end from the front end of the unit.

Back side. The side of the manufactured home or recreational vehicle which is the opposite side from the front side of the unit.

Front end. The end of a manufactured home or recreational vehicle where the tongue would be attached or where the headlights are.

Front side. The side of the manufactured home or recreational vehicle where the front door is located or left side when facing the tongue or headlights.

Installation. The construction of the foundation systems, whether temporary or permanent, and the placement and erection of a recreational vehicle, manufactured home, manufactured home component, manufactured home accessory, including fuel tanks, on or near the foundation system and includes supporting, blocking, leveling, securing, anchoring, and properly connections of multiple or expandable sections or components, and performing minor adjustments.

Manufactured home unit plot. A section of the manufactured home community designated for the placement of a single manufactured home.

Porch or *deck.* A structure adjacent to an entry door of a building.

Unit. Manufactured home space, manufactured home, recreational vehicle, washateria, office, clubhouse, and athletic facility.

Unit plot. A piece of ground set aside and designated for occupancy for one (1) manufactured home, recreational vehicle, or actually occupied by a manufactured home or recreational vehicle.

Unit plot line. The imaginary or actual marked line around any manufactured home unit plot or recreational vehicle unit plot.

SECTION 2. That Section 8-5 "International Building Code" of Chapter 8 of Development Standards and Construction Codes of the City of Irving, Texas, is hereby amended to read as follows:

Sec. 8-5. International Building Code.

(a) **Commercial Building Code.** The 2006 edition of the International Building Code with amendments, modifications, and deletions as specified in this section is adopted as the commercial building code for the City of Irving, Texas.

(b) **Amendments, modifications, and deletions to the 2006 International Building Code.** Amendments, modifications, and deletions to the 2006 *International Building Code* are adopted as follows:

Section 101.1. Section 101.1 of Section 101 "General" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

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

Section 101.2 Section 101.2 of Section 101 "General" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

101.2 Scope. The provisions of this code shall apply to the construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures.

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories above grade plane in height with a separate means of egress and their accessory structures shall comply with the *International Residential Code*.

2. Existing buildings undergoing repair, alterations or additions, and change of occupancy shall be permitted to comply with the *International Existing Building Code* with prior approval of the building official. Otherwise, see Chapter 34.

Section 101.2.1. Section 101.2.1 of Section 101 "General" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

101.2.1 Appendices. Provisions in the appendices shall not apply unless specifically adopted. Appendix C "Group U – Agricultural Buildings," Appendix E "Supplementary Accessibility Requirements," and Appendix I "Patio Covers" shall be considered part of the requirements of this code. Appendix L "Fee Schedule" and Appendix M "Aircraft Noise Attenuation Requirements" have been added and shall be considered part of the requirements of this code.

Section 101.3. Section 101.3 of Section 101 "General" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

101.3 Intent. The purpose of this code is to establish the minimum requirements to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, stability, sanitation, adequate light and ventilation, energy conservation, and safety to life and property from fire and other hazards attributed to the built environment and to provide safety to fire fighters and emergency responders during emergency operations. The administrative requirements and procedures of this chapter shall also apply to the referenced codes in Section 101.4 of this code.

Section 101.4 Section 101.4 of Section 101 "General" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

101.4 Referenced codes. The other codes listed in Sections 101.4.1 through 101.4.7 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 ICC *Electrical Code* shall mean the Electrical Code as adopted.

Section 103. Section 103 "Department of Building Safety" of Chapter 1 "Administration" of the 2006 International Building Code is amended in its entirety to read as follows:

SECTION 103
DEPARTMENT OF PLANNING AND INSPECTIONS

103.1 Creation of enforcement agency. The department of planning and inspections is hereby created and the official in charge thereof shall be known as the building official. Wherever the term "department of building safety" is used elsewhere in this code, it shall mean the department of planning and inspections.

Section 105.2. Section 105.2 of Section 105 "Permits" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

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

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses, and similar uses, not exceeding 6 feet in any dimension (includes height measured from adjacent grade to the highest point of the roof).

2. Installation or repair of retaining walls which are not over 30” in height of exposed face, unless supporting a surcharge or impounding Class I, II, or III-A liquids.

3. Water tanks supported directly on grade if the capacity does not exceed 5,000 gallons and the ratio of height to diameter or width does not exceed 2:1.

4. Sidewalks exceeding 4 feet in width, paving, or driveways which are:

    a. On private property;
    b. Not more than 30 inches above adjacent grade;
    c. Not over any basement or story below;
    d. Not located in any required front or street-side yard; and
    e. Not exceeding 120 square feet in area if located in a non-street side or rear yard.

    For purposes of this section, the maintenance or repair of pavement existing on October 2, 2008, is exempt from permit.

5. Painting, papering, tiling, carpeting, cabinets, counter tops, and similar finish work.

6. Temporary motion picture, television, and theater stage sets and scenery.

7. Prefabricated swimming pools accessory to a Group R-3 occupancy, as applicable in Section 101.2, which are less than 24 inches deep, do not exceed 5,000 gallons, and are installed entirely above ground.

8. Swings and other playground equipment.

9. Window awnings supported by an exterior wall which do not project more than 54 inches from the exterior wall and do not require additional support of Group R-3, as applicable in Section 101.2, and Group U occupancies.

10. Nonfixed and movable fixtures, cases, racks, counters, and partitions not over 5 feet 9 inches in height.

Electrical: In accordance with the *National Electrical Code* as adopted.

Gas:

1. Portable heating appliance.

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

Mechanical:

1. Portable heating appliance.

2. Portable ventilation equipment.

3. Portable cooling unit.

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

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

6. Portable evaporative cooler.

7. Self-contained refrigeration system containing 10 pounds or less of refrigerant and actuated by motors of 1 horsepower or less.

Plumbing:

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

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

Section 106.1.1. Section 106.1.1 of Section 106 "Construction Documents" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

106.1.1 Information on construction documents. Construction documents shall be dimensioned and drawn upon suitable material. Civil engineering drawings shall be submitted on 24 inch by 36 inch paper. Approved drawings shall be submitted electronically. Construction documents shall be of sufficient clarity to indicate the location, nature, and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules, and regulations, as determined by the building official.

Section 108.2. Section 108.2 of Section 108 "Fees" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

108.2 Schedule of permit fees. On buildings, structures, electrical, gas, mechanical, and plumbing systems or alterations requiring a permit, a fee for each permit shall be paid as required, in accordance with Appendix L of this code.

Section 108.4. Section 108.4 of Section 108 "Fees" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

108.4 Work commencing before permit issuance. Any person who commences any work on a building, structure, electrical, gas, mechanical, or plumbing system before obtaining the necessary permits may be subject to 100 percent of the usual permit fee in addition to the required permit fees.

Section 108.6. Section 108.6 of Section 108 "Fees" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

108.6 Refunds. The building official shall authorize the refunding of fees as follows:

1. The full amount of the fee paid hereunder that was erroneously paid or due to extenuating circumstances as approved by the code official.

2. Not more than 80 percent of the permit fee paid when no work or inspection has been done under a permit issued in accordance with this code.

The code official shall not authorize the refunding of any fee paid except upon written application filed by the original permittee not later than 180 days after the date of fee payment.

Section 110.1. Section 110.1 of Section 110 "Certificate of Occupancy" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

110.1 Use and occupancy. No building or structure shall be used or occupied, and no change in the existing occupancy classification of a building or structure or portion thereof shall be made until the building official has issued and the fire code official has approved a certificate of occupancy therefor as provided herein. Issuance of a certificate of occupancy shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction.

Exception: Minor accessory structures not used for human occupancy.

Section 110. Section 110 "Certificate of Occupancy" of Chapter 1 "Administration" of the 2006 International Building Code is amended by adding Sections 110.1.1 and 110.1.2 to read as follows:

110.1.1 Certificate of use. No lot or tract of property upon which no building or structure has been constructed shall be used or occupied, and no change in the existing use of the property or portion thereof shall be made until the building official has issued a certificate of use therefor as provided herein. Issuance of a certificate of use shall not be construed as an approval of a violation of the provisions of this code or of other ordinances of the jurisdiction.

110.1.2 Letter of compliance. The building official shall issue a letter of compliance for buildings which have received shell construction final inspections from both the planning and inspections and fire departments.

Section 110.2. Section 110.2 of Section 110 "Certificate of Occupancy" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

110.2 Certificate issued. After the building official inspects the building, structure, or property and finds no violations of the provisions of this code or any ordinance or regulation or any of the provisions of this code, the building official shall issue a certificate of occupancy or certificate of use that contains the following (where applicable):

1. The permit number.

2. The address of the structure or property.

3. The name and address of the owner.

4. A description of that portion of the structure or property for which the certificate is issued.

5. A statement that the described portion of the structure or property has been inspected for compliance with the requirements of this code for the occupancy and division of occupancy and the use for which the proposed occupancy is classified.

6. The name of the building official.

7. The edition of the code under which the permit/certificate was issued.

8. The use and occupancy, in accordance with the provisions of Chapter 3.

9. The type of construction as defined in Chapter 6.

10. The design occupant load.

11. If an automatic sprinkler system is provided, whether the sprinkler system is required.

12. Any special stipulations and conditions of the certificate of use or occupancy.

13. The name of the tenant.

Section 110.4. Section 110.4 of Section 110 "Certificate of Occupancy" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

110.4 Revocation. The building official is authorized to, in writing, suspend or revoke a certificate of occupancy or use issued under the provisions of this code wherever the certificate is issued in error, or on the basis of incorrect information supplied, or where it is determined that the building, structure, or lot or tract of property or portion thereof is in violation of any ordinance or regulation or any of the provisions of this code.

Section 112. Section 112 "Board of Appeals" of Chapter 1 "Administration" of the 2006 International Building Code is amended in its entirety to read as follows:

SECTION 112
CONSTRUCTION BOARD OF APPEALS

112.1 General. In order to hear and decide appeals of orders, decisions, or determinations made by the building official or fire chief relative to the application and interpretation of the *International Building Code*, *International Residential Code*, *International Plumbing Code*, *International Mechanical Code*, *International Energy Conservation Code*, *International Fuel Gas Code*, *National Electrical Code*, or *International Fire Code*, there shall be and is hereby created a construction board of appeals. The construction board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business.

112.2 Limitations on authority. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The board shall have no authority to waive requirements of this code, but may only vary requirements to allow an alternate method or material when the alternate method or material would be as good as or better than the requirements of the code.

112.3 Appointment. There has been established the construction board of appeals consisting of seven members as follows: one interested citizen, one master electrician or electrical contractor, one master plumber or plumbing contractor, one class "A" licensed mechanical (HVAC) contractor or mechanical engineer, one home builder, one representative from the fire protection industry, and one licensed architect or engineer. The board was appointed by the city council. The building official and the fire chief are ex officio members of the board.

112.3.1 Term of office. Initially, four of the seven members of the construction board of appeals were appointed to serve for two years; and three of the members were appointed to serve one year. Thereafter, each member shall serve for a term of two years which shall expire upon the date of the first city council meeting in November of the year of expiration; however, if an appointment is not made by the city council meeting in November of the year of expiration, the member shall continue in office until reappointed or a successor has been appointed by the city council. Vacancies shall be filled for an unexpired term in the manner in which original appointments are made. Continued absence of any member from regular meetings of the board may, at the discretion of the city council, render the member liable to immediate removal from office.

112.3.1.1 Conflict of interest. No board member shall act in a case in which he or she has a conflict of interest.

112.3.2 Quorum. Four members of the board constitute a quorum. In varying the application of any provision of the *International Building Code*, *International Residential Code*, *International Plumbing Code*, *International Mechanical Code*, *International Energy Conservation Code*, *International Fuel Gas Code, National Electrical Code,* or *International Fire Code,* or in modifying an order of a building official or the fire chief, affirmative votes of the majority present, but not less than four affirmative votes are required.

112.3.3 Records. The building official may act as secretary of the construction board of appeals and may make a detailed record of all its proceedings, which set forth the reasons for its decisions, the vote of each member participating including abstentions, and the absence of a member.

112.3.4 Procedure. The board may establish rules and regulations for its own procedure not inconsistent with the provisions of the *International Building Code*, *International Residential Code*, *International Plumbing Code*, *International Mechanical Code*, *International Energy Conservation Code*, *International Fuel Gas Code*, *National Electrical Code,* or *International Fire Code*. The board may meet at regular intervals, to be determined by the chairperson, and shall meet within 30 days after any notice of appeal has been received by the building official.

112.4 Appeals--Time limit. When the building official or fire chief rejects or refuses to approve the method of construction proposed to be followed in the erection or alteration of a building or structure, or when the owner of the building or structure claims that the provisions of this code do not apply, or that the true intent and meaning of a code, or any of its regulations have been misconstrued or wrongly interpreted, the owner of the building or structure, or his or her agent, may appeal the decision of the building official or fire chief to the construction board of appeals. The person appealing a decision of the building official or fire chief shall file the appeal in writing on a form provided by the building official and submit it with a fee, in accordance with Appendix L "Fee Schedule", to the planning and inspections department within 30 days after the decision is rendered by the building official or fire chief.

112.4.1 Accelerated appeal. In case of a building or structure which, in the opinion of the building official or fire chief, is unsafe or dangerous, the building official or fire chief may limit the time for the appeal to a shorter period.

112.5 Decisions of the construction board of appeals. The construction board of appeals, when on appeal to and after a hearing, may vary the application of any provision of a code when, in its opinion, enforcement would be unjust, and would be contrary to the spirit and purpose of a code, or public interest, or when, in its opinion the interpretation of the building official or fire chief should be modified or reversed.

A decision of the construction board of appeals to vary the application of a provision of the *International Building Code*, *International Residential Code*, *International Plumbing Code*, *International Mechanical Code*, *International Energy Conservation Code*, *International Fuel Gas Code*, *National Electrical Code*, or *International Fire Code*, or to modify an order of the building official or fire chief may specify in what manner such variation or modification is made, the conditions upon which it is made and the reasons for it.

112.5.1 Decisions. Each decision of the construction board of appeals is final, subject, however, to such remedy as any aggrieved party might have at law or in equity. Each decision is in writing and indicates the vote upon the decision. Each decision is to be promptly filed in the office of the building official, and is to be open to public inspections; the building official may send a certified copy by mail or otherwise to the appellant and keep a copy publicly posted in his or her office for two weeks after filing it.

The construction board of appeals will, in each case, reach a decision without unreasonable or unnecessary delay.

If a decision of the construction board of appeals reverses or modifies a refusal, order, or disallowance of the building official or fire chief, or varies the application of a provision of an applicable code, the building official or fire chief will immediately take action in accordance with the decision.

Section 113.4. Section 113.4 of Section 113 "Violations" of Chapter 1 "Administration" of the 2006 International Building Code is amended to read as follows:

113.4 Violation penalties. The penalty for a violation of this code shall be between $1.00 and $500.00, unless the complaint alleges that the offense was committed intentionally, knowingly, or recklessly, in which case, the penalty shall be from $1.00 to $2,000.00. Each day that a violation continues after due notice has been served shall be deemed a separate offense.

Chapter 1. Chapter 1 "Administration" of the 2006 International Building Code is amended by adding Section 116 "Contractor Registration" to read as follows:

SECTION 116
CONTRACTOR REGISTRATION

116.1 Contractor registration required. It shall be unlawful for any person who is not registered by the City as a fence, sign, concrete, electrical, plumbing, mechanical, irrigation, house moving, fuel tank installer, maintenance worker for apartments (plumbing/mechanical), or general contractor to secure a permit as provided for in this code.

Exception: Homeowners may obtain permits to perform work at a residence for which they have a homestead tax exemption and in which they live, without being registered or without the requirement of hiring a registered contractor.

116.2 Method of registration. To register with the City as a contractor, an application shall be made in writing on forms furnished by the building official for that purpose along with the registration fee as required in Appendix L "Fee Schedule."

116.3 Contractor registration renewal. Every contractor registration provided for in this code shall expire one year following the date of its issuance and shall be renewed by the building official upon application and upon the payment to the City of the required renewal fee.

*Section 202***.** Section 202 "Definitions" of Chapter 2 "Definitions" of the 2006 International Building Code is amended by changing the definition of "Building Official" to read as follows:

BUILDING OFFICIAL. The City Manager designee to this position or his or her designated representative.

Section 202. Section 202 "Definitions" of Chapter 2 "Definitions" of the 2006 International Building Code is amended by adding the following definitions:

FIRE CHIEF. The chief of the City of Irving fire department or a duly authorized representative.

HIGH-RISE BUILDING. A building having any floor used for human occupancy located more than 75 feet above the lowest level of fire department vehicle access.

Section 304.1. Section 304.1 of Section 304 "Business Group B" of Chapter 3 "Use and Occupancy Classification" of the 2006 International Building Code is amended to read as follows:

304.1 Business Group B. Business Group B occupancy includes, among others, the use of a building or structure, or a portion thereof, for office, professional, or service-type transactions, including storage of records and accounts. Business occupancies shall include, but not be limited to, the following:

Airport traffic control towers
Animal hospitals, kennels, and pounds
Banks
Barber and beauty shops
Car wash
Civic administration
Clinic–outpatient
Dry cleaning and laundries; pick-up and delivery stations and self-service
Educational occupancies for students above the 12th grade
Electronic data processing
Fire stations
Laboratories: testing and research
Motor vehicle showrooms
Police stations with detention facilities for 5 or less
Post offices
Print shops

Professional services (architects, attorneys, dentists, physicians, engineers, etc.)
Radio and television stations
Telephone exchanges
Training and skill development not within a school or academic program

Section 403.1. Section 403.1 of Section 403 "High-Rise Buildings" of Chapter 4 "Special Detailed Requirements Based on Use and Occupancy" of the 2006 International Building Code is amended to read as follows:

403.1 Applicability. The provisions of this section shall apply to buildings with an occupied floor located more than 75 feet above the lowest level of fire department vehicle access.

Exception: The provisions of this section shall not apply to the following buildings and structures:

1. Airport traffic control towers in accordance with Section 412.

2. Open parking garages in accordance with Section 406.3.

3. Open air portions of buildings with an occupancy in Group A-5 in accordance with Section 303.1.

4. Low-hazard special industrial occupancies in accordance with Section 503.1.1.

5. Buildings with an occupancy in Group H-1, H-2, or H-3 in accordance with Section 415.

Section 403.2. Section 403.2 of Section 403 "High-Rise Buildings" of Chapter 4 "Special Detailed Requirements Based on Use and Occupancy" of the 2006 International Building Code is amended to read as follows:

[F] 403.2 Automatic sprinkler system. Buildings and structures shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and a secondary water supply where required by Section 903.3.5.2.

Exception: An automatic sprinkler system shall not be required in spaces or areas of open parking garages in accordance with Section 406.3.

Section 404.1.1. Section 404.1.1 of Section 404 "Atriums" of Chapter 4 "Special Detailed Requirements Based on Use and Occupancy" of the 2006 International Building Code is amended to read as follows:

404.1.1 Definition. The following word and term shall, for the purposes of this chapter and as used elsewhere in this code, have the meaning shown herein.

ATRIUM. An opening connecting three or more stories other than enclosed stairways, elevators, hoistways, escalators, plumbing, electrical, air-conditioning, or other equipment, which is closed at the top and not defined as a mall. Stories, as used in this definition, do not include balconies within assembly groups or mezzanines that comply with Section 505.

Section 406.1.4. Section 406.1.4 of Section 406 "Motor-Vehicle-Related Occupancies" of Chapter 4 "Special Detailed Requirements Based on Use and Occupancy" of the 2006 International Building Code is amended to read as follows:

406.1.4 Separation. Separations shall comply with the following:

1. The private garage shall be separated from the dwelling unit and its attic area by means of a minimum 1/2-inch gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8-inch Type X gypsum board or equivalent. Door openings between a private garage and the dwelling unit shall be equipped with either solid wood doors or solid or honeycomb core steel doors not less than 1-3/8 inches thick, or doors in compliance with Section 715.4.3. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Doors shall be self-closing and self-latching.

2. Ducts in a private garage and ducts penetrating the walls or ceilings separating the dwelling unit from the garage shall be constructed of a minimum 0.019-inch sheet steel and shall have no openings into the garage.

3. A separation is not required between a Group R-3 and U carport, provided the carport is entirely open on two or more sides and there are not enclosed areas above.

4. A separation is not required between a Group R-2 and U carport provided that the carport is non-combustible and entirely open on all sides and that the distance between the two is at least 10 feet.

Section 406.2.7. Section 406.2.7 of Section 406 "Motor-Vehicle-Related Occupancies" of Chapter 4 "Special Detailed Requirements Based on Use and Occupancy" of the 2006 International Building Code is amended to read as follows:

406.2.7 Mixed separation. Parking garages shall be separated from other occupancies in accordance with Section 508.

Section 406.6.1. Section 406.6.1 of Section 406 "Motor-Vehicle-Related Occupancies" of Chapter 4 "Special Detailed Requirements Based on Use and Occupancy" of the 2006 International Building Code is amended to read as follows:

406.6.1 General. Repair garages shall be constructed in accordance with the *International Fire Code* and this section. This occupancy shall not include motor fuel-dispensing facilities, as regulated in Section 406.5

This occupancy shall include garages involved in servicing of motor vehicles for items such as lube changes, inspections, windshield repair or replacement, shocks, minor part replacement, and other such non-major repair. When the repair garage is only involved in such minor repair, it need not comply with Section 406.6.2.

Section 407. Section 407 "Group I-2" of Chapter 4 "Special Detailed Requirements Based on Use and Occupancy" of the 2006 International Building Code is amended by adding section 407.8 to read as follows:

407.8 Special egress control. In buildings that are fully protected with approved automatic fire sprinkler systems and smoke detection systems, where building occupants are flight risks, exterior egress doors may be permitted to be equipped with an egress control system which shall be installed in accordance with all of the following criteria:

1. Design and operation of the egress control system shall be approved by the fire chief or his duly authorized representative.

2. Locking devices must be electro-magnetic.

3. Throw-bolt type locks, panic hardware, or fire exit hardware shall not be installed on egress controlled doors.

4. All egress controlled doors shall be capable of being unlocked simultaneously upon a signal from a central location.

5. Loss of power to a part of the egress control system that locks the doors shall automatically unlock the doors.

6. Activation of the building fire alarm, fire detection, or automatic fire sprinkler system shall automatically unlock the egress controlled doors, and the egress controlled doors shall remain unlocked until the fire alarm system has been reset.

7. A manual unlocking button shall be provided within 12 inches of each egress controlled door. These buttons shall be red in color, circular, and a minimum of 1-1/2 inches in diameter. A sign stating "Push to Exit" with one inch letters on a contrasting background shall be provided near the button. The button may be located behind a break glass device.

Section 506.2.2. Section 506.2.2 of Section 506 "Area Modifications" of Chapter 5 "General Building Heights and Areas" of the 2006 International Building Code is amended to read as follows:

506.2.2 Open space limits. 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 from the street or approved fire lane shall be provided for hose lay measurement pathway requirements.

Section 508.2.1. Section 508.2.1 of Section 508 "Mixed Use and Occupancy" of Chapter 5 "General Building Heights and Areas" of the 2006 International Building Code is amended to read as follows:

508.2.1 Occupancy classification. An incidental use area shall be classified in accordance with the occupancy of that portion of the building in which it is located.

Exception: Incidental use areas within and serving a dwelling unit are not required to comply with this section.

Section 508.3.1. Section 508.3.1 of Section 508 "Mixed Use and Occupancy" of Chapter 5 "General Building Heights and Areas" of the 2006 International Building Code is amended to read as follows:

508.3.1 Accessory occupancies. Accessory occupancies are those occupancies subsidiary to the main occupancy of the building or portion therof. Aggregate accessory occupancies shall not occupy more than 10 percent of the area of the story in which they are located and shall not exceed the tabular values in Table 503, without height and area increases in accordance with Sections 504 and 506 for such accessory occupancies.

Exceptions:

1. Accessory assembly areas having a floor area less than 750 square feet are not considered separate occupancies.

2. Assembly areas that are accessory to Group E occupancies are not considered separate occupancies except when applying the assembly occupancy requirements of Chapters 10 and 11.

3. Accessory religious educational rooms and religious auditoriums with occupant loads of less than 100 are not considered separate occupancies

Table 602. Table 602 "Fire-Resistance Rating Requirements for Exterior Walls Based on Fire Separation Distance" of Section 602 "Construction Classification" of Chapter 6 "Types of Construction" of the 2006 International Building Code is amended by changing footnote "b" to read as follows:

b. For special requirements for Group U occupancies, see Section 406.1.2. Group R-3 and Group U when used as accessory to Group R-3, as applicable in Section 101.2, shall not be required to have a fire-resistance rating where the fire separation distance is 3 feet or more. Group R-2 and Group U carport, as applicable in Section 406.1.4, Exception 4, shall be required to have a fire-resistance rating where fire separation distance is 10 feet or less.

Section 705.11. Section 705.11 of Section 705 "Fire Walls" of Chapter 7 "Fire-Resistance-Rated Construction" of the 2006 International Building Code is amended to read as follows:

705.11 Ducts and air transfer openings. Ducts and air transfer openings shall not penetrate fire walls.

Exception: For other than hazardous exhaust ducts, penetrations by ducts and air transfer openings of fire walls that are not on a lot line shall be allowed provided the penetrations comply with Sections 712 and 716. The size and aggregate width of all openings shall not exceed the limitations of Section 705.8.

Section 706.3.9. Section 706.3.9 of Section 706 "Fire Barriers" of Chapter 7 "Fire-Resistance-Rated Construction" of the 2006 International Building Code is amended to read as follows:

706.3.9 Fire areas. The fire barrier or horizontal assembly, or both, separating occupancies into different fire areas shall have a fire-resistance rating of not less than that indicated in Table 706.3.9 for a single occupancy and the most restrictive value indicated in Table 706.3.9 shall apply to the entire building or portion thereof for a mixed occupancy.

Section 707.2. Section 707.2 of Section 707 "Shaft Enclosures" of Chapter 7 "Fire-Resistance-Rated Construction" of the 2006 International Building Code is amended to read as follows:

707.2 Shaft enclosure required. Openings through a floor/ceiling assembly shall be protected by a shaft enclosure complying with this section.

Exceptions:

1. A shaft enclosure is not required for openings totally within an individual residential dwelling unit and connecting four stories or less.

   A shaft enclosure is not required in a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 for an escalator opening or stairway that is not a portion of the means of egress protected according to Item 2.1 or 2.2:

   2.1. Where the area of the floor opening between stories does not exceed twice the horizontal projected area of the escalator or stairway and the opening is protected by a draft curtain and closely spaced sprinklers in accordance with NFPA 13. In other than Groups B and M, this application is limited to openings that do not connect more than four stories.

   2.2. Where the opening is protected by approved power-operated automatic shutters at every penetrated floor. The shutters shall be of noncombustible construction and have a fire-resistance rating of not less than 1.5 hours. The shutter shall be so constructed as to close immediately upon the actuation of a smoke detector installed in accordance with Section 907.11 and shall completely shut off the well opening. Escalators shall cease operation when the shutter begins to close. The shutter shall operate at a speed of not more than 30 feet per minute and shall be equipped with a sensitive leading edge to arrest its progress where in contact with any obstacle, and to continue its progress on release therefrom.

3. A shaft enclosure is not required for penetrations by pipe, tube, conduit, wire, cable, and vents protected in accordance with Section 712.4.

4. A shaft enclosure is not required for penetrations by ducts protected in accordance with Section 712.4. Grease ducts shall be protected in accordance with the *International Mechanical Code*.

5. In other than Group H occupancies, a shaft enclosure is not required for floor openings complying with the provisions for atriums in Section 404.

6. A shaft enclosure is not required for approved masonry chimneys where annular space protection is provided at each floor level in accordance with Section 717.2.5.

7. In other than Groups I-2 and I-3, a shaft enclosure is not required for a floor opening or air transfer opening that complies with the following:

   7.1. Does not connect more than two stories.

   7.2. Is not part of the required means of egress system, except as permitted in Section 1020.1.

   7.3. Is not concealed within the building construction.

7.4. Is separated from floor openings and air transfer openings serving other floors by construction conforming to required shaft enclosures.

7.5. Is limited to the same smoke compartment.

8. A shaft enclosure is not required for automobile ramps in open and enclosed parking garages constructed in accordance with Sections 406.3 and 406.4, respectively.

9. A shaft enclosure is not required for floor openings between a mezzanine and the floor below.

10. A shaft enclosure is not required for joints protected by a fire-resistant joint system in accordance with Section 713.

11. A shaft enclosure shall not be required for floor openings created by unenclosed stairs or ramps in accordance with Exception 8 or 9 in Section 1020.1.

12. Floor openings protected by floor fire door assemblies in accordance with Section 711.8.

13. Where permitted by other sections of this code.

Section 715.4.7.4. Section 715.4.7.4 of Section 715 "Opening Protectives" of Chapter 7 "Fire-Resistance-Rated Construction" of the 2006 International Building Code is amended to read as follows:

715.4.7.4 Doors in pedestrian ways. Horizontal sliding or horizontal rolling fire doors in openings through which pedestrians travel shall be heat activated or activated by smoke detectors with alarm verification. Vertical sliding or vertical rolling fire doors in openings through which pedestrians, fire fighters, or emergency responders travel are prohibited.

Section 716.5.2. Section 716.5.2 of Section 716 "Ducts and Air Transfer Openings" of Chapter 7 "Fire-Resistance-Rated Construction" of the 2006 International Building Code is amended to read as follows:

716.5.2 Fire barriers. Ducts and transfer openings of fire barriers shall be protected with approved fire dampers installed in accordance with their listing. Ducts and air transfer openings shall not penetrate exit enclosures and exit passageways except as permitted by Sections 1020.1.2 and 1021.5, respectively.

Exception: Fire dampers are not required at penetrations of fire barriers where any of the following apply:

1. Penetrations are tested in accordance with ASTM E119 as part of the fire-resistance rated assembly.

2. Ducts are used as part of an approved smoke control system in accordance with Section 909 and where the use of a fire damper would interfere with the operation of a smoke control system.

3. Such walls are penetrated by ducted HVAC systems, have a required fire-resistance

rating of 1 hour or less, are in areas of other than Group H and are in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 and 903.3.1.2. For the purposes of this exception, a ducted HVAC system shall be a duct system for conveying supply, return, or exhaust air as part of the structure's HVAC system. Such a duct system shall be constructed of sheet steel not less than 26 gage thickness and shall be continuous from the air-handling appliance or equipment to the air outlet and inlet terminals.

4. In the duct penetration of the separation between the private garage and its residence when constructed in accordance with Section 406.1.4, Exception 2.

Section 901. Section 901 "General" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended by adding Section 901.6.1.1 to read as follows:

901.6.1.1 Standpipe testing. Building owners/managers must utilize a licensed fire protection contractor to test and certify standpipe systems. In addition to the testing and maintenance requirements of NFPA 25 applying to standpipe systems, 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 hydrostatically tested for all FDCs 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 contractor 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. 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.

4. If the FDC is not already provided with approved caps, the contractor shall install such caps for all FDCs.

5. Upon successful completion of standpipe test, the contractor shall place a blue tag (as per "Texas Administrative Code, Title 28. Insurance, Part I. Texas Department of Insurance, Chapter 34. State Fire Marshal, Subchapter G. Fire Sprinkler Rules, 28 TAC § 34.720. 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 contractor shall follow the procedures as required by "Texas Administrative Code, Title 28. Insurance, Part I. Texas Department of Insurance, Chapter 34. State Fire Marshal, Subchapter G. Fire Sprinkler Rules, 28 TAC" with regard to Yellow Tags and Red Tags or any deficiencies noted during the testing, including the required notification of the fire chief.

7. Additionally, records of the testing shall be maintained by the owner and contractor, 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 chief for requests to remove existing fire hose from Class II and III standpipe systems where employees are not trained in the utilization of this fire fighting 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 chief.

Section 902.1. Section 902.1 of Section 902 "Definitions" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended by changing the definition of "Standpipe, Types Of" to read as follows:

[F] STANDPIPE, TYPES OF. Standpipe types are as follows:

Automatic dry. A dry standpipe system, normally filled with pressurized air, that is arranged through the use of a device, such as dry pipe valve, to admit water into the system piping automatically upon the opening of a hose valve. The water supply for an automatic dry standpipe system shall be capable of supplying the system demand.

Automatic wet. A wet standpipe system that has a water supply that is capable of supplying the system demand automatically.

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 meet the system demand. The system must be supervised as specified in Section 905.2.

Manual wet. A wet standpipe system connected to a water supply for the purpose of maintaining water within the system but does not have a water supply capable of delivering the system demand attached to the system. Manual wet standpipe systems require water from a fire department pumper (or the like) to be pumped into the system in order to meet the system demand.

Semiautomatic dry. A dry standpipe system that is arranged through the use of a device, such as a deluge valve, to admit water into the system piping upon activation of a remote control device located at a hose connection. A remote control activation device shall be provided at each hose connection. The water supply for a semiautomatic dry standpipe system shall be capable of supplying the system demand.

Section 903. Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended by adding Section 903.1.2 to read as follows:

903.1.2 Residential systems. Unless specifically allowed by this code or the 2006 *International Fire Code*, residential sprinkler systems installed in accordance with NFPA 13D or NFPA 13R shall not be recognized for the purposes of exceptions or reductions, commonly referred to as "trade-offs," permitted by other requirements of this code.

Section 903.2. Section 903.2 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 903.2 Where required. Approved automatic sprinkler systems in new buildings and structures shall be provided in the locations described in this section.

Section 903.2.1.1. Section 903.2.1.1 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 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. A new building or addition exceeds 6,000 square feet or the aggregate fire area exceeds 12,000 square feet;

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; or

4. The fire area contains a multi-theater complex.

Section 903.2.1.2. Section 903.2.1.2 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 903.2.1.2 Group A-2. An automatic sprinkler system shall be provided for Group A-2 occupancies where one of the following conditions exists:

1. A new building or addition exceeds 5,000 square feet or the aggregate fire area exceeds 5,000 square feet;

2. The fire area has an occupant load of 100 or more; or

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

Section 903.2.1.3. Section 903.2.1.3 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 903.2.1.3 Group A-3. An automatic sprinkler system shall be provided for Group A-3 occupancies where one of the following conditions exists:

1. A new building or addition exceeds 6,000 square feet or the aggregate fire area exceeds 12,000 square feet;

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

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

Exception: Areas used exclusively as participant sports areas (actual playing areas) where the main floor area is located at the same level as the level of exit discharge of the main

entrance and exit.

Section 903.2.1.4. Section 903.2.1.4 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 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. A new building or addition exceeds 6,000 square feet or the aggregate fire area exceeds 12,000 square feet;

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

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

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

Section 903.2.2. Section 903.2.2 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 903.2.2 Group E. An automatic sprinkler system shall be provided for Group E occupancies as follows:

1. A new building or addition exceeds 6,000 square feet or the aggregate fire area exceeds 20,000 square feet; or

2. Throughout every portion of educational buildings 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.

Section 903.2.3. Section 903.2.3 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 903.2.3 Group F-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy where one of the following conditions exists:

1. The building exceeds 6,000 square feet;

2. The fire area is located more than three stories above grade plane; or

3. The combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 6,000 square feet.

Section 903.2.5. Section 903.2.5 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 903.2.5 Group I. An automatic sprinkler system shall be provided throughout all buildings with a Group I fire area.

Exception: An automatic fire sprinkler system installed in accordance with Section 903.3.1.2 or 903.3.1.3 shall be allowed in Group I-1 Residential Board and Care facilities not otherwise required to comply with NFPA 13. Sprinkler systems must provide complete sprinkler protection in all living areas, sleeping areas, closets, bathrooms, hallways, stairways, meeting and community rooms, and similar areas and be enhanced with a fire department connection, attic protection, and monitoring by a central station and shall be maintained in proper working condition at all times the facility is occupied by any person.

Section 903.2.6. Section 903.2.6 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 903.2.6 Group M. An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

1. The building exceeds 6,000 square feet;

2. The fire area is located more than three stories above grade plane; or

3. The combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 6,000 square feet.

Section 903.2.8. Section 903.2.8 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 903.2.8 Group S-1. An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

1. The building exceeds 6,000 square feet;

2. The 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 6,000 square feet.

Section 903.2.8.1. Section 903.2.8.1 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 903.2.8.1 Repair garages. An automatic sprinkler system shall be provided throughout all buildings used as repair garages in accordance with the International Building Code, as follows:

1. The building exceeds 6,000 square feet; or

2. A building with a repair garage servicing vehicles parked in a basement.

Section 903. Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended by adding Section 903.2.8.3 to read as follows:

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

Exception: One-story self-service storage facilities not exceeding 6,000 square feet total building area or fire area that have no interior corridors, with a one-hour fire barrier separation wall installed between every storage compartment.

Section 903.2.10. Section 903.2.10 Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code are amended to read as follows:

[F] 903.2.10 All occupancies except Groups R-3 and U. An automatic sprinkler system shall be installed in the locations set forth in Sections 903.2.10.1 through 903.2.10.1.3.

Section 903.2.10.3. Section 903.2.10.3 Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code are amended to read as follows:

[F] 903.2.10.3 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, that is located 35 feet or more above the lowest level of fire department vehicle access.

Exception: Open parking structures in compliance with Section 406.3.

Section 903. Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended by adding Sections 903.2.10.4 through 903.2.10.6 to read as follows:

903.2.10.4 High-piled combustible storage. For any building with a clear height exceeding 12 feet, see Chapter 23 of the *International Fire Code* to determine if those provisions apply.

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

903.2.10.6 Buildings over 6,000 sq. ft. An automatic sprinkler system shall be installed throughout all buildings with a building area over 6,000 square feet. For the purpose of this provision, fire walls shall not define separate buildings.

Exceptions:

1. Open parking garages in compliance with Section 406.3.

2. Group A-5 occupancies.

Section 903.3.1.1.1. Section 903.3.1.1.1 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 903.3.1.1.1 Exempt locations. When approved by the 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.

Section 903.3.1.2. Section 903.3.1.2 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 903.3.1.2 NFPA 13R sprinkler systems. Where allowed in buildings of Group R, up to and including four stories in height, but having no floor used for human occupancy more than 55 feet above the lowest level of fire department vehicle access, automatic sprinkler systems shall be installed throughout in accordance with NFPA 13R. However, for the purposes of exceptions or reductions permitted by other requirements of this code, see Section 903.2.

Section 903.3.1.2.1 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of this code is amended to read as follows:

[F] 903.3.1.2.1 Balconies. Sprinkler protection shall be provided for exterior balconies and ground floor patios. Side wall sprinklers that are used to protect such areas shall be permitted to be located such that their deflectors are within 1 inch to 6 inches below the structural members, and a maximum distance of 14 inches below the deck of the exterior balconies that are constructed of open wood joist construction.

Section 903.3.5. Section 903.3.5 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended by adding the second paragraph to read as follows:

[F] 903.3.5 Water supplies. Water supplies for automatic sprinkler systems shall comply with this section and the standards referenced in Section 903.3.1. The potable water supply shall be protected against backflow in accordance with the requirements of this section and the *International Plumbing Code.*

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 5 psi safety factor.

Section 903.3.7. Section 903.3.7 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended by adding Section 903.3.7 to read as follows:

[F] 903.3.7 Fire department connections. The number, size, and location of all fire department connections on any fire protection system shall be as approved by the fire code official. All combined standpipe systems shall be equipped with a minimum of one four-way fire department connection. Combined standpipe systems with three or more standpipes or any system in excess of 1,000 gpm system demand shall be provided with not less than two four-way fire department connections. All fire department connections shall be interconnected in a manner that allows any system in the building to be supplied by any or all of those fire department connections. All high-rise buildings shall have not less than two four-way fire department connections. All fire department connections shall be located on a street front or fire lane and not less than 18 inches nor more than 4 feet above grade and shall be equipped with approved substantial plugs or caps. All fire department connections shall be protected against mechanical injury and shall be visible and accessible. The location of fire department connections shall be as approved by the fire department, and shall not exceed 45 feet from a dedicated street or approved designated fire lane. In high-rise buildings having two or more zones, a minimum of two fire department connections shall be provided for each zone.

Section 903.4. Section 903.4 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 903.4 Sprinkler system monitoring and alarms. All valves controlling the water supply for automatic sprinkler systems, pumps, tanks, water levels and temperatures, critical air pressures, and water-flow switches on all sprinkler systems shall be electrically supervised.

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 and no longer 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.

Preaction solenoid valves shall be of the type that when power is lost or the actuator is removed, the valve will open and introduce water into the sprinkler piping.

Exceptions:

1. Automatic sprinkler systems protecting one- and two-family dwellings.

2. Limited area systems serving fewer than 20 sprinklers.

3. Automatic sprinkler systems installed in accordance with NFPA 13R where a common supply main is used to supply both domestic water and the automatic sprinkler systems and a separate shutoff valve for the automatic sprinkler system is not provided.

4. Jockey pump control valves that are sealed or locked in the open position.

5. Control valves to commercial kitchen hoods, paint spray booths, or dip tanks that are sealed or locked in the open position.

6. Valves controlling the fuel supply to fire pump engines that are sealed or locked in the open position.

7. Trim valves to pressure switches in dry, preaction, and deluge sprinkler systems that are sealed or locked in the open position.

Section 903.4.3. Section 903.4.3 of Section 903 "Automatic Sprinkler Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 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 in all buildings 2 stories or more.

Exception: Group R occupancies 3 stories or less.

Section 905.2. Section 905.2 of Section 905 "Standpipe Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 905.2 Installation standards. Standpipe systems shall be installed in accordance with this section and NFPA 14. Manual dry standpipe systems shall have a minimum of 10 psig and a maximum of 40 psig air pressure with a high/low alarm supervisory signal sent to an approved fire alarm system.

Section 905. Section 905 "Standpipe Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended by adding Section 905.3.8 to read as follows:

[F] 905.3.8 Building area. In buildings exceeding 10,000 square feet in area per story, Class I automatic wet or manual wet standpipes shall be provided where any portion of the building's interior area is more than 200 feet of travel, vertically and horizontally, from the nearest point of fire department vehicle access.

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

Section 905.4. Section 905.4 of Section 905 "Standpipe Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 905.4 Location of Class I standpipe hose connections. Class I standpipe hose connections shall be provided in all of the following locations:

1. In every required stairway, a hose connection shall be provided for each floor level above or below grade. Hose connections shall be located at an intermediate floor level landing between floors, unless otherwise approved by the fire code official.

2. On each side of the wall adjacent to the exit opening of a horizontal exit.

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

4. In covered mall buildings, adjacent to each exterior public entrance to the mall and adjacent to each entrance from an exit passageway or exit corridor to the mall.

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.

6. Where the most remote portion of a non-sprinklered floor or story is more than 150 feet from a hose connection or the most remote portion of a sprinklered floor or story is more than 200 feet from a hose connection, the fire code official is authorized to require that additional hose connections be provided in approved locations.

Section 905. Section 905 "Standpipe Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended by deleting Section 905.5 "Location of Class II standpipe hose connections"; Section 905.5.1 "Groups A-1 and A-2"; Section 905.5.2 "Protection"; and Section 905.5.3 "Class II system 1-inch hose."

Section 905. Section 905 "Standpipe Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended by adding Section 905.6.3 to read as follows:

[F] 905.6.3 Groups A-1 and A-2. In Group A-1 and A-2 occupancies with occupant loads of more than 1,000 persons, hose connections shall be located on each side of any stage, on each side of the rear of the auditorium, on each side of the balcony, and on each tier of dressing rooms.

Section 905.9. Section 905.9 of Section 905 "Standpipe Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 905.9 Valve supervision. Valves controlling water supplies shall be supervised in the open position so that a change in the normal position of the valve will generate a supervisory signal at the supervising station required by Section 903.4. Where a fire alarm system is provided, a signal shall also be transmitted to the control unit.

Exceptions:

1. Valves to underground key or hub valves in roadway boxes provided by the municipality or public utility do not require supervision.

2. Valves locked in the normal position and inspected as provided in this code in buildings not equipped with a fire alarm system.

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 907. Section 907 "Fire Alarm and Detection Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended by adding Section 907.1.3 to read as follows:

907.1.3 Design standards. All new or replacement alarm systems serving 50 or more alarm actuating devices shall be addressable fire detection systems. Alarm systems serving more than 75 smoke detectors or more than 200 total alarm activating devices shall be analog intelligent addressable fire detection systems.

Exception: Existing systems need not comply unless the total building remodel or expansion initiated after April 1, 1998, exceeds 30 percent of the building. When cumulative building remodel or expansion exceeds 50 percent of the building, the building must comply with the requirements of this code within 18 months of permit application.

Section 907.2.1. Section 907.2.1 of Section 907 "Fire Alarm and Detection Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 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.

Section 907.2.3. Section 907.2.3 of Section 907 "Fire Alarm and Detection Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 907.2.3 Group E. A manual fire alarm system 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 feet of 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. 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 2-1/2 or less years of age, see Section 907.2.6.)

2. Manual fire alarm boxes are not required in Group E occupancies where all the following apply:

    2.1. Interior corridors are protected by smoke detectors with alarm verification.

    2.2. Auditoriums, cafeterias, gymnasiums, and the like are protected by heat detectors or other approved detection devices.

    2.3. Shops and laboratories involving dusts or vapors are protected by heat detectors or other approved detection devices.

2.4. Off-premises monitoring is provided.

2.5. The capability to activate the evacuation signal from a central point is provided.

2.6. In buildings where normally occupied spaces are provided with a two-way communication system between such spaces and a constantly attended receiving station from where a general evacuation alarm can be sounded, except in locations specifically designated by the fire code official.

Section 907.2.12. Section 907.2.12 of Section 907 "Fire Alarm and Detection Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 907.2.12 High-rise buildings. Buildings having any floor used for human occupancy located more than 75 feet 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.

Exceptions:

1. Airport traffic control towers in accordance with Sections 412 and 907.2.22.

2. Open parking garages in accordance with Section 406.3.

3. Buildings with an occupancy in Group A-5 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.

4. Low-hazard special occupancies in accordance with Section 503.1.1.

5. Buildings with an occupancy in Group H-1, H-2, or H-3 in accordance with Section 415.

Section 907.3. Section 907.3 of Section 907 "Fire Alarm and Detection Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 907.3 Manual fire alarm boxes. Manual fire alarm boxes shall be installed in accordance with Sections 907.3.1 through 907.3.5. Manual alarm actuating devices shall be an approved double action type.

Section 907. Section 907 "Fire Alarm and Detection Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended by adding Section 907.6.1 to read as follows:

907.6.1 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 initiating circuit conductors shall be Class "A" wired with a minimum of 6 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.

Section 907.8.1. Section 907.8.1 of Section 907 "Fire Alarm and Detection Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 907.8.1 Zoning indicator panel. When two or more alarm zones are required, there shall be a remote zoning indicator panel installed inside the main entrance of all buildings, in a location approved by the fire chief. The visual zone indication shall lock in until the system is reset and shall not be canceled by the operation of the audible-alarm silencing switch.

Exception: A zoning indicator panel is not required when the main control unit approved to be installed inside the main entrance of the building or when the monitoring system is for the fire sprinkler system only.

When duct detectors are installed, readily visible indicator lights in the immediate area of the detector shall be required.

Section 907.10. Section 907.10 of Section 907 "Fire Alarm and Detection Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 907.10 Fire safety functions. Automatic fire detectors utilized for the purpose of performing fire safety functions shall be connected to the building's fire alarm control panel where a fire alarm system is required by Section 907.2. Detectors shall, upon actuation, perform the intended function and activate the alarm notification appliances or activate a visible and audible supervisory signal at a constantly attended location. In buildings not required to be equipped with a fire alarm system, the automatic fire detector shall be powered by normal electrical service and, upon actuation, perform the intended function. The detectors shall be located in accordance with NFPA 72. A heat detector connected to the building fire alarm system shall be provided in elevator shafts. Activation of this heat detector shall initiate the elevator recall functions.

Section 907.11. Section 907.11 of Section 907 "Fire Alarm and Detection Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 907.11 Duct smoke detectors. Duct smoke detectors shall be connected to the building's fire alarm control panel when a fire alarm system is provided. Activation of a duct smoke detector shall initiate a visible and audible supervisory signal at a constantly attended location. Duct smoke detectors shall not be used as a substitute for required open-area detection. When duct detectors are installed, readily visible indicator lights in the immediate area of the detector shall be required.

Section 907.14. Section 907.14 of Section 907 "Fire Alarm and Detection Systems" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 907.14 Monitoring. Fire alarm systems required by this chapter or the *International Fire Code* shall be monitored by an approved listed central station in accordance with NFPA 72. Existing fire alarm systems in existing Groups R-1 and R-2 occupancies shall comply with this provision within 18 months of adoption of this code.

Exception: Supervisory service is not required for:

1. Single- and multiple-station smoke alarms required by Section 907.2.10.

2. Smoke detectors in Group I-3 occupancies.

3. Automatic sprinkler systems in one- and two-family dwellings.

Section 910.1. Section 910.1 of Section 910 "Smoke and Heat Vents" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 910.1 General. Where required by this code or otherwise installed, smoke and heat vents, or mechanical smoke exhaust systems, and draft curtains shall conform to the requirements of this section.

Exceptions:

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

2. Where areas of buildings are equipped with early suppression fast-response (ESFR) sprinklers, only manual smoke and heat vents shall be required within these areas.

Section 910.3.2. Section 910.3.2 of Section 910 "Smoke and Heat Vents" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 910.3.2. Vent operation. Smoke and heat vents shall be approved and labeled and shall be capable of being operated by approved manual means only.

Section 910.3.2.2. Section 910.3.2.2 of Section 910 "Smoke and Heat Vents" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 910.3.2.2 Sprinklered buildings. Where installed in buildings provided with an approved automatic sprinkler system, smoke and heat vents shall be designed to operate manually.

Section 910.3.2.3. Section 910.3.2.3 of Section 910 "Smoke and Heat Vents" of Chapter 9 "Fire Protection Systems" of the 2006 International Building Code is amended to read as follows:

[F] 910.3.2.3. Nonsprinklered buildings. Where installed in buildings not provided with an approved automatic sprinkler system, smoke and heat vents shall operate manually.

Exception: Gravity-operated drop-out vents complying with Section 910.3.2.1.

Section 1004.1.1. Section 1004.1.1 of Section 1004 "Occupant Load" of Chapter 10 "Means of Egress" of the 2006 International Building Code is amended in its entirety to read as follows:

1004.1.1 Areas without fixed seating. The number of occupants shall be computed at the rate of one occupant per unit of area as prescribed in Table 1004.1.1. For areas without fixed seating, the occupant load shall not be less than that number determined by dividing the floor area under consideration by the occupant per unit of area factor assigned to the occupancy as set forth in Table 1004.1.1. Where an intended use is not listed in Table 1004.1.1, the building official shall establish a use based on a listed use that most nearly resembles the intended use.

Section 1008.1.2. Section 1008.1.2 of Section 1008 "Doors, Gates and Turnstiles" of Chapter 10 "Means of Egress" of the 2006 International Building Code is amended to read as follows:

1008.1.2 Door swing. Egress doors shall be of the pivoted, balanced, or side-hinged swinging type.

Exceptions:

1. Private garages, office areas, factory, and storage areas with an occupant load of 10 or less.

2. Group I-3 occupancies used as a place of detention.

3. Critical or intensive care patient rooms within suites of health care facilities.

4. Doors within or serving a single dwelling unit in Groups R-2 and R-3.

5. In other than Group H occupancies, revolving doors complying with Section 1008.1.3.1.

6. In other than Group H occupancies, horizontal sliding doors complying with Section 1008.1.3.3 are permitted in a means of egress.

7. Power-operated doors in accordance with Section 1008.1.3.2.

8. Doors serving a bathroom within an individual sleeping unit in Group R-1.

Doors shall swing in the direction of egress travel where serving an occupant load of 50 or more persons or a Group H occupancy.

The opening force for interior side-swinging doors without closers shall not exceed a 5-pound force. For other side-swinging, sliding, and folding doors, the door latch shall release when subjected to a 15-pound force. The door shall be set in motion when subjected to a 30-pound force. The door shall swing to a full-open position when subjected to a 15-pound force. Forces shall be applied to the latch side.

Section 1008.1.3.4. Section 1008.1.3.4 of Section 1008 "Doors, Gates And Turnstiles" of Chapter 10 "Means of Egress" of the 2006 International Building Code is amended to read as follows:

1008.1.3.4 Access-controlled egress doors. Doors in a means of egress in buildings with an occupancy in Group A, B, E, M, R-1, or R-2 are permitted to be equipped with an approved entrance and egress access control system which shall be installed in accordance with all of the following criteria:

1. A sensor shall be provided on the egress side arranged to detect an occupant approaching the doors. The doors shall be arranged to unlock by a signal from or loss of power to the sensor.

   Exception: A sensor shall not be required where:

   a. The building is equipped throughout with an automatic sprinkler system;

   b. The unlocking device required in Item 3 is located within 12 inches of the unhinged side of a single door or within 6 inches of the hinged side of double doors; or

c. Smoke detection required in Item 5 is provided within 5 feet of both sides of the door.

2. Loss of power to that part of the access control system which locks the doors shall automatically unlock the doors.

3. The doors shall be arranged to unlock from a manual unlocking device located 40 inches to 48 inches vertically above the floor and within 5 feet of the secured doors. The manual unlocking device shall be 1-1/2 inch mushroom type red button. Ready access shall be provided to the manual unlocking device, and the device shall be clearly identified by a sign that reads "PUSH TO EXIT" in letters 1 inch high with a stroke of 1/8 inch on a contrasting background. When operated, the manual unlocking device shall result in direct interruption of power to the lock—independent of the access control system electronics—and the doors shall remain unlocked for a minimum of 30 seconds.

4. Entrance doors in buildings with an occupancy in Group A, B, E, or M shall not be secured from the egress side during periods that the building is open to the general public.

5. A smoke detector tied to the building fire alarm system shall be provided within 5 feet of the egress side of doors equipped with access control devices. Activation of the building fire alarm system shall automatically unlock the doors, and the doors shall remain unlocked until the fire alarm system has been reset.

6. Where the door is equipped with manual panic hardware that simultaneously, without delay, releases all locks/latches securing the door, the sensor in Item 1, the manual unlocking device in Item 3, and the smoke detector in Item 5 are not required.

Section 1008.1.8.6. Section 1008.1.8.6 of Section 1008 "Doors, Gates And Turnstiles" of Chapter 10 "Means of Egress" of the 2006 International Building Code is amended to read as follows:

1008.1.8.6 Delayed egress locks. Approved, listed, delayed egress locks shall be permitted to be installed on doors serving any occupancy except Group A, E, and H occupancies in buildings that are equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or an approved automatic smoke or heat detection system installed in accordance with Section 907, provided that the doors unlock in accordance with Items 1 through 7 below. A building occupant shall not be required to pass through more than one door equipped with a delayed egress lock before entering an exit.

1. The doors unlock upon actuation of the automatic sprinkler system or automatic fire detection system.

2. The doors unlock upon loss of power controlling the lock or lock mechanism.

3. The door locks shall have the capability of being unlocked by a signal from the fire command center.

4. The initiation of an irreversible process which will release the latch in not more than 15 seconds when a force of not more than 15 pounds is applied for 1 second to the release device. Initiation of the irreversible process shall activate an audible signal in the vicinity of the door. Once the door lock has been released by the application of force to the releasing device, relocking shall be by manual means only.

   Exception: Where approved, a delay of not more than 30 seconds is permitted.

5. A sign shall be provided on the door located above and within 12 inches of the release device reading: PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS.

6. Emergency lighting shall be provided at the door.

7. Release device shall be panic hardware.

Section 1017.1. Section 1017.1 of Section 1017 "Corridors" of Chapter 10 "Means of Egress" of the 2006 International Building Code is amended to read as follows:

1017.1 Construction. Corridors shall be fire-resistance rated in accordance with Table 1017.1. The corridor walls required to be fire-resistance rated shall comply with Section 708 for fire partitions.

Exceptions:

1. A fire-resistance rating is not required for corridors in an occupancy in Group E where each room that is used for instruction has at least one door opening directly to the exterior and rooms for assembly purposes have at least one-half of the required means of egress doors opening directly to the exterior. Exterior doors specified in this exception are required to be at ground level.

2. A fire-resistance rating is not required for corridors contained within a dwelling or sleeping unit in an occupancy in Group R.

3. A fire-resistance rating is not required for corridors in open parking garages.

4. A fire-resistance rating is not required for corridors in an occupancy in Group B which is a space requiring only a single means of egress complying with Section 1015.1.

5. In Group B office buildings, corridor walls and ceilings need not be of fire-resistive construction within office spaces of a single tenant when the space is equipped with an approved automatic fire alarm system within the corridor. The actuation of any detector shall activate alarms audible in all areas served by the corridor.

Section 1020.1.7. Section 1020.1.7 of Section 1020 "Vertical Exit Enclosures" of Chapter 10 "Means of Egress" of the 2006 International Building Code is amended to read as follows:

1020.1.7 Smokeproof enclosures. In buildings required to comply with Section 403 or 405, each of the exits of a building that serves a story where the floor surface is located more than 75 feet above the lowest level of fire department vehicle access or more than 30 feet below the level of exit discharge serving such floor levels shall be a smokeproof enclosure or pressurized stairway in accordance with Section 909.20.

Section 1101.2. Section 1101.2 of Section 1101 "General" of Chapter 11 "Accessibility" of the 2006 International Building Code is amended to read as follows:

1101.2 Design. Buildings and facilities shall be designed and constructed to be accessible in accordance with this code and ICC A117.1.

Exception: Buildings regulated under state law and built in accordance with state certified plans, including any variances or waivers granted by the state, shall be deemed to be in compliance with the requirements of this chapter.

Section 1109.2.1. Section 1109.2.1 of Section 1109 "Other Features and Facilities" of Chapter 11 "Accessibility" of the 2006 International Building Code is amended to read as follows:

1109.2.1 Unisex toilet and bathing rooms. In assembly and mercantile occupancies, an accessible unisex toilet room shall be provided where an aggregate of six or more male or female water closets are provided. In buildings of mixed occupancy, only those water closets required for the assembly or mercantile occupancy shall be used to determine the unisex toilet room requirement. In recreational facilities where separate-sex bathing rooms are provided, an accessible unisex bathing room shall be provided. Fixtures located within unisex toilet and bathing rooms shall be included in determining the number of fixtures provided in an occupancy.

Exception: Where each separate-sex bathing room has only one shower or bathtub fixture, a unisex bathing room is not required.

Section 1210.2. Section 1210.2 of Section 1210 "Surrounding Materials" of Chapter 12 "Interior Environment" of the 2006 International Building Code is amended to read as follows:

1210.2 Walls. Walls within 2 feet of urinals and water closets shall have a smooth, hard, nonabsorbent surface, to a height of 4 feet above the floor, and except for structural elements, the materials used in such walls shall be of a type that is not adversely affected by moisture.

Exceptions:

1. Dwelling units and sleeping units.

2. Toilet rooms that are not accessible to the public and which have not more than one water closet, provided that walls around urinals comply with the minimum surrounding material specified by Section 419.3 of *the International Plumbing Code*.

Accessories such as grab bars, towel bars, paper dispensers, and soap dishes, provided on or within walls, shall be installed and sealed to protect structural elements from moisture.

Section 1405. Section 1405 "Installation of Wall Coverings" of Chapter 14 "Exterior Walls" of the 2006 International Building Code is amended by adding Section 1405.3.2.1 to read as follows:

1405.3.2.1 Clay brick. Clay brick used outdoors shall meet Grade SW requirements of either ASTM C216 or ASTM C652.

Table 1505.1. Table 1505.1 "Minimum Roof Covering Classification for Types of Construction" of Section 1505 "Fire Classification" of Chapter 15 "Roof Assemblies and Rooftop Structures" of the 2006 International Building Code is amended by changing footnotes "b" and "c" to read as follows:

b. All individual replacement shingles or shakes shall be in compliance with the rating required by this table.

c. Non-classified roof coverings shall be permitted on buildings of Group U occupancies having not more than 120 square feet of projected roof area. When exceeding 120 square feet of projected roof area, buildings of Group U occupancies may use non-rated, non-combustible roof coverings.

Section 1505. Section 1505 "Fire Classification" of Chapter 15 "Roof Assemblies and Rooftop Structures" of the 2006 International Building Code is amended by deleting Section 1505.7 "Special purpose roofs."

Section 1806. Section 1806 "Retaining Walls" of Chapter 18 "Soils and Foundations" of the 2006 International Building Code is amended in its entirety to read as follows:

SECTION 1806
RETAINING WALLS

1806.1 General. Retaining walls shall be designed to ensure stability against overturning, sliding, excessive foundation pressure, and water uplift. Retaining walls shall be designed for a safety factor of 1.5 against lateral sliding and overturning. Retaining walls shall be designed, inspected, and approved by a registered structural engineer. Retaining walls which require permits shall not be constructed of wood.

1806.2 Property restrictions. The proper performance of retaining walls shall not be based on restrictions or requirements placed on property owners which will require future design or review by the retaining wall design engineer. Any exposed soil in the vicinity of a retaining wall shall be assumed to be landscaped and irrigated. Restrictions which may deprive property owners from full use and enjoyment of property shall not be included in the design or related maintenance requirements of a retaining wall.

Exception: Restrictions clearly stated in easements which are designated on the subdivision plat of record.

Section 2308. Section 2308 "Conventional Light-Frame Construction" of Chapter 23 "Wood" of the 2006 International Building Code is amended by adding Section 2308.2.3 to read as follows:

2308.2.3 Application to engineered design. When accepted by the building official, any portion of this section is permitted to apply to buildings that are otherwise outside the limitations of this section provided that:

1. The resulting design will comply with the requirements specified in Chapter 16;

2. The load limitations of various elements of this section are not exceeded; and

3. The portions of this section which will apply are identified by an engineer in the construction documents.

Section 2901.1. Section 2901.1 of Section 2901 "General" of Chapter 29 "Plumbing Systems" of the 2006 International Building Code is amended to read as follows:

[P] 2901.1 Scope. The provisions of this chapter and the *International Plumbing Code* shall govern the erection, installation, alteration, repairs, relocation, replacement, addition to, use, or maintenance of plumbing equipment and systems. Plumbing systems and equipment shall be constructed, installed, and maintained in accordance with the *International Plumbing Code*. Private sewage disposal systems shall conform to the *International Private Sewage Disposal Code*. 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. Section 2902.1 of Section 2902 "Minimum Plumbing Facilities" of Chapter 29 "Plumbing Systems" of the 2006 International Building Code is amended to read as follows:

[P] 2902.1 Minimum number of fixtures. Plumbing fixtures shall be provided for the type of occupancy and substantially in the number shown in Table 2902.1. Types of occupancies not shown in Table 2902.1 shall be considered individually by the building official. The number of occupants shall be determined by this code. Occupancy classification shall be determined in accordance with Chapter 3.

Section 2902.2. Section 2902.2 of Section 2902 "Minimum Plumbing Facilities" of Chapter 29 "Plumbing Systems" of the 2006 International Building Code is amended to read as follows:

2902.2 Separate facilities. Where plumbing fixtures are required, separate facilities shall be provided for each sex.

Exceptions:

1. Separate facilities shall not be required for dwelling units and sleeping units.

2. Separate facilities shall not be required in food service establishments with a total occupant load, including both employees and customers, of 15 or less.

3. Separate facilities shall not be required in mercantile occupancies in which the maximum occupant load is 50 or less.

4. In Groups B, F, H, M and S occupancies, separate facilities shall be provided for each sex when the number of employees exceeds four.

Section 2902. Section 2902 "Minimum Plumbing Facilities" of Chapter 29 "Plumbing Systems" of the 2006 International Building Code is amended by adding Section 2902.6 to read as follows:

2902.6 Finish material. Finish materials shall comply with Section 1210.

Section 3109.1. Section 3109.1 of Section 3109 "Swimming Pool Enclosures and Safety Devices" of Chapter 31 "Special Construction" of the 2006 International Building Code is amended to read as follows:

3109.1 General. Swimming pools shall comply with the requirements of this section and other applicable sections of this code. Provisions of this section shall not be deemed to nullify any provisions of state law or state code.

2006 International Building Code. The 2006 International Building Code is amended by adding Appendix L "Fee Schedule" and Appendix M "Aircraft Noise Attenuation Requirements" to read as follows:

APPENDIX L

FEE SCHEDULE

L101 Schedule of fees. The following fees shall be charged for the work shown. Other fees may be required under other ordinances. In the event that a permit is to be issued for work not shown below, a fee shall be charged based upon a category of work shown which most nearly resembles the work intended. The permit fees listed may be doubled if work is started prior to the permit being issued.

L102 Combination permit fee schedule (building, electrical, plumbing, and mechanical). The general contractor shall obtain a combination permit for all construction requiring inspection by more than one trade inspector (Items 1 through 7 below). Subcontractors are not required to obtain separate permits when serving as the registered subcontractor for a combination permit. Each subcontractor working under a general contractor's combination permit shall notify the department of planning and inspections and submit all required information prior to any inspection. Combination permits require temporary service poles. Separate permits are required for drive approaches, fences, signs, fire sprinklers, fire alarms, on-site utilities, irrigation systems, retaining walls, etc., unless specifically included in a listed fee.

Item	Fee Type	Fee	Notes
1	**Single family dwelling, Townhouse, Duplex, Triplex** (new)	Plan review – $0.08 per square foot Permit – $0.31 per square foot	Per square foot of all floor area under roof. Fee includes 2 drive approaches
2	**Multi-family complex** (four or more units) (new or addition)	Plan review – See 8 below Permit – $380 per unit Garages – $60 per vehicle section Carports – $30 per vehicle section	Each clubhouse, office, laundry, etc., shall be counted as one unit.
3	**Residential alterations** **Garages** (residential detached) **Fire repair** (residential or multi-family) **Storage buildings over 400 square feet**	Permit – $0.24 per square foot Minimum fee – $95	Per square foot of all floor area under roof of construc-tion. Fee shall not exceed the fee for comparable space for new construction
4	**Residential additions** (any enclosed square footage)	Plan review – $0.08 per square foot Permit – $0.31 per square foot Minimum fee – $208	Per square foot of all floor area under roof

5	**Commercial building** Building area (sq ft) Up to 2,500 2,501 to 10,000 10,001 to 50,000 50,001 to 100,000 100,001 to 300,000 Over 300,000	Plan review – See 8 below Permit fee: $ 900 $ 240 + $0.26/sq ft $ 600 + $0.23/sq ft $1800 + $0.20/sq ft $3000 + $0.19/sq ft $6600 + $0.18/sq ft	Letter of compliance or certificate of occupancy included
6	**Shell building** (includes parking garages and modular buildings)	Plan review – See 8 below Permit – 80% of permit fee in 5 above	Letter of compliance included
7	**Interior finish, Repairs,** or **Remodel**	Plan review – See 8 below Permit – 50% of permit fee in 5 above	Certificate of occupancy included, if required
8	**Plan Review:** -Multi-family/Commercial buildings, new or additions -Interior finish over 2,500 square feet	25% of permit fee	In addition to regular permit fee
9	**Plan review fee -- additional** (changes, revisions, additions)	$40 per hour	One-hour minimum
10	**Swimming pools**	In-ground – $180 Above-ground – $100 Commercial – $300	Sewer P-trap, gas line, and electrical for pool equipment is included. New service requires a separate electrical permit.
11	**Certificate of occupancy,** **Certificate of use**	Restaurant – $180 Auto-related use – $130 Day care – $130 All other occupancy types – $95 Change of tenant name or duplicate – $30	
12	**Re-inspections**	$75	
13	**Drive approaches**	$48 for first two approaches $24 for each additional approach	
14	**Electrical single trade** (temporary service poles, mobile home service, utility releases, clean and shows, service changes)	$48	Each multi-family unit is considered a separate permit
15	**Plumbing single trade** (water, sewer, gas service line replacements, water heaters, and similar plumbing work)	$48	Each multi-family unit is considered a separate permit
16	**Mechanical single trade** (heating, air conditioning installations or replacements and related work)	$48	Each multi-family unit is considered a separate permit
17	**Building single trade** • Storage buildings greater than 6 feet in any dimension up to 400 square feet • Tents greater than 400 square feet • Canopies greater than 1600 square feet • Decks higher than 30 inches above grade • Temporary sales and construction office trailers • Demolitions—single family • Telecommunication antennae • Flatwork	$48	Any additional trades or work, see elsewhere in this fee schedule

18	**Foundation Repair** Foundation area (square feet) (total area of each building's grade-level foundation) 0-1,500 1,501-3,000 3,001-5,000 5,001 and up	 $ 90 $120 $150 $180	Fee is per building
19	**Retaining walls** (with over 30 inches in height of exposed face at any point) Residential single family, single lot Commercial and all other as follows: (Length, Linear feet of wall) Up to 100' 101' to 200' 201'-350' Over 350'	 $150 $150 $150 + $0.30/ft $220 + $0.24/ft $230 + $0.22/ft	
20	**Re-roofing, Roofing overlay:** Single-family, Townhouse Duplex, Triplex Multifamily Commercial	 $48 $48 $60 $90	Fee per structure or building
21	**Fuel tanks, Pumps, Lines** (installation, repair, or replacement)	$90	
22	**Fuel tank, Pump** (removal)	$48	
23	**Fire alarm, Fire sprinkler, Standpipes, Fire control panel**	$96 + $2.40 per additional similar device	Per address/suite/unit
24	**On-Site utilities** (storm drain, domestic water, sanitary sewer, gas line, and fire main)	$60 + $0.06 per linear foot	Fee is per utility
25	**Fire hydrant** (installation or repair)	$48 per hydrant	
26	**Parking lots -- commercial** Resurface/Overlay New parking lot	 $48 $120	Annual outdoor parking permit fees provided in another ordinance
27	**Solar energy system**	$65 + $30 per hour for plan review	
28	**Commercial security** (electric door locks)	$66 for the first lock + $13 for each additional lock	
29	**Record verification, Special services**	$33 per hour	Two-hour minimum. Copy charge is separate.
30	**Construction board of appeals**	$750	Non-refundable
31	**Moved buildings**	$300 for the first section $33 for each additional section(s)	House-moving permits
32	**Set-up of moved buildings, Manufactured home** (move-in) **Demolitions** (single family)	$48 per trade	Additional floor area – see Item 4
33	**Housing-moving case** (requiring city council approval)	$750	Moving a building within the city limits (except schools). Non-refundable
34	**Temporary use permit (**requiring city council approval)	$750	Non-refundable Good for 6 months

35	**Christmas tree, Pumpkin, Firewood sales lots**	$96	Separate permit required for tents, signs, electrical, etc.
36	**Carnivals, Circuses, Batch plants** (and similar temporary events not specifically covered in another fee item)	$120	Separate permit required for tents, electrical, etc.
37	**Snow cone stands**	$180	Separate permit required for signs, electrical, etc.
38	**After-hours inspection**	$40 per hour	Two-hour minimum
39	**Contractor registration:** Electrical Mechanical Plumbing General Concrete or masonry Fuel tank Irrigation Fence House-moving Apartment maintenance worker	 $120 $120 $ 0 $120 $120 $120 $120 $120 $120 $120	Apartment maintenance worker can only perform minor mechanical and plumbing–no gas work) Plumbing, Fire sprinkler, and Fire alarm contractors are exempt from registration fees per state law
40	**Annual electrical permit**	$120	
41	**Irrigation system**	Residential – $100 Commercial – $150	Residential is single family and duplex
42	**Electric gate controllers**	$48 for first item $13 for each additional item	
43	**Foundation only permit**	10% of regular permit fee	In addition to regular fee
44	**Investigation fee** (for work begun without a permit)	100% of regular fee	In addition to regular fee

APPENDIX M

AIRCRAFT NOISE ATTENUATION REQUIREMENTS

M101.1 Two zones. For the purposes of this code, certain sections of the city are zones subject to significant noise from aircraft. These zones are the "65-70 DNL noise zone" and the "over 70 DNL noise zone."

M101.2 Map. These noise zones shall include such territory or portions of the city as are designated and shown on the aircraft noise impact map (a copy of which is on file with the building official) and incorporated into this code and made a part of it for all intents and purposes.

M102.1 Certified plans. The building official shall not issue a building permit for any building or structure within the noise zones shown on the aircraft noise impact map unless the plans and specifications accompanying the application for the permit are certified by a bona fide acoustical consultant as meeting the required noise level reduction standards of this appendix.

M102.2 Noise consultants. Bona fide acoustical noise consultants include members of the National Council of Acoustical Consultants and others who are approved by the building official, such approval being based on the demonstration of competence and credentials in the area of architectural acoustics.

M102.3 Building intrusion in a noise zone. A building or structure which is located partly within a noise zone and partly without or located partly within one (1) noise zone and partly within another noise zone shall be considered within the most restrictive of the noise zones within which it is located for purposes of this appendix.

M103.1 Noise reductions standards. Plans for the construction of buildings or structures within noise zones shall be certified as achieving at least the outdoor to indoor noise level reductions as measured in decibels within the building as follows:

Building Use	**65-70 DNL Noise Zone**	**Over 70 DNL Noise Zone**
Residential:		
Residential within each unit including transient lodgings	25	30
Public Use:		
Schools, hospitals, and nursing homes	25	30

SECTION 3. That Section 8-6 "International Residential Code" of Chapter 8 of Development Standards and Construction Codes of the City of Irving, Texas, is hereby amended to read as follows:

Sec. 8-6. International Residential Code.

(a) **Residential Building Code.** The 2003 and 2006 editions of the International Residential Code with amendments, modifications, and deletions as specified in this section are adopted as the residential building code for the City of Irving, Texas.

(b) **Amendments, modifications, and deletions to the 2003 International Residential Code.** Amendments, modifications, and deletions to the 2003 *International Residential Code* are adopted as follows:

2003 International Residential Code. The 2003 International Residential Code is amended by deleting all sections except for Section R313, which was previously adopted by Ordinance No. 2008-9000 to read as follows:

SECTION R313
FIRE PROTECTION SYSTEMS

[F] R313.1 Smoke alarms. Smoke alarms shall be installed in the following locations:

1. In each sleeping room.

2. Outside each separate sleeping area in the immediate vicinity of the bedrooms.

3. On each additional story of the dwelling, including basements but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

When more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. The alarm shall be clearly audible in all bedrooms over background noise levels with all intervening doors closed.

All smoke alarms shall be listed and installed in accordance with the provisions of this code and the household fire warning equipment provisions of NFPA 72.

[EB] R313.1.1 Alterations, repairs, and additions. When interior alterations, repairs, or additions requiring a permit occur, or when one or more sleeping rooms are added or created in existing dwellings, the individual dwelling unit shall be provided with smoke alarms located as required for new dwellings; the smoke alarms shall be interconnected and hard wired.

[F] R313.2 Power source. In new construction, the required smoke alarms shall receive their primary power from the building wiring when such wiring is served from a commercial source, and when primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Smoke alarms shall be permitted to be battery operated when installed in buildings without commercial power or in buildings that undergo alterations, repairs, or additions regulated by Section R313.1.1.

R313.3 Buildings over 6,000 square feet. An automatic sprinkler system shall be installed throughout:

1. Any building with a building area over 6,000 square feet, or

2. Attached buildings on the same or separate lots or tracts with an aggregate area of over 6,000 square feet.

Fire walls shall not define separate buildings.

(c) **Amendments, modifications, and deletions to the 2006 International Residential Code.** Amendments, modifications, and deletions to the 2006 *International Residential Code* are adopted as follows:

Section R101.1. Section R101.1 of Section R101 "Title, Scope and Purpose" of Chapter 1 "Administration" of the 2006 International Residential Code is amended 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 Irving, Texas*, hereinafter referred to as "this code" or "IRC."

Section R102.4. Section R102.4 of Section R102 "Applicability" of Chapter 1 "Administration" of the 2006 International Residential Code is amended 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. 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 ICC *Electrical Code* shall mean the Electrical Code as adopted. Where differences occur between provisions of this code and referenced codes and standards, the provisions of this code shall apply.

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

Section R102.5. Section R102.5 of Section R102 "Applicability" of Chapter 1 "Administration" of the 2006 International Residential Code is amended to read as follows:

R102.5 Appendices. Provisions in the appendices shall not apply unless specifically adopted. Appendix A "Sizing and Capacities of Gas Piping"; Appendix B "Sizing of Venting Systems Serving Appliances Equipped with Draft Hoods, Category I Appliances, and Appliances Listed for Use with Type B Vents"; Appendix C "Exit Terminals of Mechanical Draft and Direct-Vent Venting Systems"; Appendix G "Swimming Pools, Spas and Hot Tubs"; Appendix H "Patio Covers"; Appendix I "Irrigation Systems" are hereby adopted as amended and shall be considered part of the requirements of this code. Appendix R "Aircraft Noise Attenuation Requirements" has been added and shall be considered part of the requirements of this code.

Section R102.7. Section R102.7 of Section R102 "Applicability" of Chapter 1 "Administration" of the 2006 International Residential Code is amended to read as follows:

R102.7 Existing structures. The legal occupancy of any structure existing on the date of adoption of this code shall be permitted to continue without change pursuant to the requirements in force at the time the structure was built, except as is specifically covered in this code or the *International Fire Code*, or as is deemed necessary by the building official for the general safety and welfare of the occupants and the public.

Section R103.1. Section R103.1 of Section R103 "Department of Building Safety" of Chapter 1 "Administration" of the 2006 International Residential Code is amended to read as follows:

R103.1 Creation of enforcement agency. The department of planning and inspections is hereby created and the official in charge thereof shall be known as the building official.

Section R105.2. Section R105.2 of Section R105 "Permits" of Chapter 1 "Administration" of the 2006 International Residential Code is amended to read as follows:

R105.2 Work exempt from permit. Exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or ordinances of this jurisdiction. Permits shall not be required for the following.

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses, and similar uses, not exceeding 6 feet in any dimension (includes height measured from adjacent grade to the highest point of the roof).

2. Installation or repair of retaining walls that are not over 30" in height of exposed face, unless supporting a surcharge.

3. Water tanks supported directly upon grade if the capacity does not exceed 5,000 gallons and the ratio of height to diameter or width does not exceed 2 to 1.

4. Sidewalks, paving, or driveways which are:

    a. On private property;
    b. Not more than 30 inches above adjacent grade;
    c. Not over any basement or story below;
    d. Not located in any required front or street-side yard; and
    e. Not exceeding 120 square feet in area if located in a non-street-side or rear yard.

    For purposes of this section, the maintenance or repair of pavement existing on October 2, 2008, and sidewalks on private property not exceeding 4 feet in width and not located in a required front or street-side yard are exempt from permit.

5. Painting, papering, tiling, carpeting, cabinets, counter tops, and similar finish work.

6. Prefabricated swimming pools that are less than 24 inches deep.

7. Swings and other playground equipment accessory to a one- or two-family dwelling.

8. Window awnings supported by an exterior wall which do not project more than 54 inches from the exterior wall and do not require additional support.

Electrical: In accordance with the *National Electrical Code* as adopted.

Gas:

1. Portable heating, cooking, or clothes drying appliances.

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

3. Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

Mechanical:

1. Portable heating appliances.

2. Portable ventilation appliances.

3. Portable cooling units.

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

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

6. Portable evaporative coolers.

7. Self-contained refrigeration systems containing 10 pounds or less of refrigerant or that are actuated by motors of 1 horsepower or less.

8. Portable-fuel-cell appliances that are not connected to a fixed piping system and are not interconnected to a power grid.

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

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

Section R106.1.1. Section R106.1.1 of Section R106 "Construction Documents" of Chapter 1 "Administration" of the 2006 International Residential Code is amended to read as follows:

R106.1.1 Information on construction documents. Construction documents shall be dimensioned and drawn upon suitable material. Approved drawings shall be submitted electronically. Construction documents shall be of sufficient clarity to indicate the location, nature, and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules, and regulations, as determined by the building official.

Section R108.2. Section R108.2 of Section R108 "Fees" of Chapter 1 "Administration" of the 2006 International Residential Code is amended to read as follows:

R108.2 Schedule of permit fees. Fees shall be in accordance with Appendix L of the 2006 *International Building Code*.

Section R108.5. Section R108.5 of Section R108 "Fees" of Chapter 1 "Administration" of the 2006 International Residential Code is amended to read as follows:

R108.5 Refunds. The building official shall authorize the refunding of fees as follows:

1. The full amount of the fee paid hereunder that was erroneously paid or due to extenuating circumstances as approved by the code official.

2. Not more than 80 percent of the permit fee paid when no work or inspection has been done under a permit issued in accordance with this code.

The building official shall not authorize the refunding of any fee paid except upon written application filed by the original permitee not later than 180 days after the date of fee payment.

Section R108. Section R108 "Fees" of Chapter 1 "Administration" of the 2006 International Residential Code is amended by adding Section R108.6 to read as follows:

R108.6 Work commencing before permit issuance. Any person who commences work on a building, structure, electrical, gas, mechanical, or plumbing system before obtaining the necessary permits shall be subject to 100 percent of the usual permit fee in addition to the required permit fees.

Section R109.1.3. Section R109.1.3 of Section R109 "Inspections" of Chapter 1 "Administration" of the 2006 International Residential Code is amended to read as follows:

R109.1.3 Floodplain inspections. For construction in areas prone to flooding as established by Table R301.2(1), upon placement of the lowest floor, including basement, and prior to further vertical construction, the building official may require submission of documentation, prepared and sealed by a registered design professional, of the elevation of the lowest floor, including basement, required in Section R324.

Chapter 1. Chapter 1 "Administration" of the 2006 International Residential Code is amended by deleting Section R110 "Certificate of Occupancy."

Section R112. Section R112 "Board of Appeals" of Chapter 1 "Administration" of the 2006 International Residential Code is amended in its entirety to read as follows:

R112.1 Means of appeal. Any person shall have the right to appeal a decision of the building official to the construction board of appeals. Residential code appeals shall be handled in accordance with the provisions set forth in Section 112 of the 2006 *International Building Code*.

Section R202. Section R202 "Definitions" of Chapter 2 "Definitions" of the 2006 International Residential Code is amended by adding the following definitions to read as follows:

AREA, BUILDING. The area included within surrounding exterior walls exclusive of vent shafts and courts. Areas of the building not provided with surrounding walls shall be included in the building area if such areas are included within the horizontal projection of the roof or floor above.

CARPORT. A roof projecting from the wall of a building or supported on posts or columns and used to shelter motor vehicles, boats, camper tops, or trailers.

Section R202. Section R202 "Definitions" of Chapter 2 "Definitions" of the 2006 International Residential Code is amended by revising the definition of "Glazing Area" to read as follows:

GLAZING AREA. Total area of the glazed fenestration measured using the rough opening and including sash, curbing, or other framing elements that enclose conditioned space. Glazing area includes the area of glazed fenestration assemblies in walls bounding conditioned basements. For doors where the daylight opening area is less that 50 percent of the door area, the glazing area is the daylight opening area. For all other doors, the glazing area is the rough opening area for the door including the door and the frame.

Section R202. Section R202 "Definitions" of Chapter 2 "Definitions" of the 2006 International Residential Code is amended by revising the definition of "Townhouse" to read as follows:

TOWNHOUSE. A single-family dwelling unit constructed in a group of attached units separated by property lines in which each unit extends from foundation to roof and with open space on at least two sides.

Table R301.2(1). Table R301.2(1) of Section R301 "Design Criteria" of Chapter 3 "Building Planning" of the 2006 International Residential Code is amended to read as follows:

TABLE R301.2(1)
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND SPEED[d] (mph)	SEISMIC DESIGN CATEGORY[f]	SUBJECT TO DAMAGE FROM		
			Weathering[a]	Frost line depth[b]	Termite[c]
5 lb/ft^2	90 (3-sec-gust)/ 75 fastest mile	A	Moderate	6"	Very heavy

WINTER DESIGN TEMP[e]	ICE BARRIER UNDERLAYMENT REQUIRED[h]	FLOOD HAZARDS[g]	AIR FREEZING INDEX[i]	MEAN ANNUAL TEMP[j]
22^{o}F	No	local code	69^{o}F	64.9^{o}F

For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.

a. Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index (i.e., "negligible," "moderate," or "severe") for concrete as determined from the Weathering Probability Map [Figure R301.2(3)]. The grade of masonry units shall be determined from ASTM C 34, C 55, C 62, C 73, C 90, C 129, C 145, C 216, or C 652.

b. The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.

c. The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.

d. The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.

e. The outdoor design dry-bulb temperature shall be selected from the columns of 97½-percent values for winter from Appendix D of the *International Plumbing Code*. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official.

f. The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.

g. The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the currently effective FIRM and FBFM, or other flood hazard map adopted by the community, as may be amended.

h. In accordance with Sections R905.2.7.1, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1, and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."

i. The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99%) value on the National Climatic Data Center data table "Air Freezing Index - USA Method (Base 32° Fahrenheit)" at www.ncdc.noaa.gov/fpsf.html.

j. The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index - USA Method (Base 32° Fahrenheit)" at www.ncdc.noaa.gov/fpsf.html.

Section R302.1. Section R302.1 of Section R302 "Exterior Wall Location" of Chapter 3 "Building Planning" of the 2006 International Residential Code is amended to read as follows:

R302.1 Exterior walls. Construction, projections, openings, and penetrations of exterior walls of dwellings and accessory buildings shall comply with Table R302.1. These provisions shall not apply to walls, projections, openings, or penetrations in walls that are perpendicular to the line used to determine the fire separation distance. Projections beyond the exterior wall shall not extend more than 12 inches into the areas where openings are prohibited.

Exceptions:

1. Detached tool sheds and storage sheds, playhouses, and similar structures exempted from permits are not required to provide wall protection based on location on the lot. Projections beyond the exterior wall shall not extend over the lot line.

2. Detached garages accessory to a dwelling located within 2 feet of a lot line are permitted to have roof eave projections not exceeding 4 inches.

3. Foundation vents installed in compliance with this code are permitted.

4. Open metal carport structures may be constructed within zero (0) feet of the property line without fire-resistive or opening protection when the location of such is approved as required by other adopted ordinances.

Section R303.3. Section R303.3 of Section R303 "Light, Ventilation and Heating" of Chapter 3 "Building Planning" of the 2006 International Residential Code is amended to read as follows:

R303.3 Bathrooms. Bathrooms, water closet compartments, and other similar rooms shall be provided with aggregate glazing area in windows of not less than 3 square feet, one-half of which must be openable.

Exceptions: The glazed areas shall not be required where artificial light and a mechanical ventilation system, complying with one of the following, are provided:

1. The minimum ventilation rates shall be 50 cubic feet per minute for intermittent ventilation or 20 cubic feet per minute for continuous ventilation. Ventilation air from the space shall be exhausted directly to the outside.

2. Bathrooms that contain only a water closet, lavatory, or combination thereof may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.

Section R303.8. Section R303.8 of Section R303 "Light, Ventilation and Heating" of Chapter 3 "Building Planning" of the 2006 International Residential Code is amended to read as follows:

R303.8 Required heating. Every dwelling unit shall be provided with heating facilities capable of maintaining a minimum room temperature of 68°F at a point 3 feet above the floor and 2 feet from exterior walls in all habitable rooms at the design temperature. The installation of one or more portable space heaters shall not be used to achieve compliance with this section.

Section R309.4. Section R309.4 of Section R309 "Garages and Carports" of Chapter 3 "Building Planning" of the 2006 International Residential Code is amended to read as follows:

R309.4 Carports. Carports shall be open on at least two sides. Carports not open on at least two sides shall be considered a garage and shall comply with the provisions of this section for garages. Carports shall be designed by a licensed engineer and shall be constructed with either (1) a wood roof deck with roof coverings in accordance with Chapter 9 of this code or (2) metal roof panels. Carports constructed using fabric, canvas, vinyl, plastic, fiberglass, and other similar materials are prohibited.

Carport floor surfaces shall be of concrete or asphalt and shall be sloped to facilitate the movement of liquids to drain to an open side.

Section R311.2.2. Section R311.2.2 of Section R311 "Means of Egress" of Chapter 3 "Building Planning" of the 2006 International Residential Code is amended to read as follows:

R311.2.2 Under stair protection. Enclosed accessible space under stairs shall have walls, under stair surface, and any soffits protected on the enclosed side with 5/8-inch fire-rated gypsum board or one-hour fire-resistive construction.

Section R313. Section R313 "Smoke Alarms" of Chapter 3 "Building Planning" of the 2006 International Residential Code is deleted in its entirety.

Section R317.1. Section R317.1 of Section R317 "Dwelling Unit Separation" of Chapter 3 "Building Planning" of the 2006 International Residential Code is amended to read as follows:

R317.1 Two-family dwellings. Dwelling units in two-family dwellings shall be separated from each other by wall and/or floor assemblies having not less than a 1-hour fire-resistance rating when tested in accordance with ASTM E119. Fire resistance-rated floor-ceiling and wall assemblies shall extend to and be tight against the exterior wall, and wall assemblies shall extend to the underside of the roof sheathing.

Exceptions:

1. A fire-resistance rating of 1/2 hour shall be permitted in buildings equipped throughout with an automatic sprinkler system installed in accordance with NFPA 13.

2. Wall assemblies need not extend through attic spaces when the ceiling is protected by not less than 5/8-inch Type X gypsum board and an attic draft stop constructed as specified in Section R502.12.1 is provided above and along the wall assembly separating the dwellings. The structural framing supporting the ceiling shall also be protected by not less than ½-inch gypsum board or equivalent.

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

Section R324.1. Section R324.1 of Section R324 "Flood-Resistant Construction" of Chapter 3 "Building Planning" of the 2006 International Residential Code is amended to read as follows:

R324.1 General. Buildings and structures, when permitted to be constructed in whole or in part in flood hazard areas (including A or V Zones) as established in Table R301.2(1), shall be designed and constructed in accordance with the provisions contained in this section or by other local provisions as applicable.

Chapter 3. Chapter 3 **"**Building Planning**"** of the 2006 International Residential Code is amended by adding Section R325 to read as follows:

SECTION R325
RETAINING WALLS

R325.1 General. Retaining walls shall be designed to ensure stability against overturning, sliding, excessive foundation pressure, and water uplift. Retaining walls shall be designed for a safety factor of 1.5 against lateral sliding and overturning. Retaining walls shall be designed, inspected, and approved by a registered structural engineer. Retaining walls which require permits shall not be constructed of wood.

R325.2 Property restrictions. The proper performance of retaining walls shall not be based on restrictions or requirements placed on property owners which will require future design or review by the retaining wall design engineer. Any exposed soil in the vicinity of a retaining wall shall be assumed to be landscaped and irrigated. Restrictions which may deprive property owners from full use and enjoyment of property shall not be included in the design or related maintenance requirements of a retaining wall.

Exception: Restrictions clearly stated in easements which are designated on the subdivision plat of record.

Section R703.7. Section R703.7 of Section 703 "Exterior Covering" of Chapter 7 "Wall Covering" of the 2006 International Residential Code is amended to read as follows:

R703.7 Stone and masonry veneer, general. Stone and masonry veneer shall be installed in accordance with this chapter, Table R703.4, and Figure R703.7. These veneers installed over a backing of wood or cold-formed steel shall be limited to the first story above-grade and shall not exceed 5 inches in thickness. Clay brick used outdoors shall meet Grade SW requirements of either ASTM C216 or ASTM C652.

Exceptions:

1. For all buildings in Seismic Design Categories A, B, and C, exterior stone or masonry veneer, as specified in Table R703.7(1), with a backing of wood or steel framing shall be permitted to the height specified in Table R703.7(1) above a noncombustible foundation. Wall bracing at exterior and interior braced wall lines shall be in accordance with Section R602.10 or R603.7, and the additional requirements of Table R703.7(1).

2. For detached one- or two-family dwellings in Seismic Design Categories D_0, D_1, and D_2, exterior stone or masonry veneer, as specified in Table R703.7(2), with a backing of wood framing shall be permitted to the height specified in Table R703.7(2) above a noncombustible foundation. Wall bracing and hold downs at exterior and interior braced wall lines shall be in accordance with Sections R602.10 and R602.11 and the additional requirements of Table R703.7(2). In Seismic Design Categories D_0, D_1, and D_2, cripple walls shall not be permitted, and required interior braced wall lines shall be supported on continuous foundations.

Section R703.7.4.1. Section R703.7.4.1 of Section R703 "Exterior Covering" of Chapter 7 "Wall Covering" of the 2006 International Residential Code is amended to read as follows:

R703.7.4.1 Size and spacing. Veneer ties, if strand wire, shall not be less in thickness than No. 9 U.S. gage (0.148 in.) wire and shall have a hook embedded in the mortar joint, or if sheet metal, shall be not less than No. 22 U.S. gage (0.0299 in.) by 7/8 inch corrugated. Each tie shall be spaced not more than 24 inches on center horizontally and vertically and shall support not more than 2.67 square feet of wall area.

For 2.67 square feet of wall area, the following dimensions shall be adhered to:

1. When ties are placed on studs 16 in on center, they shall be spaced no further apart than 24 inches vertically starting approximately 12 inches from the foundation.

2. When ties are placed on studs 24 inches on center, they shall be spaced no further apart than 16 inches vertically starting approximately 8 inches from the foundation.

Exception: In Seismic Design Category D_0, D_1, or D_2 or townhouses in Seismic Design Category C or in wind areas of more than 30 pounds per square foot pressure, each tie shall support not more than 2 square feet of wall area.

Section R902. Section R902 **"**Roof Classification**"** of Chapter 9 "Roof Assemblies" of the 2006 International Residential Code is amended by adding Section R902.3 to read as follows:

R902.3 Minimum roof class. All roof coverings shall be a minimum Class C. All individual replacement shingles or shakes shall be a minimum Class C.

Exception: Non-classified roof coverings shall be permitted on buildings of U occupancies having not more than 120 square feet of projected roof area. When exceeding 120 square feet of projected roof area, buildings of U occupancies may use non-rated non-combustible coverings.

Section R907.1. Section R907.1 of Section R907 "Reroofing" of Chapter 9 "Roof Assemblies" of the 2006 International Residential Code is amended to read as follows:

R907.1 General. Materials and methods of application used for re-covering or replacing an existing roof covering shall comply with the requirements of Chapter 9. All individual replacement shingles or shakes shall comply with Section R902.3.

Exception: Reroofing shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section R905 for roofs that provide positive roof drainage.

Section N1101.2.1. Section N1101.2.1 of Section N1101 "General" of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended to read as follows:

N1101.2.1 Warm humid counties. Warm humid counties are listed in Table N1101.2.1 and Table N1101.2.2.

Section N1101.7. Section N1101.7 of Section N1101 "General" of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended to read as follows:

N1101.7 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.

Figure N1101.2. Figure N1101.2 "Climate Zones" of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended as follows:

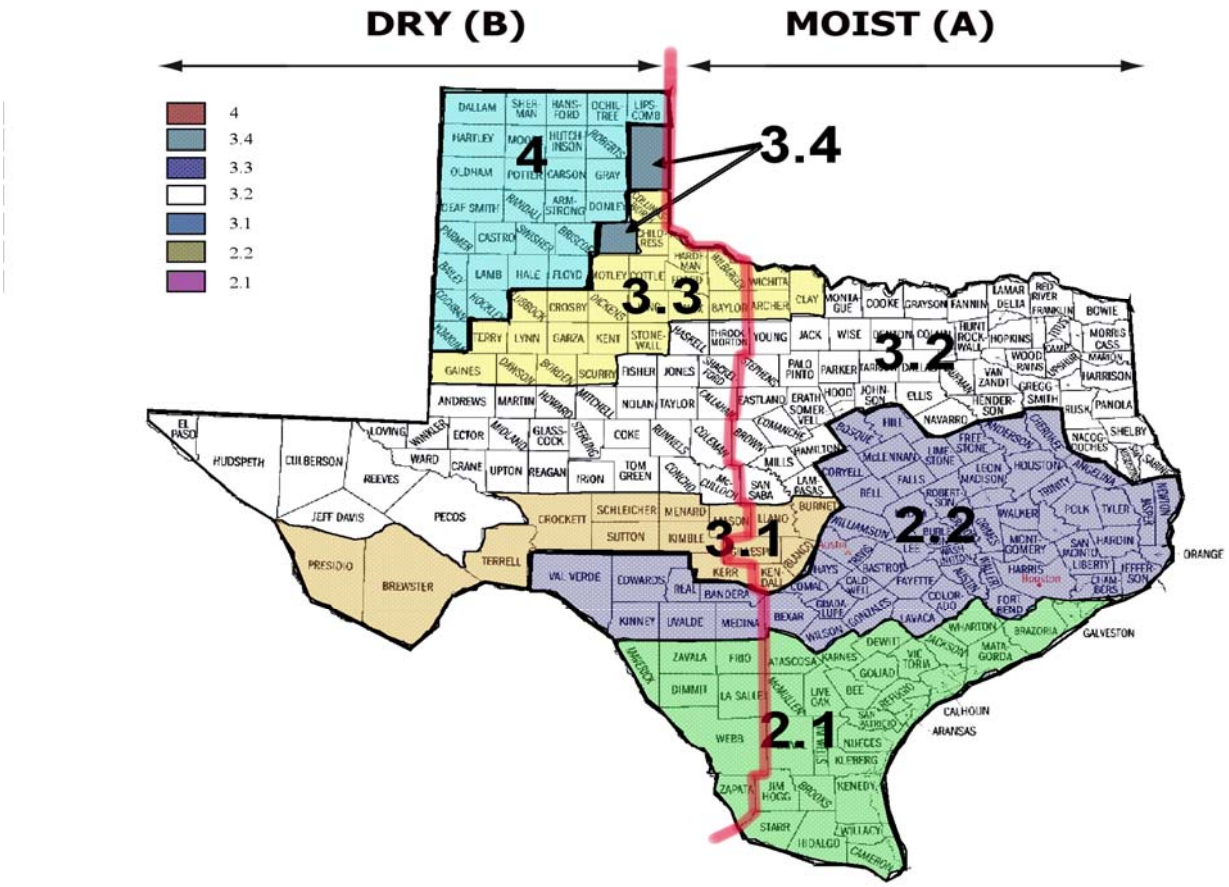

FIGURE N1101.2 TEXAS CLIMATE ZONES

Table N1101.2.1. Table N1101.2.1 of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended to read as follows:

TABLE N1101.2.1
CLIMATE ZONES AND SUB-CLIMATE ZONES FOR TEXAS

Zone 2

ANDERSON	2.2	DE WITT	2.1	JIM HOGG	2.1	ORANGE	2.2
ANGELINA	2.2	DIMMIT	2.1	JIM WELLS	2.1	POLK	2.2
ARANSAS	2.1	DUVAL	2.1	KARNES	2.1	REAL	2.2
ATASCOSA	2.1	EDWARDS	2.2	KENEDY	2.1	REFUGIO	2.1
AUSTIN	2.2	FALLS	2.2	KINNEY	2.2	ROBERTSON	2.2
BANDERA	2.2	FAYETTE	2.2	KLEBERG	2.1	SAN JACINTO	2.2
BASTROP	2.2	FORT BEND	2.2	LA SALLE	2.1	SAN PATRICIO	2.1
BEE	2.1	FREESTONE	2.2	LAVACA	2.2	STARR	2.1
BELL	2.2	FRIO	2.1	LEE	2.2	TRAVIS	2.2
BEXAR	2.2	GALVESTON	2.1	LEON	2.2	TRINITY	2.2
BOSQUE	2.2	GOLIAD	2.1	LIBERTY	2.2	TYLER	2.2
BRAZORIA	2.1	GONZALES	2.2	LIMESTONE	2.2	UVALDE	2.2
BRAZOS	2.2	GRIMES	2.2	LIVE OAK	2.1	VAL VERDE	2.2
BROOKS	2.1	GUADALUPE	2.2	MADISON	2.2	VICTORIA	2.1
BURLESON	2.2	HARDIN	2.2	MATAGORDA	2.1	WALKER	2.2
CALDWELL	2.2	HARRIS	2.2	MAVERICK	2.1	WALLER	2.2
CALHOUN	2.1	HAYS	2.2	MCLENNAN	2.2	WASHINGTON	2.2
CAMERON	2.1	HIDALGO	2.1	MCMULLEN	2.1	WEBB	2.1
CHAMBERS	2.2	HILL	2.2	MEDINA	2.2	WHARTON	2.1
CHEROKEE	2.2	HOUSTON	2.2	MILAM	2.2	WILLACY	2.1
COLORADO	2.2	JACKSON	2.1	MONTGOMERY	2.2	WILLIAMSON	2.2
COMAL	2.2	JASPER	2.2	NEWTON	2.2	WILSON	2.2
CORYELL	2.2	JEFFERSON	2.2	NUECES	2.1	ZAPATA	2.1

Zone 3

ANDREWS	3.2	EL PASO	3.2	KERR	3.1	ROCKWALL	3.2
ARCHER	3.3	ELLIS	3.2	KIMBLE	3.1	RUNNELS	3.2
BAYLOR	3.3	ERATH	3.2	KING	3.3	RUSK	3.2
BLANCO	3.1	FANNIN	3.2	KNOX	3.3	SABINE	3.2
BORDEN	3.3	FISHER	3.2	LAMAR	3.2	SAN AUGUSTINE	3.2
BOWIE	3.2	FOARD	3.3	LAMPASAS	3.2	SAN SABA	3.2
BREWSTER	3.1	FRANKLIN	3.2	LLANO	3.1	SCHLEICHER	3.1
BROWN	3.2	GAINES	3.3	LOVING	3.2	SCURRY	3.3
BURNET	3.1	GARZA	3.3	LUBBOCK	3.3	SHACKELFORD	3.2
CALLAHAN	3.2	GILLESPIE	3.1	LYNN	3.3	SHELBY	3.2
CAMP	3.2	GLASSCOCK	3.2	MARION	3.2	SMITH	3.2
CASS	3.2	GRAYSON	3.2	MARTIN	3.2	SOMERVELL	3.2
CHILDRESS	3.3	GREGG	3.2	MASON	3.1	STEPHENS	3.2
CLAY	3.3	HALL	3.4	MCCULLOCH	3.2	STERLING	3.2
COKE	3.2	HAMILTON	3.2	MENARD	3.1	STONEWALL	3.3
COLEMAN	3.2	HARDEMAN	3.3	MIDLAND	3.2	SUTTON	3.1
COLLIN	3.2	HARRISON	3.2	MILLS	3.2	TARRANT	3.2
COLLINGSWORTH	3.3	HASKELL	3.2	MITCHELL	3.2	TAYLOR	3.2
COMANCHE	3.2	HEMPHILL	3.4	MONTAGUE	3.2	TERRELL	3.1
CONCHO	3.2	HENDERSON	3.2	MORRIS	3.2	TERRY	3.3
COOKE	3.2	HOOD	3.2	MOTLEY	3.3	THROCKMORTON	3.2
COTTLE	3.3	HOPKINS	3.2	NACOGDOCHES	3.2	TITUS	3.2
CRANE	3.2	HOWARD	3.2	NAVARRO	3.2	TOM GREEN	3.2
CROCKETT	3.1	HUDSPETH	3.2	NOLAN	3.2	UPSHUR	3.2
CROSBY	3.3	HUNT	3.2	PALO PINTO	3.2	UPTON	3.2

CULBERSON	3.2	IRION	3.2	PANOLA	3.2	VAN ZANDT	3.2
DALLAS	3.2	JACK	3.2	PARKER	3.2	WARD	3.2
DAWSON	3.3	JEFF DAVIS	3.2	PECOS	3.2	WHEELER	3.4
DELTA	3.2	JOHNSON	3.2	PRESIDIO	3.1	WICHITA	3.3
DENTON	3.2	JONES	3.2	RAINS	3.2	WILBARGER	3.3
DICKENS	3.3	KAUFMAN	3.2	REAGAN	3.2	WINKLER	3.2
EASTLAND	3.2	KENDALL	3.1	RED RIVER	3.2	WISE	3.2
ECTOR	3.2	KENT	3.3	REEVES	3.2	WOOD	3.2
						YOUNG	3.2

Zone 4

ARMSTRONG	DEAF SMITH	HOCKLEY	PARMER
BAILEY	DONLEY	HUTCHINSON	POTTER
BRISCOE	FLOYD	LAMB	RANDALL
CARSON	GRAY	LIPSCOMB	ROBERTS
CASTRO	HALE	MOORE	SHERMAN
COCHRAN	HANSFORD	OCHILTREE	SWISHER
DALLAM	HARTLEY	OLDHAM	YOAKUM

Section N1101. Section N1101 "General" of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended by adding Table N1101.2.2 "Warm Humid Counties for Texas" immediately after Table N1101.2.1 to read as follows:

TABLE N1101.2.2
WARM HUMID COUNTIES FOR TEXAS

ANDERSON	2.2	DUVAL	2.1	KAUFMAN	3.2	RED RIVER	3.2
ANGELINA	2.2	EDWARDS	2.2	KENDALL	3.1	REAL	2.2
ARANSAS	2.1	ELLIS	3.2	KENEDY	2.1	REFUGIO	2.1
ATASCOSA	2.1	ERATH	3.2	KINNEY	2.2	ROBERTSON	2.2
AUSTIN	2.2	FALLS	2.2	KLEBERG	2.1	ROCKWALL	3.2
BANDERA	2.2	FAYETTE	2.2	LA SALLE	2.1	RUSK	3.2
BASTROP	2.2	FORT BEND	2.2	LAMAR	3.2	SABINE	3.2
BEE	2.1	FRANKLIN	3.2	LAMPASAS	3.2	SAN AUGUSTINE	3.2
BELL	2.2	FREESTONE	2.2	LAVACA	2.2	SAN JACINTO	2.2
BEXAR	2.2	FRIO	2.1	LEE	2.2	SAN PATRICIO	2.1
BLANCO	3.1	GALVESTON	2.1	LEON	2.2	SAN SABA	3.2
BOSQUE	2.2	GILLESPIE	3.1	LLANO	3.1	SHELBY	3.2
BOWIE	3.2	GOLIAD	2.1	LIBERTY	2.2	SMITH	3.2
BRAZORIA	2.1	GONZALES	2.2	LIMESTONE	2.2	STARR	2.1
BROWN	3.2	GREGG	3.2	LIVE OAK	2.1	SOMMERVELL	3.2
BRAZOS	2.2	GRIMES	2.2	MADISON	2.2	TARRANT	3.2
BROOKS	2.1	GUADALUPE	2.2	MARION	3.2	TITUS	3.2
BURLESON	2.2	HAMILTON	3.2	MATAGORDA	2.1	TRAVIS	2.2
BURNET	3.1	HARDIN	2.2	MAVERICK	2.1	TRINITY	2.2
CALDWELL	2.2	HARRIS	2.2	MCLENNAN	2.2	TYLER	2.2
CALHOUN	2.1	HARRISON	3.2	MCMULLEN	2.1	UPSHUR	3.2
CAMERON	2.1	HAYS	2.2	MEDINA	2.2	UVALDE	2.2
CHAMBERS	2.2	HENDERSON	3.2	MILAM	2.2	VAL VERDE	2.2
CAMP	3.2	HIDALGO	2.1	MILLS	3.2	VAN ZANDT	3.2
CASS	3.2	HOOD	3.2	MONTGOMERY	2.2	VICTORIA	2.1
CHEROKEE	2.2	HOPKINS	3.2	MORRIS	3.2	WALKER	2.2
COLLIN	3.2	HILL	2.2	NACOGDOCHES	3.2	WALLER	2.2
COLORADO	2.2	HOUSTON	2.2	NAVARRO	3.2	WASHINGTON	2.2
COMAL	2.2	HUNT	3.2	NEWTON	2.2	WEBB	2.1
COMANCHE	3.2	JACKSON	2.1	NUECES	2.1	WHARTON	2.1

CORYELL	2.2	JASPER	2.2	ORANGE	2.2	WILLACY	2.1
DALLAS	3.2	JEFFERSON	2.2	PALO PINTO	3.2	WILLIAMSON	2.2
DELTA	3.2	JIM HOGG	2.1	PANOLA	3.2	WILSON	2.2
DENTON	3.2	JIM WELLS	2.1	PARKER	3.2	WOOD	3.2
DE WITT	2.1	JOHNSON	3.2	POLK	2.2	ZAPATA	2.1
DIMMIT	2.1	KARNES	2.1	RAINS	3.2	ZAVALA	2.1

Section N1102.1. Section N1102.1 of Section N1102 "Building Thermal Envelope" of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended to read as follows:

N1102.1 Insulation and fenestration criteria. The building thermal envelope shall meet the requirements of Table N1102.1 based on the climate zone specified in Table N1101.2.

When compliance using Table 1102.1 is demonstrated with a ceiling *R*-value of R-30 or less, no more than 33 percent of the total projected ceiling area may be of cathedral type construction (ceiling joist/roof rafter assembly) and the required insulation *R*-value may be reduced to a minimum of R-22 insulation when the remaining ceiling area insulation is increased to R-38.

Table N1102.1. Table N1102.1 of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended to read as follows:

TABLE N1102.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT (TEXAS)[a]

CLIMATE-SUB-CLIMATE ZONE	MAX GLAZED AREA TO WALL AREA RATIO	MAX GLAZED FENESTRATION *U*-FACTOR	MAX SKYLIGHT *U*-FACTOR[b]	MAX GLAZED FENESTRATION SHGC	MIN CEILING *R*-VALUE	MIN WOOD FRAME WALL *R*-VALUE[d]	MAX. MASS WALL *R*-VALUE	MIN FLOOR *R*-VALUE	MIN BASEMENT WALL *R*-VALUE	MIN SLAB *R*-VALUE & DEPTH[c]	MIN CRAWL SPACE WALL *R*-VALUE
2.1	15	0.75	0.75	0.358	19	13	6	19	0	0	5
	20	0.70	0.75	0.38	30	13	6	19	0	0	5
	25	0.65	0.75	0.35	30	13	6	19	0	0	5
	30	0.54	0.75	0.35	38	13	6	19	0	0	5
2.2	15	0.65	0.75	0.38	30	13	6	19	5	0	6
	20	0.65	0.75	0.38	38	13	6	19	6	0	6
	25	0.54	0.75	0.35	38	13	6	19	8	0	10
	30	0.46	0.75	0.35	38	16, 13 + 3.7[e]	6	19	8	0	10
3.1	15	0.65	0.65	0.40	30	13	6	19	5	0	6
	20	0.55	0.65	0.40	38	13	6	19	5	0	6
	25	0.54	0.65	0.35	38	13	6	19	8	0	10
	30	0.46	0.65	0.35	38	16, 13 + 3.7[e]	7	19	8	0	10
3.2	15	0.60	0.65	0.40	30	13	6	19	6	0	7
	20	0.54	0.65	0.40	38	13	6	19	6	0	7
	25	0.51	0.65	0.40	38	16, 13 + 3.7[e]	7	19	6	0	7
	30	0.46	0.65	0.38	38	16, 13 + 3.7[e]	7	19	6	0	7
3.3	15	0.51	0.65	0.40	30	13	6	19	7	0	8
	20	0.45	0.65	0.40	38	13	6	19	7	0	9
	25	0.40	0.65	0.40	38	16, 13 + 3.7[e]	7	19	7	0	9
	30	0.40	0.65	0.40	38	19, 13 + 8.1[e]	9	19	7	0	9

3.4	15	0.45	0.60	NR	38	13	6	19	8	5, 2 ft	11
	20	0.37	0.60	NR	38	13	6	19	8	6, 2 ft	13
	25	0.37	0.60	NR	38	19, 13 + 8.1[e]	9	19	8	6, 2 ft	13
	30	0.37	0.60	NR	38	19, 13 + 8.1[e]	9	30	8	6, 2 ft	13
4	15	0.45	0.60	NR	38	13	8	19	8	5, 2 ft	11
	20	0.37	0.60	NR	38	13	8	19	9	6, 2 ft	13
	25	0.37	0.60	NR	38	19, 13 + 8.1[e]	10	19	9	6, 2 ft	13
	30	0.37	0.60	NR	38	19, 13 + 8.1[e]	10	30	9	6, 2 ft	13

For SI: 1 foot = 304.8 mm

a. *R*-values are minimums. *U*-factors and SHGC are maximums. R-19 shall be permitted to be compressed into a 2 x 6 cavity.
b. The fenestration *U*-factor column excludes skylights. The solar heat gain coefficient (SHGC) column applies to all glazed fenestration.
c. R-5 shall be added to the required slab edge *R*-values for heated slabs.
d. The total *R*-value may be achieved with a combination of cavity insulation and insulating sheathing that covers 100 percent of the exterior wall.
e. The wall insulation may be the sum of the two values where the first value is the cavity insulation and the second value is insulating sheathing. The combination of cavity insulation plus insulating sheathing may be used where structural sheathing covers not more than 25 percent of the exterior wall area and insulating sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25 percent of exterior wall area, then the wall insulation requirement may only be satisfied with the single insulation value.

Table N1102.1.2. Table N1102.1.2 of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended to read as follows:

TABLE N1102.1.2
EQUIVALENT *U*-FACTORS[a]

CLIMATE-SUB-CLIMATE ZONE	MAX GLAZED AREA TO WALL AREA RATIO	MAX GLAZED FENESTRATION *U*-FACTOR	MAX SKYLIGHT *U*-FACTOR	MAX CEILING *U*-FACTOR	MAX WOOD FRAME WALL *U*-FACTOR	MAX MASS WALL *U*-FACTOR	MAX FLOOR *U*-FACTOR	MAX BASEMENT WALL *U*-FACTOR	MAX CRAWL SPACE WALL *U*-FACTOR
2.1	15	0.75	0.75	0.039	0.082	0.124	0.047	0.360	0.136
	20	0.70	0.75	0.034	0.082	0.124	0.047	0.360	0.136
	25	0.65	0.75	0.034	0.082	0.124	0.047	0.360	0.136
	30	0.54	0.75	0.030	0.082	0.124	0.047	0.360	0.136
2.2	15	0.65	0.75	0.034	0.082	0.124	0.047	0.210	0.100
	20	0.65	0.75	0.030	0.082	0.124	0.047	0.210	0.100
	25	0.54	0.75	0.030	0.082	0.124	0.047	0.119	0.065
	30	0.46	0.75	0.030	0.071	0.124	0.047	0.119	0.065
3.1	15	0.65	0.65	0.034	0.082	0.124	0.047	0.210	0.100
	20	0.55	0.65	0.030	0.082	0.124	0.047	0.210	0.100
	25	0.54	0.65	0.030	0.082	0.124	0.047	0.119	0.065
	30	0.46	0.65	0.030	0.071	0.112	0.047	0.119	0.065
3.2	15	0.60	0.65	0.034	0.082	0.124	0.047	0.179	0.075
	20	0.54	0.65	0.030	0.082	0.124	0.047	0.179	0.075
	25	0.51	0.65	0.030	0.071	0.112	0.047	0.179	0.075
	30	0.46	0.65	0.030	0.071	0.112	0.047	0.179	0.075
3.3	15	0.51	0.65	0.034	0.082	0.124	0.047	0.149	0.061
	20	0.45	0.65	0.030	0.082	0.124	0.047	0.149	0.058
	25	0.40	0.65	0.030	0.075	0.112	0.047	0.149	0.058
	30	0.40	0.65	0.030	0.061	0.094	0.047	0.149	0.058

3.4	15	0.45	0.60	0.030	0.082	0.124	0.047	0.119	0.083
	20	0.37	0.60	0.030	0.082	0.124	0.047	0.119	0.152
	25	0.37	0.60	0.030	0.061	0.094	0.047	0.119	0.152
	30	0.37	0.60	0.030	0.061	0.094	0.033	0.119	0.152
4	15	0.45	0.60	0.030	0.082	0.102	0.047	0.119	0.083
	20	0.37	0.60	0.030	0.082	0.102	0.047	0.089	0.152
	25	0.37	0.60	0.030	0.061	0.087	0.047	0.089	0.152
	30	0.37	0.60	0.030	0.061	0.087	0.033	0.089	0.152

a. Nonfenestration *U*-factors shall be obtained from measurement, calculation, or an approved source.

Section N1102. Section N1102 "Building Thermal Envelope" of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended by adding Section N1102.2.11 to read as follows:

N1102.2.11 Insulation installed in walls. Insulation batts installed in walls shall be totally surrounded by an enclosure on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing, or other equivalent material approved by the building official.

Section N1102.3.2. Section N1102.3.2 of Section N1102 "Building Thermal Envelope" of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended to read as follows:

N1102.3.2 Glazed fenestration SHGC. An area-weighted average of fenestration products more than 50 percent glazed shall be permitted to satisfy the solar heat gain coefficient (SHGC) requirements. In sub-climate zones 2.1, 2.2, 3.1, 3.2, and 3.3, the maximum area-weighted average and the maximum SHGC shall not exceed 0.40.

Section N1102.3.3. Section N1102.3.3 of Section N1102 "Building Thermal Envelope" of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended to read as follows:

N1102.3.3 Glazed fenestration exemption. Up to 1 percent of glazed fenestration per dwelling unit shall be permitted to be exempt from *U*-factor and solar heat gain coefficient (SHGC) requirements in Section N1102.1.

Section N1102.3.5. Section N1102.3.5 of Section N1102 "Building Thermal Envelope" of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended to read as follows:

N1102.3.5 Thermally isolated sunroom. New windows and doors separating the sunroom from conditioned space shall meet the building thermal envelope requirements.

Section N1102.3.6. Section N1102.3.6 of Section N1102 "Building Thermal Envelope" of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended to read as follows:

N1102.3.6 Replacement fenestration. Where some or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the replacement fenestration unit shall meet the applicable requirements for the *U*-factor in Table N1102.3.7.

Exceptions:

1. Replacement skylights shall have a maximum *U*-factor for 0.60 when installed in all sub-climate zones except for 2.1.

2. For buildings constructed in conformance with an energy code as required by Chapter 388 of the Texas Health and Safety Code, replacement fenestration units may comply with the original construction documents or applicable *U*-factor in N1102.1.

Section N1102. Section N1102 "Building Thermal Envelope" of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended by adding Section N1102.3.7 to read as follows:

N1102.3.7 Prescriptive path for additions. As an alternative to demonstrating compliance, additions with a conditioned floor area less than 500 square feet to existing single-family residential buildings and structures shall meet the prescriptive envelope component criteria in Table N1102.3.7 for the sub-climate zone applicable to the location. The *U*-factor of each individual fenestration product (windows, doors, and skylights) shall be used to calculate the area-weighted average fenestration product *U*-factor for the addition, which shall not exceed the applicable listed values in Table N1102.3.7. For additions, other than sunroom additions, the total area of fenestration products shall not exceed 40 percent of the gross wall and roof area of the addition. The *R*-values for opaque thermal envelope components shall be equal to or greater than the applicable listed values in Table N1102.3.7.

Conditioned sunroom additions shall maintain thermal isolation. Conditioned sunroom additions shall not be used as kitchens or sleeping rooms.

In sub-climate zones 2.1, 2.2, 3.1, 3.2, and 3.3, the combined solar heat gain coefficient (the area-weighted average) of all glazed fenestration products used in additions and as replacement windows in accordance with this section shall not exceed 0.40.

Section N1102. Section N1102 "Building Thermal Envelope" of Chapter 11 "Energy Efficiency" of the 2006 International Residential Code is amended by adding Table N1102.3.7 "Prescriptive Envelope Component Criteria" immediately after Table N1102.2.4 to read as follows:

TABLE N1102.3.7
PRESCRIPTIVE ENVELOPE COMPONENT CRITERIA
ADDITIONS TO AND REPLACEMENT WINDOWS FOR EXISTING DETACHED ONE- AND TWO-FAMILY DWELLINGS[d]

SUB-CLIMATE ZONES	MAXIMUM	MINIMUM					
	Fenestration *U*-factor	Ceiling *R*-value[a, d]	Wall *R*-value[d]	Floor *R*-value	Basement wall *R*-value[b]	Slab perimeter *R*-value	Crawl space wall *R*-value[c]
2.1	0.75	R-26	R-13	R-11	R-5	R-0	R-5
2.2, 3.1, 3.2, 3.3 and 3.4	0.50	R-30	R-13	R-19	R-8	R-0	R-10
4	0.50	R-38	R-13	R-21	R-10	R-0	R-19

a. "Ceiling *R*-value" shall be required for flat or inclined (cathedral) ceilings. Floors over outside air shall meet "Ceiling *R*-value" requirements.

b. Basement wall insulation to be installed in accordance with Section N1102.2.6.

c. "Crawl space wall *R*-value" shall apply to unventilated crawl spaces only. Crawl space insulation shall be installed in accordance with Section N1102.2.8.

d. Sunroom additions shall be required to have a maximum fenestration U-factor of 0.5 in all sub-climate zones except sub-climate zone 2.1. In all sub-climate zones, the minimum ceiling *R*-value for sunroom additions shall be R-19 and the minimum wall *R*-value shall be R-13.

Section M1305.1.3. Section M1305.1.3 of Section M1305 "Appliance Access" of Chapter 13 "General Mechanical System Requirements" of the 2006 International Residential Code is amended to read as follows:

M1305.1.3 Appliances in attics. Attics containing appliances requiring access shall be provided with an opening and a clear and unobstructed passageway large enough to allow removal of the largest appliance, but not less than 30 inches high and 22 inches wide and not more than 20 feet long when measured along the centerline of the passageway from the opening to the appliance. The passageway shall have continuous unobstructed solid flooring in accordance with Chapter 5 not less than 24 inches wide. A level service space at least 30 inches deep and 30 inches wide shall be present along all sides of the appliance where access is required. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches, or larger where such dimensions are not large enough to allow removal of the largest appliance. As a minimum, access to the attic space shall be provided with one of the following:

1. A permanent stair.

2. A pull down stair.

3. An access door from an upper floor level.

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

Exceptions:

1. The passageway and level service space are not required where the appliance can be serviced and removed through the required opening.

2. Where the passageway is unobstructed and not less than 6 feet high and 22 inches wide for its entire length, the passageway shall be not more than 50 feet long.

Section M1305.1.3.1. Section M1305.1.3.1 of Section M1305 "Appliance Access" of Chapter 13 "General Mechanical System Requirements" of the 2006 International Residential Code is amended to read as follows:

M1305.1.3.1 Electrical requirements. A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet shall be provided at or near the appliance location in accordance with the *National Electrical Code*. Low voltage wiring of 50 volts or less shall be installed in a manner to prevent physical damage.

Section M1305.1.4.1. Section M1305.1.4.1 of Section M1305 "Appliance Access" of Chapter 13 "General Mechanical System Requirements" of the 2006 International Residential Code is amended to read as follows:

> **M1305.1.4.1 Ground clearance.** Appliances supported from the ground shall be level and firmly supported on a concrete slab or other approved material extending above the adjoining ground a minimum of 3 inches. Appliances suspended from the floor shall have a clearance of not less than 6 inches above the ground.

Section M1305.1.4.3. Section M1305.1.4.3 of Section M1305 "Appliance Access" of Chapter 13 "General Mechanical System Requirements" of the 2006 International Residential Code is amended to read as follows:

> **M1305.1.4.3 Electrical requirements.** A luminaire controlled by a switch located at the required passageway opening and a receptacle outlet shall be installed at or near the appliance location in accordance with Chapter 38. Low voltage wiring of 50 volts or less shall be installed in a manner to prevent physical damage.

Section M1307. Section M1307 "Appliance Installation" of Chapter 13 "General Mechanical System Requirements" of the 2006 International Residential Code is amended by deleting Section 1307.3.1 "Protection from impact."

Section M1502.3. Section M1502.3 of Section M1502 "Clothes Dryer Exhaust" of Chapter 15 "Exhaust Systems" of the 2006 International Residential Code is amended to read as follows:

M1502.3 Exhaust duct size. The minimum diameter of the exhaust duct shall be as recommended by the manufacturer, shall be at least the diameter of the appliance outlet, and shall be a minimum nominal size of 4 inches in diameter. The size of duct shall not be reduced along its developed length nor at the point of termination.

Section M1502.6. Section M1502.6 of Section M1502 "Clothes Dryer Exhaust" of Chapter 15 "Exhaust Systems" of the 2006 International Residential Code is amended to read as follows:

M1502.6 Duct length. The maximum length of a clothes dryer exhaust duct shall not exceed 35 feet from the dryer location to the wall or roof termination with not more than two bends. When extra bends are installed, the maximum length of the duct shall be reduced 2.5 feet for each 45-degree bend and 5 feet for each 90-degree bend that occur after the first two bends, measuring in the direction of airflow. The maximum length of the exhaust duct does not include the transition duct.

Exceptions:

1. Where the make and model of the clothes dryer to be installed is known and the manufacturer's installation instructions for the dryer are provided to the building official, the maximum length of the exhaust duct, including any transition duct, shall be permitted to be in accordance with the dryer manufacturer's installation instructions and provided that a 4 inch by 6 inch sign red in color with white letters is permanently affixed to the structure stating the following:

Warning: Dryer must be approved for vent length not to exceed 40 feet total developed length (TDL).
Duct Size: (Number)
Total Developed Length: (Number)

2. Where large-radius 45-degree and 90-degree bends are installed, determination of the equivalent length of clothes dryer exhaust duct for each bend by engineering calculation in accordance with the ASHRAE Fundamentals Handbook shall be permitted.

Section M2005.2. Section M2005.2 of Section M2005 "Water Heaters" of Chapter 20 "Boilers and Water Heaters" of the 2006 International Residential Code is amended 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. On or after February 15, 2009, water heaters with storage tanks shall not be installed in attics, unless such water heater was installed prior to such date. This section does not prohibit the replacement of water heaters with storage tanks in attics if such water heaters were legally permitted and installed prior to February 15, 2009.

Section G2407.10. Section G2407.10 of Section G2407 "Combustion, Ventilation and Dilution Air" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended to read as follows:

G2407.10 (304.10) Louvers and grilles. The required size of openings for combustion, ventilation, and dilution air shall be based on the net free area of each opening. Where the free area through a design of louver, grille, or screen is known, it shall be used in calculating the size opening required to provide the free area specified. Where the design and free area of louvers and grilles are not known, it shall be assumed that wood louvers will have 25 percent free area and metal louvers and grilles will have 50 percent free area. Screens shall have a mesh size not smaller than 1/4 inch. Nonmotorized louvers and grilles shall be fixed in the open position. Motorized louvers shall be interlocked with the appliance so that they are proven to be in the full open position prior to main burner ignition and during main burner operation. Means shall be provided to prevent the main burner from igniting if the louvers fail to open during burner start-up and to shut down the main burner if the louvers close during operation.

Section G2407.11. Section G2407.11 of Section G2407 "Combustion, Ventilation and Dilution Air" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended to read as follows:

G2407.11 (304.11) Combustion air ducts. Combustion air ducts shall comply with all of the following:

1. Ducts shall be constructed of galvanized steel complying with Chapter 16 or of a material having equivalent corrosion resistance, strength, and rigidity.

Exception: Within dwelling units, unobstructed stud and joist spaces shall not be prohibited from conveying combustion air, provided that not more than one required fireblock is removed.

2. Ducts shall terminate in an unobstructed space allowing free movement of combustion air to the appliances.

3. Ducts shall serve a single enclosure.

4. Ducts shall not serve both upper and lower combustion air openings where both such openings are used. The separation between ducts serving upper and lower combustion air openings shall be maintained to the source of combustion air.

5. Ducts shall not be screened where terminating in an attic space.

6. Horizontal upper combustion air ducts shall not slope downward toward the source of combustion air.

7. The remaining space surrounding a chimney liner, gas vent, special gas vent, or plastic piping installed within a masonry, metal, or factory-built chimney shall not be used to supply combustion air.

   Exception: Direct-vent gas-fired appliances designed for installation in a solid fuel-burning fireplace where installed in accordance with the manufacturer's instructions.

8. Combustion air intake openings located on the exterior of a building shall have the lowest side of such openings located not less than 12 inches vertically from the adjoining grade level or the manufacturer's recommendation, whichever is more stringent.

Section G2408. Section G2408 "Installation" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended by deleting Section G2408.3 (305.5) "Private garages."

Section G2408.4. Section G2408.4 of Section G2408 "Installation" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended to read as follows:

G2408.4 (305.7) Clearances from grade. Equipment and appliances installed at grade level shall be supported on a level concrete slab or other approved material extending a minimum of 3 inches above adjoining grade or shall be suspended a minimum of 6 inches above adjoining grade.

Section G2412.5. Section G2412.5 of Section G2412 "General" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended to read as follows:

G2412.5 (401.5) Identification. For other than steel pipe, exposed piping shall be identified by a yellow label marked "Gas" in black letters. The marking shall be spaced at intervals not exceeding 5 feet. The marking shall not be required on pipe located in the same room as the equipment served.

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 G2413.3. Section G2413.3 of Section 2413 "Pipe Sizing" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended to read as follows:

G2413.3 (402.3) Sizing. Gas piping shall be sized in accordance with one of the following:

1. Pipe sizing tables or sizing equations in accordance with Section G2413.4.

2. The sizing tables included in a listed piping system's manufacturer's installation instructions.

3. Other engineering methods approved by the building official.

Exception: Corrugated stainless steel tubing (CSST) shall be a minimum of 1/2 inch (18 EDH).

Section G2415.9. Section G2415.9 of Section G2415 "Piping System Installation" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended to read as follows:

G2415.9 (404.9) Minimum burial depth. Underground piping systems shall be installed a minimum depth of 18 inches below grade.

Section G2415. Section G2415 "Piping System Installation" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended by deleting Section G2415.9.1 (404.9.1) "Individual outside appliances."

Section G2417.1. Section G2417.1 of Section G2417 "Inspection, Testing And Purging" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended 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 code 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. Section G2417.4 of Section G2417 "Inspection, Testing And Purging" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended to read as follows:

G2417.4 (406.4) Test pressure measurement. Test pressure shall be measured with a manometer 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.

Section G2417.4.1. Section G2417.4.1 of Section G2417 "Inspection, Testing And Purging" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended to read as follows:

G2417.4.1 (406.4.1) Test pressure. The test pressure to be used shall be not less than 3 psig, or at the discretion of the code official, the piping and valves may be tested at a pressure of at least 6 inches of mercury, measured with a manometer or slope gauge. For tests requiring a pressure of 3 psig, diaphragm gauges shall utilize a dial with a minimum diaphragm diameter of 3-1/2 inches, a set hand, 1/10 pound incrementation and a 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 3-1/2 inches, 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 14 inches water column pressure (1/2 psi) and less than 200 inches of water column pressure (7.5 psi), the test pressure shall not be less than 10 psi. For piping carrying gas at a pressure that exceeds 200 inches of water column (7.5 psi), the test pressure shall be not less than one and one-half times the proposed maximum working pressure.

Section G2417.4.2. Section G2417.4.2 of Section G2417 "Inspection, Testing And Purging" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended 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 code official, but in no case for less than 15 minutes. For welded piping, and for piping carrying gas at pressures in excess of 14 inches water column pressure, the test duration shall be held for a length of time satisfactory to the code official, but in no case for less than 30 minutes.

Section G2420.1.2. Section G2420.1.2 of Section G2420 "Gas Shutoff Valves" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended to read as follows:

G2420.1.2 (409.1.2) Prohibited locations. Shutoff valves shall be located in readily visible and accessible locations.

Section G2420. Section G2420 "Gas Shutoff Valves" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended by adding Section G2420.1.4 to read as follows:

G2420.1.4 Valves in CSST installations. Shutoff valves installed with corrugated stainless steel tubing (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 G2421.1. Section G2421.1 of Section G2421 "Flow Controls" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended to read as follows:

G2421.1 (410.1) Pressure regulators. A line pressure regulator shall be installed where the appliance is designed to operate at a lower pressure than the supply pressure. Line gas pressure regulators shall be listed as complying with ANSI Z21.80. Access shall be provided to pressure regulators. Pressure regulators shall be protected from physical damage. Regulators installed on the exterior of the building shall be approved for outdoor installation.

Access to regulators shall comply with the requirements for access to appliances as specified in Section 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 G2439.5. Section G2439.5 of Section G2439 "Clothes Dryer Exhaust" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended to read as follows:

G2439.5 (614.6) Clothes dryer ducts. Exhaust ducts for domestic clothes dryers shall be constructed of metal and shall have a smooth interior finish. The exhaust duct shall be a minimum nominal size of 4 inches in diameter. The entire exhaust system shall be supported and secured in place. The male end of the duct at overlapped duct joints shall extend in the direction of airflow. Clothes dryer transition ducts used to connect the appliance to the exhaust duct system shall be metal and limited to a single length not to exceed 8 feet in length and shall be listed and labeled for the application. Transition ducts shall not be concealed within construction. The size of duct shall not be reduced along its developed length nor at the point of termination.

Section G2439.5.1. Section G2439.5.1 of Section G2439 "Clothes Dryer Exhaust" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended to read as follows:

G2439.5.1 (614.6.1) Maximum length. The maximum length of a clothes dryer exhaust duct shall not exceed 35 feet from the dryer location to the outlet terminal with not more than 2 bends. When extra bends are installed, the maximum length of the duct shall be reduced 2-1/2 feet for each 45 degree bend and 5 feet for each 90 degree bend that occur after the first two bends, measuring in the direction of airflow.

Exception: Where the make and model of the clothes dryer to be installed is known and the manufacturer's installation instructions for such dryer are provided to the code official, the maximum length of the exhaust duct, including any transition duct, shall be permitted to be in accordance with the dryer manufacturer's installation instructions, and provided that a 4 inch by 6 inch sign red in color with white letters is permanently affixed to the structure stating the following:

Warning: Dryer must be approved for vent length not to exceed
40 feet Total Developed Length (TDL).
Duct Size: (Number)
Total Developed Length: (Number)

Section G2445.2. Section G2445.2 of Section G2445 "Unvented Room Heaters" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended 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 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 the *International Fuel Gas Code* Section 108.7.

Section G2448.1.1. Section G2448.1.1 of Section G2448 "Water Heaters" of Chapter 24 "Fuel Gas" of the 2006 International Residential Code is amended 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 P2709.1. Section P2709.1 of Section 2709 "Shower Receptors" of Chapter 27 "Plumbing Fixtures" of the 2006 International Residential Code is amended to read as follows:

P2709.1 Construction. Shower receptors shall have a finished curb threshold not less than 1 inch below the sides and back of the receptor. The curb shall be not less than 2 inches and not more than 9 inches deep when measured from the top of the curb to the top of the drain. The finished floor shall slope uniformly toward the drain not less than 1/4 unit vertical in 12 units horizontal (2 percent slope) nor more than 1/2 inch, and floor drains shall be flanged to provide a water-tight joint in the floor.

Exception: Showers designed to comply with ICC/ANSI A117.1.

Section P2717.3. Section P2717.3 of Section 2717 "Dishwashing Machines" of Chapter 27 "Plumbing Fixtures" of the 2006 International Residential Code is amended to read as follows:

P2717.3 Sink, dishwasher, and food grinder. The combined discharge from a sink, dishwasher, and waste grinder is permitted to discharge through a single 1-1/2 inch trap. The discharge pipe from the dishwasher shall be increased to a minimum of 3/4 inch in diameter and shall connect with a wye fitting between the discharge of the food-waste grinder and the trap inlet or to the head of the food grinder. Dishwashing equipment shall discharge to the drainage system through an approved air gap fitting or the waste line shall rise and be securely fastened to the underside of the sink rim or counter.

Section P2801.6. Section P2801.6 of Section P2801 "General" of Chapter 28 "Water Heaters" of the 2006 International Residential Code is amended to read as follows:

P2801.6 Water heaters installed in garages. Water heaters having an ignition source shall be elevated such that the source of ignition is not less than 18 inches above the garage floor.

Exceptions:

1. Elevation of the ignition source is not required for water heaters that are listed as flammable vapor resistant and for installation without elevation.

2. Electric water heaters.

Section P2901. Section P2901 "General" of Chapter 29 "Water Supply and Distribution" of the 2006 International Residential Code is amended by adding Section P2901.1.1 to read as follows:

P2901.1.1 Separate water service required. Water supplied to any irrigation system shall be publicly metered separately from water provided for all other uses.

Section P2902.5.3. Section P2902.5.3 of Section P2902 "Protection of Potable Water Supply" of Chapter 29 "Water Supply and Distribution" of the 2006 International Residential Code is amended 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.

Table P2904.4. Table P2904.4 of Section P2904 "Materials, Joints and Connections" of Chapter 29 "Water Supply and Distribution" of the 2006 International Residential Code is amended as follows:

TABLE P2904.4
WATER SERVICE PIPE

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic pipe	ASTM D 1527; ASTM D 2282
Asbestos-cement pipe	ASTM C 296
Brass pipe	ASTM B 43
Chlorinated polyvinyl chloride (CPVC) plastic pipe	ASTM D 2846; ASTM F 441; ASTM F 442; CSA B137.6
Copper or copper-alloy pipe	ASTM B 42; ASTM B 302
Copper or copper-alloy tubing (Type K, WK, L, WL, M or WM)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 447
Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe	ASTM F 1281; CSA CAN/CSA B137.10
Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE) pipe	ASTM F 1986
Cross-linked polyethylene (PEX) plastic tubing	ASTM F 876; ASTM F 877; CSA B137.5
Ductile iron water pipe	AWWA C151; AWWA C115
Galvanized steel pipe	ASTM A 53
Polyethylene/aluminum/polyethylene (PE-AL-PE) pipe	ASTM F 1282; CSA CAN/CSA-B137.9M
Polyethylene (PE) plastic pipe	ASTM D 2104; ASTM D 2239; CSA-B137.1
Polyethylene (PE) plastic tubing	ASTM D 2737; CSA B137.1
Polypropylene (PP) plastic pipe or tubing	ASTM F 2389; CSA B137.11
Polyvinyl chloride (PVC) plastic pipe	ASTM D 1785; ASTM D 2241; ASTM D 2672; CSA B137.3
Stainless steel (Type 304/304L) pipe	ASTM A 312; ASTM A 778
Stainless steel (Type 316/316L) pipe	ASTM A 312; ASTM A 778

Table P2904.5. Table P2904.5 of Section P2904 "Materials, Joints and Connections" of Chapter 29 "Water Supply and Distribution" of the 2006 International Residential Code is amended as follows:

TABLE P2904.5
WATER DISTRIBUTION PIPE

MATERIAL	STANDARD
Brass pipe	ASTM B 43
Chlorinated polyvinyl chloride (CPVC) plastic pipe and tubing	ASTM D 2846; ASTM F 441; ASTM F 442; CSA B137.6
Copper or copper-alloy pipe	ASTM B 42; ASTM B 302
Copper or copper-alloy tubing (Type K, WK, L, WL, M or WM)	ASTM B 75; ASTM B 88; ASTM B 251; ASTM B 447
Cross-linked polyethylene (PEX) plastic tubing	ASTM F 877; CSA B137.5
Cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) pipe	ASTM F 1281; CSA CAN/CSA-B137.10
Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE) pipe	ASTM F 1986
Galvanized steel pipe	ASTM A 53
Polyethylene/aluminum/polyethylene (PE-AL-PE) composite pipe	ASTM F 1282
Polypropylene (PP) plastic pipe or tubing	ASTM F 2389; CSA B137.11
Stainless steel (Type 304/304L*)* pipe	ASTM A 312; ASTM A 778
Stainless steel (Type 316/316L) pipe	ASTM A 312; ASTM A 778

*Section P2904.5.1***.** Section P2904.5.1 of Section P2904 "Materials, Joints and Connections" of Chapter 29 "Water Supply and Distribution" of the 2006 International Residential Code is amended to read as follows:

P2904.5.1 Under concrete slabs. Inaccessible water distribution piping under slabs shall be copper water tube minimum Type M, brass, ductile iron pressure pipe, cross-linked polyethylene/aluminum/cross-linked polyethylene (PEX-AL-PEX) pressure pipe, polyethylene/aluminum/polyethylene (PE-AL-PE) pressure pipe, chlorinated polyvinyl chloride (CPVC), cross-linked polyethylene (PEX) plastic pipe or tubing or polypropylene (PP) pipe or tubing, all to be installed with approved fittings or bends. The minimum pressure rating for plastic pipe or tubing installed under slabs shall be 100 pounds per square inch at 180° F.

Table P2904.6. Table P2904.6 of Section P2904 "Materials, Joints and Connections" of Chapter 29 "Water Supply and Distribution" of the 2006 International Residential Code is amended as follows:

TABLE P2904.6
PIPE FITTINGS

MATERIAL	STANDARD
Acrylonitrile butadiene styrene (ABS) plastic	ASTM D 2468
Brass	ASTM F 1974
Cast-iron	ASME B16.4; ASME B16.12
Chlorinated polyvinyl chloride (CPVC) plastic	ASTM F 437; ASTM F 438; ASTM F 439; CSA B137.6
Copper or copper alloy	ASME B16.15; ASME B16.18; ASME B16.22; ASME B16.23; ASME B16.26; ASME B16.29
Cross-linked polyethylene/aluminum/high-density polyethylene (PEX-AL-HDPE)	ASTM F 1986
Fittings for cross-linked polyethylene (PEX) plastic tubing	ASTM F 877; ASTM F 1807; ASTM F 1960; ASTM F 2080; ASTM F 2159; CSA B137.5
Gray iron and ductile iron	AWWA C110; AWWA C153

Malleable iron	ASTE B16.3
Polyethylene (PE) plastic pipe	ASTM D 2104; ASTM D 2239; CSA-B137.1
Polyethylene (PE) plastic	ASTM D 2609; CSA B137.1
Polypropylene (PP) plastic pipe or tubing	ASTM F 2389; CSA B137.11
Polyvinyl chloride (PVC) plastic	ASTM D 2464; ASTM D 2466; ASTM D 2467; CSA B137.2
Stainless steel (Type 304/304L) pipe	ASTM A 312; ASTM A 778
Stainless steel (Type 316/316L) pipe	ASTM A 312; ASTM A 778
Steel	ASME B16.9; ASME B16.11; ASME B16.28

*Section P3005.2.6***.** Section P3005.2.6 of Section P3005 "Drainage System" of Chapter 30 "Sanitary Drainage" of the 2006 International Residential Code is amended to read as follows:

P3005.2.6 Upper terminal. Each horizontal drain shall be provided with a cleanout at its upper terminal.

Exception: Cleanouts may be omitted on a horizontal drain less than 5 feet in length unless such line is serving sinks or urinals.

Chapter 31. Chapter 31 "Vents" of the 2006 International Residential Code is amended by deleting Section P3111 "Combination Waste and Vent System."

Section P3112.2. Section P3112.2 of Section P3112 "Island Fixture Venting" of Chapter 31 "Vents" of the 2006 International Residential Code is amended to read as follows:

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 6 inches 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 1/4 inch per foot back to the drain shall be maintained. The return bend used under the drainboard shall be a one piece fitting or an assembly of a 45-degree, a 90-degree and a 45-degree 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.

Chapter 33. Chapter 33 "General Requirements" of Part VIII "Electrical" of the 2006 International Residential Code is amended to read as follows:

CHAPTER 33

GENERAL REQUIREMENTS

The provisions of the 2008 *National Electrical Code* as adopted by the City of Irving shall establish the general scope of the electrical system and equipment requirements of this code.

Part VIII. Part VIII "Electrical" of the 2006 International Residential Code is amended by deleting Chapter 34 "Electrical Definitions."

Part VIII. Part VIII "Electrical" of the 2006 International Residential Code is amended by deleting Chapter 35 "Services."

Part VIII. Part VIII "Electrical" of the 2006 International Residential Code is amended by deleting Chapter 36 "Branch Circuit and Feeder Requirements."

Part VIII. Part VIII "Electrical" of the 2006 International Residential Code is amended by deleting Chapter 37 "Wiring Methods."

Part VIII. Part VIII "Electrical" of the 2006 International Residential Code is amended by deleting Chapter 38 "Power and Lighting Distribution."

Part VIII. Part VIII "Electrical" of the 2006 International Residential Code is amended by deleting Chapter 39 "Devices and Luminaires."

Part VIII. Part VIII "Electrical" of the 2006 International Residential Code is amended by deleting Chapter 40 "Appliance Installation."

Part VIII. Part VIII "Electrical" of the 2006 International Residential Code is amended by deleting Chapter 41 "Swimming Pools."

Part VIII. Part VIII "Electrical" of the 2006 International Residential Code is amended by deleting Chapter 42 "Class 2 Remote-Control, Signaling and Power-Limited Circuits."

Section AG105.2. Section AG105.2 of Section AG105 "Barrier Requirements" of Appendix G "Swimming Pools, Spas and Hot Tubs" of the 2006 International Residential Code is amended to read as follows:

AG105.2 Outdoor swimming pool. An outdoor swimming pool, including an in-ground, above-ground, or on-ground pool, hot tub, or spa shall be surrounded by a barrier which shall comply with the following:

1. The top of the barrier shall be at least 48 inches above grade measured on the side of the barrier which faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches measured on the side of the barrier which faces away from the swimming pool. Where the top of the pool structure is above grade, such as an above-ground pool, the barrier may be at ground level, such as the pool structure, or mounted on top of the pool structure. Where the barrier is mounted on top of the pool structure, the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches.

2. Openings in the barrier shall not allow passage of a 4-inch-diameter sphere.

3. Solid barriers which do not have openings, such as a masonry or stone wall, shall not contain indentations or protrusions except for normal construction tolerances and tooled masonry joints.

4. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches, the horizontal members shall be located on the swimming pool side of the fence. Spacing between vertical members shall not exceed 1-3/4 inches in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1-3/4 inches in width.

5. Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is 45 inches or more, spacing between vertical members shall not exceed 4 inches. Where there are decorative cutouts within vertical members, spacing within the cutouts shall not exceed 1-3/4 inches in width.

6. Maximum mesh size for chain link fences shall be a 2-1/4 inch square unless the fence has slats fastened at the top or the bottom which reduce the openings to not more than 1-3/4 inches.

7. Where the barrier is composed of diagonal members, such as a lattice fence, the maximum opening formed by the diagonal members shall not be more than 1-3/4 inches.

8. Access gates shall comply with the requirements of Section AG105.2, Items 1 through 7, and shall be equipped to accommodate a locking device. Access gates shall open outward away from the pool and shall be self-closing and have a self-latching device. Where the release mechanism of the self-latching device is located less than 54 inches from the bottom of the gate, the release mechanism and openings shall comply with the following:

    8.1. The release mechanism shall be located on the pool side of the gate at least 3 inches below the top of the gate, and

    8.2. The gate and barrier shall have no opening greater than 1/2 inch within 18 inches of the release mechanism.

    Exception: With approval of the building official, self-latching devices may be omitted on gates that are kept locked except when in active use and under direct adult supervision. A letter from the pool owner requesting authorization to utilize this exception must be filed with the building official.

9. Where a wall of a dwelling serves as part of the barrier, one of the following conditions shall be met:

    9.1. The pool shall be equipped with a powered safety cover in compliance with ASTM F 1346; or

    9.2. All doors with direct access to the pool through that wall shall be equipped with an alarm which produces an audible warning when the door and its screen, if present, are opened. The alarm shall sound continuously for a minimum of 30 seconds immediately after the door is opened and be capable of being heard throughout the house during normal household activities. The alarm shall automatically reset under all conditions. The alarm system shall be equipped with a manual means, such as touchpad or switch, to temporarily deactivate the alarm for a single opening. Such deactivation shall last for not more than 15 seconds. The deactivation switch(es) shall be located at least 54 inches above the threshold of the door; or

9.3. Other means of protection, such as self-closing doors with self-latching devices, which are approved by the building official, shall be acceptable so long as the degree of protection afforded is not less than the protection afforded by Item 9.1 or 9.2 described above.

10. Where an above-ground pool structure is used as a barrier or where the barrier is mounted on top of the pool structure, and the means of access is a ladder or steps, then:

10.1 The ladder or steps shall be capable of being secured, locked, or removed to prevent access; or

10.2 The ladder or steps shall be surrounded by a barrier which meets the requirements of Section AG105.2, Items 1 through 9. When the ladder or steps are secured, locked, or removed, any opening created shall not allow the passage of a 4 inch diameter sphere.

Appendix I. Appendix I "Private Sewage Disposal" of the 2006 International Residential Code is amended in its entirety to read as follows:

APPENDIX I

IRRIGATION SYSTEMS

AI101.1 Scope. Irrigation systems shall conform to Appendix I of the 2006 *International Plumbing Code*.

2006 International Residential Code. The 2006 International Residential Code is amended by adding Appendix R "Airport Noise Attenuation Requirements" to read as follows:

APPENDIX R

AIRCRAFT NOISE ATTENUATION REQUIREMENTS

AR101.1 Two zones. For the purposes of this code, certain sections of the city are zones subject to significant noise from aircraft. These zones are the "65-70 DNL noise zone" and the "over 70 DNL noise zone."

AR101.2 Map. These noise zones shall include such territory or portions of the city as are designated and shown on the aircraft noise impact map (a copy of which is on file with the building official) and incorporated into this code and made a part of it for all intents and purposes.

AR102.1 Certified plans. The building official shall not issue a building permit for any building or structure within the noise zones shown on the aircraft noise impact map unless the plans and specifications accompanying the application for the permit are certified by a bona fide acoustical consultant as meeting the required noise level reduction standards of this section.

AR102.2 Noise consultants. Bona fide acoustical noise consultants include members of the National Council of Acoustical Consultants and others who are approved by the building official, such approval being based on the demonstration of competence and credentials in the area of architectural acoustics.

AR102.3 Building intrusion in a noise zone. A building or structure which is located partly within a noise zone and partly without or located partly within one (1) noise zone and partly within another noise zone shall be considered within the most restrictive of the noise zones within which it is located for purposes of this chapter.

AR103.1 Noise reductions standards. Plans for the construction of buildings within noise zones shall be certified as achieving at least the outdoor to indoor noise level reductions as measured in decibels within the building as follows:

Building Use	65-70 DNL Noise Zone	Over 70 DNL Noise Zone
Residential:	25	30

SECTION 4. That Section 8-7 "International Energy Conservation Code" of Chapter 8 of Development Standards and Construction Codes of the City of Irving, Texas, is hereby amended to read as follows:

Sec. 8-7. International Energy Conservation Code.

(a) **Energy Code**. The 2006 edition of the International Energy Conservation Code with amendments, modifications, and deletions as specified in this section is adopted as the energy code for the City of Irving, Texas.

(b) **Amendments, modifications, and deletions to the 2006 International Energy Conservation Code.** Amendments, modifications, and deletions to the 2006 *International Energy Conservation Code* are adopted as follows:

Section 101.1. Section 101.1 of Section 101 "Scope and General Requirements" of Chapter 1 "Administration" of the 2006 International Energy Conservation Code is amended to read as follows:

101.1 Title. These regulations shall be known as the *Energy Code of the City of Irving, Texas*, hereinafter referred to as "this code" or "IECC."

Section 101.4.2. Section 101.4.2 of Section 101 "Scope and General Requirements" of Chapter 1 "Administration" of the 2006 International Energy Conservation Code is amended to read as follows:

101.4.2 Historic buildings. Any building or structure that is listed in the State or National Register of Historic Places; designated as a historic property under local or state designation law or survey; certified as a contributing resource with a National Register listed or locally designated historic district; or with an opinion or certification that the property is eligible to be listed on the National or State Registers of Historic Places either individually or as a contributing building to a historic district by the State Historic Preservation Officer or the Keeper of the National Register of Historic Places, shall comply with all of the provisions of this code.

Exception: Whenever a provision or provisions shall invalidate or jeopardize the historical designation or listing, that provision or provisions may be exempted.

Section 103.1.1. Section 103.1.1 of Section 103 "Alternate Materials—Method of Construction, Design or Insulating Systems" of Chapter 1 "Administration" of the 2006 International Energy Conservation Code is amended to read as follows:

103.1.1 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.

Section 202. Section 202 "General Definitions" of Chapter 2 "Definitions" of the 2006 International Energy Conservation Code is amended by adding the following definition:

GLAZING AREA. Total area of the glazed fenestration measured using the rough opening and including sash, curbing, or other framing elements that enclose conditioned space. Glazing area includes the area of glazed fenestration assemblies in walls bounding conditioned basements. For doors where the daylight opening area is less than 50 percent of the door area, the glazing area is the daylight opening area. For all other doors, the glazing area is the rough opening area for the door including the door and the frame.

Section 301.1. Section 301.1 of Section 301 "Climate Zones" of Chapter 3 "Climate Zones" of the 2006 International Energy Conservation Code is amended to read as follows:

301.1 General. Climate zones from Figure 301.1, Figure 301.2, Table 301.1(1), or Table 301.2(1) shall be used in determining the applicable requirements from Chapters 4 and 5. Locations not in Table 301.1 (outside the US) shall be assigned a climate zone based on Section 301.3.

Section 301. Section 301 "Climate Zones" of Chapter 3 "Climate Zones" of the 2006 International Energy Conservation Code is amended by adding Figure 301.2 "Texas Climate Zones" immediately after Figure 301.1 to read as follows:

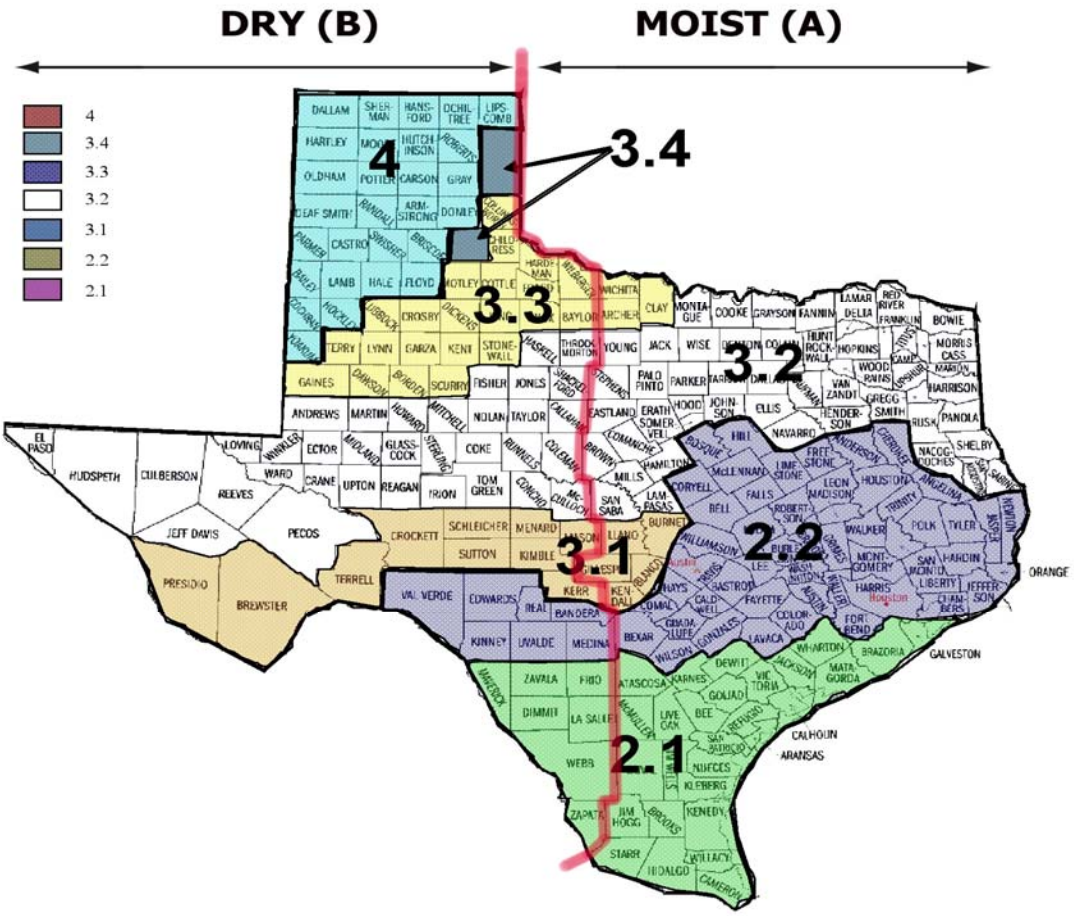

FIGURE 301.2
TEXAS CLIMATE ZONES

Table 301.1. Table 301.1 "Climate Zones By State, County and Territories" of Section 301 "Climate Zones" of Chapter 3 "Climate Zones" of the 2006 International Energy Conservation Code is amended by deleting the reference to "Texas" (and all the counties under the heading "Texas").

Section 301. Section 301 "Climate Zones" of Chapter 3 "Climate Zones" of the 2006 International Energy Conservation Code is amended by adding Table 301.1(1) "Climate Zones and Sub-Climate Zones for Texas" immediately after Table 301.1 to read as follows:

TABLE 301.1(1)
CLIMATE ZONES AND SUB-CLIMATE ZONES FOR TEXAS
Zone 2

ANDERSON	2.2	DE WITT	2.1	JIM HOGG	2.1	ORANGE	2.2
ANGELINA	2.2	DIMMIT	2.1	JIM WELLS	2.1	POLK	2.2
ARANSAS	2.1	DUVAL	2.1	KARNES	2.1	REAL	2.2
ATASCOSA	2.1	EDWARDS	2.2	KENEDY	2.1	REFUGIO	2.1
AUSTIN	2.2	FALLS	2.2	KINNEY	2.2	ROBERTSON	2.2
BANDERA	2.2	FAYETTE	2.2	KLEBERG	2.1	SAN JACINTO	2.2
BASTROP	2.2	FORT BEND	2.2	LA SALLE	2.1	SAN PATRICIO	2.1
BEE	2.1	FREESTONE	2.2	LAVACA	2.2	STARR	2.1
BELL	2.2	FRIO	2.1	LEE	2.2	TRAVIS	2.2
BEXAR	2.2	GALVESTON	2.1	LEON	2.2	TRINITY	2.2
BOSQUE	2.2	GOLIAD	2.1	LIBERTY	2.2	TYLER	2.2
BRAZORIA	2.1	GONZALES	2.2	LIMESTONE	2.2	UVALDE	2.2

BRAZOS	2.2	GRIMES	2.2	LIVE OAK	2.1	VAL VERDE	2.2
BROOKS	2.1	GUADALUPE	2.2	MADISON	2.2	VICTORIA	2.1
BURLESON	2.2	HARDIN	2.2	MATAGORDA	2.1	WALKER	2.2
CALDWELL	2.2	HARRIS	2.2	MAVERICK	2.1	WALLER	2.2
CALHOUN	2.1	HAYS	2.2	MCLENNAN	2.2	WASHINGTON	2.2
CAMERON	2.1	HIDALGO	2.1	MCMULLEN	2.1	WEBB	2.1
CHAMBERS	2.2	HILL	2.2	MEDINA	2.2	WHARTON	2.1
CHEROKEE	2.2	HOUSTON	2.2	MILAM	2.2	WILLACY	2.1
COLORADO	2.2	JACKSON	2.1	MONTGOMERY	2.2	WILLIAMSON	2.2
COMAL	2.2	JASPER	2.2	NEWTON	2.2	WILSON	2.2
CORYELL	2.2	JEFFERSON	2.2	NUECES	2.1	ZAPATA	2.1

Zone 3

ANDREWS	3.2	EL PASO	3.2	KERR	3.1	ROCKWALL	3.2
ARCHER	3.3	ELLIS	3.2	KIMBLE	3.1	RUNNELS	3.2
BAYLOR	3.3	ERATH	3.2	KING	3.3	RUSK	3.2
BLANCO	3.1	FANNIN	3.2	KNOX	3.3	SABINE	3.2
BORDEN	3.3	FISHER	3.2	LAMAR	3.2	SAN AUGUSTINE	3.2
BOWIE	3.2	FOARD	3.3	LAMPASAS	3.2	SAN SABA	3.2
BREWSTER	3.1	FRANKLIN	3.2	LLANO	3.1	SCHLEICHER	3.1
BROWN	3.2	GAINES	3.3	LOVING	3.2	SCURRY	3.3
BURNET	3.1	GARZA	3.3	LUBBOCK	3.3	SHACKELFORD	3.2
CALLAHAN	3.2	GILLESPIE	3.1	LYNN	3.3	SHELBY	3.2
CAMP	3.2	GLASSCOCK	3.2	MARION	3.2	SMITH	3.2
CASS	3.2	GRAYSON	3.2	MARTIN	3.2	SOMERVELL	3.2
CHILDRESS	3.3	GREGG	3.2	MASON	3.1	STEPHENS	3.2
CLAY	3.3	HALL	3.4	MCCULLOCH	3.2	STERLING	3.2
COKE	3.2	HAMILTON	3.2	MENARD	3.1	STONEWALL	3.3
COLEMAN	3.2	HARDEMAN	3.3	MIDLAND	3.2	SUTTON	3.1
COLLIN	3.2	HARRISON	3.2	MILLS	3.2	TARRANT	3.2
COLLINGSWORTH	3.3	HASKELL	3.2	MITCHELL	3.2	TAYLOR	3.2
COMANCHE	3.2	HEMPHILL	3.4	MONTAGUE	3.2	TERRELL	3.1
CONCHO	3.2	HENDERSON	3.2	MORRIS	3.2	TERRY	3.3
COOKE	3.2	HOOD	3.2	MOTLEY	3.3	THROCKMORTON	3.2
COTTLE	3.3	HOPKINS	3.2	NACOGDOCHES	3.2	TITUS	3.2
CRANE	3.2	HOWARD	3.2	NAVARRO	3.2	TOM GREEN	3.2
CROCKETT	3.1	HUDSPETH	3.2	NOLAN	3.2	UPSHUR	3.2
CROSBY	3.3	HUNT	3.2	PALO PINTO	3.2	UPTON	3.2
CULBERSON	3.2	IRION	3.2	PANOLA	3.2	VAN ZANDT	3.2
DALLAS	3.2	JACK	3.2	PARKER	3.2	WARD	3.2
DAWSON	3.3	JEFF DAVIS	3.2	PECOS	3.2	WHEELER	3.4
DELTA	3.2	JOHNSON	3.2	PRESIDIO	3.1	WICHITA	3.3
DENTON	3.2	JONES	3.2	RAINS	3.2	WILBARGER	3.3
DICKENS	3.3	KAUFMAN	3.2	REAGAN	3.2	WINKLER	3.2
EASTLAND	3.2	KENDALL	3.1	RED RIVER	3.2	WISE	3.2
ECTOR	3.2	KENT	3.3	REEVES	3.2	WOOD	3.2
						YOUNG	3.2

Zone 4

ARMSTRONG	DEAF SMITH	HOCKLEY	PARMER
BAILEY	DONLEY	HUTCHINSON	POTTER
BRISCOE	FLOYD	LAMB	RANDALL
CARSON	GRAY	LIPSCOMB	ROBERTS
CASTRO	HALE	MOORE	SHERMAN
COCHRAN	HANSFORD	OCHILTREE	SWISHER
DALLAM	HARTLEY	OLDHAM	YOAKUM

Table 301.2. Table 301.2 “Warm Humid Counties and Territories” of Section 301 “Climate Zones” of Chapter 3 “Climate Zones” of the 2006 International Energy Conservation Code is amended by deleting the reference to “Texas” (and all the counties under the title “Texas”).

Section 301. Section 301 “Climate Zones” of Chapter 3 “Climate Zones” of the 2006 International Energy Conservation Code is amended by adding Table 301.2(1) “Warm Humid Counties for Texas” immediately after Table 301.2 to read as follows:

TABLE 301.2(1)
WARM HUMID COUNTIES FOR TEXAS

ANDERSON	2.2	DUVAL	2.1	KAUFMAN	3.2	RED RIVER	3.2
ANGELINA	2.2	EDWARDS	2.2	KENDALL	3.1	REAL	2.2
ARANSAS	2.1	ELLIS	3.2	KENEDY	2.1	REFUGIO	2.1
ATASCOSA	2.1	ERATH	3.2	KINNEY	2.2	ROBERTSON	2.2
AUSTIN	2.2	FALLS	2.2	KLEBERG	2.1	ROCKWALL	3.2
BANDERA	2.2	FAYETTE	2.2	LA SALLE	2.1	RUSK	3.2
BASTROP	2.2	FORT BEND	2.2	LAMAR	3.2	SABINE	3.2
BEE	2.1	FRANKLIN	3.2	LAMPASAS	3.2	SAN AUGUSTINE	3.2
BELL	2.2	FREESTONE	2.2	LAVACA	2.2	SAN JACINTO	2.2
BEXAR	2.2	FRIO	2.1	LEE	2.2	SAN PATRICIO	2.1
BLANCO	3.1	GALVESTON	2.1	LEON	2.2	SAN SABA	3.2
BOSQUE	2.2	GILLESPIE	3.1	LLANO	3.1	SHELBY	3.2
BOWIE	3.2	GOLIAD	2.1	LIBERTY	2.2	SMITH	3.2
BRAZORIA	2.1	GONZALES	2.2	LIMESTONE	2.2	STARR	2.1
BROWN	3.2	GREGG	3.2	LIVE OAK	2.1	SOMMERVELL	3.2
BRAZOS	2.2	GRIMES	2.2	MADISON	2.2	TARRANT	3.2
BROOKS	2.1	GUADALUPE	2.2	MARION	3.2	TITUS	3.2
BURLESON	2.2	HAMILTON	3.2	MATAGORDA	2.1	TRAVIS	2.2
BURNET	3.1	HARDIN	2.2	MAVERICK	2.1	TRINITY	2.2
CALDWELL	2.2	HARRIS	2.2	MCLENNAN	2.2	TYLER	2.2
CALHOUN	2.1	HARRISON	3.2	MCMULLEN	2.1	UPSHUR	3.2
CAMERON	2.1	HAYS	2.2	MEDINA	2.2	UVALDE	2.2
CHAMBERS	2.2	HENDERSON	3.2	MILAM	2.2	VAL VERDE	2.2
CAMP	3.2	HIDALGO	2.1	MILLS	3.2	VAN ZANDT	3.2
CASS	3.2	HOOD	3.2	MONTGOMERY	2.2	VICTORIA	2.1
CHEROKEE	2.2	HOPKINS	3.2	MORRIS	3.2	WALKER	2.2
COLLIN	3.2	HILL	2.2	NACOGDOCHES	3.2	WALLER	2.2
COLORADO	2.2	HOUSTON	2.2	NAVARRO	3.2	WASHINGTON	2.2
COMAL	2.2	HUNT	3.2	NEWTON	2.2	WEBB	2.1
COMANCHE	3.2	JACKSON	2.1	NUECES	2.1	WHARTON	2.1
CORYELL	2.2	JASPER	2.2	ORANGE	2.2	WILLACY	2.1
DALLAS	3.2	JEFFERSON	2.2	PALO PINTO	3.2	WILLIAMSON	2.2
DELTA	3.2	JIM HOGG	2.1	PANOLA	3.2	WILSON	2.2
DENTON	3.2	JIM WELLS	2.1	PARKER	3.2	WOOD	3.2
DE WITT	2.1	JOHNSON	3.2	POLK	2.2	ZAPATA	2.1
DIMMIT	2.1	KARNES	2.1	RAINS	3.2	ZAVALA	2.1

Section 401. Section 401 “General” of Chapter 4 “Residential Energy Efficiency” of the 2006 International Energy Conservation Code is amended by adding Section 401.2.1 to read as follows:

401.2.1 Compliance software tools. Software tools used to demonstrate energy code compliance that are deemed acceptable by the building official may only utilize the energy chapter of the 2006 *International Energy Conservation Code* or the 2004 edition of the ASHRAE 90.1 *Energy Standard for Buildings Except Low-Rise Residential Buildings* when code edition and/or standard selection is available. The PNL program, *REScheck*™, is not acceptable for residential compliance.

Section 402.1.1. Section 402.1.1 of Section 402 "Building Thermal Envelope" of Chapter 4 "Residential Energy Efficiency" of the 2006 International Energy Conservation Code is amended to read as follows:

402.1.1 Insulation and fenestration criteria. The building thermal envelope shall meet the requirements of Table 402.1.1 based on the climate zone specified in Chapter 3. The use of *REScheck*™ shall not be an acceptable means of demonstrating envelope compliance.

When compliance using Table 402.1.1 is demonstrated with a ceiling *R*-value of *R*-30 or less, no more than 33 percent of the total projected ceiling area may be of cathedral type construction (ceiling joist/roof rafter assembly) and the required insulation *R*-value may be reduced to a minimum of *R*-22 insulation when the remaining ceiling area insulation is increased to *R*-38.

Table 402.1.1. Table 402.1.1 of Chapter 4 "Residential Energy Efficiency" of the 2006 International Energy Conservation Code is amended to read as follows:

TABLE 402.1.1
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT (TEXAS)[a]

CLIMATE - SUB CLIMATE ZONE	MAX GLAZED AREA TO WALL AREA RATIO	MAX GLAZED FENESTRATION *U*-FACTOR	MAX SKYLIGHT *U*- FACTOR[b]	MAX GLAZED FENESTRATION SHGC	MIN CEILING *R*-VALUE	MIN WOOD FRAME WALL *R*-VALUE[d]	MASS WALL *R*-VALUE	MIN FLOOR *R*-VALUE	MIN BASEMENT WALL *R*-VALUE	MIN SLAB *R*-VALUE & DEPTH[c]	MIN CRAWL SPACE WALL *R*-VALUE
2.1	15	0.75	0.75	0.38	19	13	6	19	0	0	5
	20	0.70	0.75	0.38	30	13	6	19	0	0	5
	25	0.65	0.75	0.35	30	13	6	19	0	0	5
	30	0.54	0.75	0.35	38	13	6	19	0	0	5
2.2	15	0.65	0.75	0.38	30	13	6	19	5	0	6
	20	0.65	0.75	0.38	38	13	6	19	6	0	6
	25	0.54	0.75	0.35	38	13	6	19	8	0	10
	30	0.46	0.75	0.35	38	16, 13 + 3.7[e]	6	19	8	0	10
3.1	15	0.65	0.65	0.40	30	13	6	19	5	0	6
	20	0.55	0.65	0.40	38	13	6	19	5	0	6
	25	0.54	0.65	0.35	38	13	6	19	8	0	10
	30	0.46	0.65	0.35	38	16, 13 + 3.7[e]	7	19	8	0	10
3.2	15	0.60	0.65	0.40	30	13	6	19	6	0	7
	20	0.54	0.65	0.40	38	13	6	19	6	0	7
	25	0.51	0.65	0.40	38	16, 13 + 3.7[e]	7	19	6	0	7
	30	0.46	0.65	0.38	38	16, 13 + 3.7[e]	7	19	6	0	7
3.3	15	0.51	0.65	0.40	30	13	6	19	7	0	8
	20	0.45	0.65	0.40	38	13	6	19	7	0	9
	25	0.40	0.65	0.40	38	16, 13 + 3.7[e]	7	19	7	0	9
	30	0.40	0.65	0.40	38	19, 13 + 8.1[e]	9	19	7	0	9

3.4	15	0.45	0.60	NR	38	13	6	19	8	5, 2 ft	11
	20	0.37	0.60	NR	38	13	6	19	8	6, 2 ft	13
	25	0.37	0.60	NR	38	19, 13 + 8.1[e]	9	19	8	6, 2 ft	13
	30	0.37	0.60	NR	38	19, 13 + 8.1 e	9	30	8	6, 2 ft	13
4	15	0.45	0.60	NR	38	13	8	19	8	5, 2 ft	11
	20	0.37	0.60	NR	38	13	8	19	9	6, 2 ft	13
	25	0.37	0.60	NR	38	19, 13 + 8.1[e]	10	19	9	6, 2 ft	13
	30	0.37	0.60	NR	38	19, 13 + 8.1[e]	10	30	9	6, 2 ft	13

For SI: 1 foot = 304.8 mm.

a. *R*-values are minimums. *U*-factors and SHGC are maximums. *R*-19 shall be permitted to be compressed into a 2 x 6 cavity.

b. The fenestration *U*-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

c. *R*-5 shall be added to the required slab edge *R*-values for heated slabs.

d. The total *R*-value may be achieved with a combination of cavity insulation and insulating sheathing that covers 100 percent of the exterior wall.

e. The wall insulation may be the sum of the two values where the first value is the cavity insulation and the second value is insulating sheathing. The combination of cavity insulation plus insulating sheathing may be used where structural sheathing covers not more than 25 percent of the exterior wall area and insulating sheathing is not required where structural sheathing is used. If structural sheathing covers more than 25 percent of exterior wall area then the wall insulation requirement may only be satisfied with the single insulation value.

Table 402.1.3. Table 402.1.3 of Chapter 4 "Residential Energy Efficiency" of the 2006 International Energy Conservation Code is amended to read as follows:

TABLE 402.1.3
EQUIVALENT *U*-FACTORS[a]

CLIMATE - SUB CLIMATE ZONE	MAX GLAZED AREA TO WALL AREA RATIO	MAX GLAZED FENESTRATION *U*-FACTOR	MAX SKYLIGHT *U*-FACTOR	MAX CEILING *U*-FACTOR	MAX WOOD FRAME WALL *U*-FACTOR	MAX MASS WALL *U*-FACTOR	MAX FLOOR *U*-FACTOR	MAX BASEMENT WALL *U*-FACTOR	MAX CRAWL SPACE WALL *U*-FACTOR
2.1	15	0.75	0.75	0.039	0.082	0.124	0.047	0.360	0.136
	20	0.70	0.75	0.034	0.082	0.124	0.047	0.360	0.136
	25	0.65	0.75	0.034	0.082	0.124	0.047	0.360	0.136
	30	0.54	0.75	0.030	0.082	0.124	0.047	0.360	0.136
2.2	15	0.65	0.75	0.034	0.082	0.124	0.047	0.210	0.100
	20	0.65	0.75	0.030	0.082	0.124	0.047	0.210	0.100
	25	0.54	0.75	0.030	0.082	0.124	0.047	0.119	0.065
	30	0.46	0.75	0.030	0.071	0.124	0.047	0.119	0.065
3.1	15	0.65	0.65	0.034	0.082	0.124	0.047	0.210	0.100
	20	0.55	0.65	0.030	0.082	0.124	0.047	0.210	0.100
	25	0.54	0.65	0.030	0.082	0.124	0.047	0.119	0.065
	30	0.46	0.65	0.030	0.071	0.112	0.047	0.119	0.065
3.2	15	0.60	0.65	0.034	0.082	0.124	0.047	0.179	0.075
	20	0.54	0.65	0.030	0.082	0.124	0.047	0.179	0.075
	25	0.51	0.65	0.030	0.071	0.112	0.047	0.179	0.075
	30	0.46	0.65	0.030	0.071	0.112	0.047	0.179	0.075
3.3	15	0.51	0.65	0.034	0.082	0.124	0.047	0.149	0.061
	20	0.45	0.65	0.030	0.082	0.124	0.047	0.149	0.058
	25	0.40	0.65	0.030	0.075	0.112	0.047	0.149	0.058
	30	0.40	0.65	0.030	0.061	0.094	0.047	0.149	0.058
3.4	15	0.45	0.60	0.030	0.082	0.124	0.047	0.119	0.083
	20	0.37	0.60	0.030	0.082	0.124	0.047	0.119	0.152
	25	0.37	0.60	0.030	0.061	0.094	0.047	0.119	0.152
	30	0.37	0.60	0.030	0.061	0.094	0.033	0.119	0.152

4	15	0.45	0.60	0.030	0.082	0.102	0.047	0.119	0.083
	20	0.37	0.60	0.030	0.082	0.102	0.047	0.089	0.152
	25	0.37	0.60	0.030	0.061	0.087	0.047	0.089	0.152
	30	0.37	0.60	0.030	0.061	0.087	0.033	0.089	0.152

a. Nonfenestration *U*-factors shall be obtained from measurement, calculation, or an approved source.

Section 402. Section 402 "Building Thermal Envelope" of Chapter 4 "Residential Energy Efficiency" of the 2006 International Energy Conservation Code is amended by adding Section 402.2.11 to read as follows:

402.2.11 Insulation installed in walls. Insulation batts installed in walls shall be totally surrounded by an enclosure on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing, or other equivalent material approved by the building official.

Section 402.3.2. Section 402.3.2 of Section 402 "Building Thermal Envelope" of Chapter 4 "Residential Energy Efficiency" of the 2006 International Energy Conservation Code is amended to read as follows:

402.3.2 Glazed fenestration SHGC. An area-weighted average of fenestration products more than 50 percent glazed shall be permitted to satisfy the SHGC requirements. In sub-climate zones 2.1, 2.2, 3.1, 3.2, and 3.3 the maximum area-weighted average and the maximum SHGC shall not exceed 0.40.

Section 402.3.3. Section 402.3.3 of Section 402 "Building Thermal Envelope" of Chapter 4 "Residential Energy Efficiency" of the 2006 International Energy Conservation Code is amended to read as follows:

402.3.3 Glazed fenestration exemption. Up to 1 percent of glazed fenestration per dwelling unit shall be permitted to be exempt from *U*-factor and SHGC requirements in Section 402.1.1.

Section 402.3.5. Section 402.3.5 of Section 402 "Building Thermal Envelope" of Chapter 4 "Residential Energy Efficiency" of the 2006 International Energy Conservation Code is amended to read as follows:

402.3.5 Thermally isolated sunroom. New windows and doors separating the sunroom from conditioned space shall meet the building thermal envelope requirements.

Section 402.3.6. Section 402.3.6 of Section 402 "Building Thermal Envelope" of Chapter 4 "Residential Energy Efficiency" of the 2006 International Energy Conservation Code is amended to read as follows:

402.3.6 Replacement fenestration. Where some or all of an existing fenestration unit is replaced with a new fenestration product, including sash and glazing, the replacement fenestration unit shall meet the applicable requirements for *U*-factor in Table 402.3.7.

Exceptions:

1. Replacement skylights shall have a maximum *U*-factor of 0.60 when installed in all sub-climate zones except for 2.1.

2. For buildings constructed in conformance with an energy code as required by Chapter 388 of the Texas Health and Safety Code, replacement fenestration units may comply with the original construction documents or applicable *U*-factor in Table 402.1.1.

Section 402. Section 402 "Building Thermal Envelope" of Chapter 4 "Residential Energy Efficiency" of the 2006 International Energy Conservation Code is amended by adding Section 402.3.7 to read as follows:

402.3.7 Prescriptive path for additions. As an alternative for demonstrating compliance, additions with a conditioned floor area less than 500 square feet to existing single-family residential buildings and structures shall meet the prescriptive envelope component criteria in Table 402.3.7 for the sub-climate zone applicable to the location. The *U*-factor of each individual fenestration product (windows, doors, and skylights) shall be used to calculate the area-weighted average fenestration product *U*-factor for the addition, which shall not exceed the applicable listed values in Table 402.3.7. For additions, other than sunroom additions, the total area of fenestration products shall not exceed 40 percent of the gross wall and roof area of the addition. The *R*-values for opaque thermal envelope components shall be equal to or greater than the applicable listed values in Table 402.3.7.

Conditioned sunroom additions shall maintain thermal isolation. Conditioned sunroom additions shall not be used as kitchens or sleeping rooms.

In sub-climate zones 2.1, 2.2, 3.1, 3.2, and 3.3, the combined solar heat gain coefficient (the area-weighted average) of all glazed fenestration products used in additions and as replacement windows in accordance with this section shall not exceed 0.40.

Section 402. Section 402 "Building Thermal Envelope" of Chapter 4 "Residential Energy Efficiency" of the 2006 International Energy Conservation Code is amended by adding Table 402.3.7 to read as follows:

TABLE 402.3.7
PRESCRIPTIVE ENVELOPE COMPONENT CRITERIA
ADDITIONS TO AND REPLACEMENT WINDOWS FOR EXISTING DETACHED ONE- AND TWO-FAMILY DWELLINGS[d]

	MAXIMUM	MINIMUM					
SUB CLIMATE ZONES	**Fenestration *U*-factor**	**Ceiling *R*-value[a, d]**	**Wall *R*-value[d]**	**Floor *R*-value**	**Basement wall *R*-value[b]**	**Slab perimeter *R*-value**	**Crawl space wall *R*-value[c]**
2.1	0.75	26	13	11	5	0	5
2.2, 3.1, 3.2, 3.3, and 3.4	0.50	30	13	19	8	0	10
4	0.50	38	13	21	10	0	19

a. "Ceiling *R*-value" shall be required for flat or inclined (cathedral) ceilings. Floors over outside air shall meet "Ceiling *R*-value" requirements.

b. Basement wall insulation to be installed in accordance with Section 402.2.6.

c. "Crawl space wall *R*-value" shall apply to unventilated crawl spaces only. Crawl space insulation shall be installed in accordance with Section 402.2.8.

d. Sunroom additions shall be required to have a maximum fenestration *U*-factor of 0.5 in all sub-climate zones except sub-climate zone 2.1. In all sub-climate zones, the minimum ceiling *R*-value for sunroom additions shall be *R*-19 and the minimum wall *R*-value shall be *R*-13.

Section 403.2.1. Section 403.2.1 of Section 403 "Systems (Mandatory)" of Chapter 4 "Residential Energy Efficiency" of the 2006 International Energy Conservation Code is amended to read as follows:

403.2.1 Installation. Supply and return ducts shall be insulated to a minimum of *R*-8. Ducts in floor trusses shall be insulated to a minimum of *R*-6.

Exceptions:

1. Ducts or portions thereof located completely inside the building thermal envelope.

2. Supply and return ducts can be insulated to a minimum of *R*-6, if the efficiency of the cooling equipment is upgraded to one SEER point above the NAECA (National Appliance Energy Conservation Act) Standard.

Section 501. Section 501 "General" of Chapter 5 "Commercial Energy Efficiency" of the 2006 International Energy Conservation Code is amended by adding Section 501.3 to read as follows:

501.3 Compliance software tools. Software tools used to demonstrate energy code compliance that are deemed acceptable by the building official may only utilize the energy chapter of the 2006 *International Energy Conservation Code* or the 2004 edition of the ASHRAE 90.1 *Energy Standard for Buildings Except Low-rise Residential Buildings* when code edition and/or standard selection is available.

Section 505.2.1. Section 505.2.1 of Section 505 "Electrical Power and Lighting Systems (Mandatory)" of Chapter 5 "Commercial Energy Efficiency" of the 2006 International Energy Conservation Code is amended to read as follows:

505.2.1 Interior lighting controls. Each area enclosed by walls or floor-to-ceiling partitions shall have at least one manual control for the lighting serving that area. The required controls shall be located within the area served by the controls or be a remote switch that identifies the lights served and indicates their status. Each control device shall control a maximum of 2,500 square feet of floor area for a space 10,000 square feet or less and a maximum of 10,000 square feet for a space greater than 10,000 square feet.

Exceptions:

1. Areas designated as security or emergency areas that must be continuously lighted.

2. Lighting in stairways or corridors that are elements of the means of egress.

SECTION 5. That Section 8-8 "International Plumbing Code" of Chapter 8 of Development Standards and Construction Codes of the City of Irving, Texas, is hereby amended to read as follows:

Sec. 8-8. International Plumbing Code.

(a) **Plumbing Code.** The 2006 edition of the International Plumbing Code with amendments, modifications, and deletions as specified in this section is adopted as the plumbing code for the City of Irving, Texas.

(b) **Amendments, modifications, and deletions to the 2006 International Plumbing Code.** Amendments, modifications, and deletions to the 2006 *International Plumbing Code* are adopted as follows:

Table of Contents. Table of Contents reference to Section 714 of the 2006 International Plumbing Code is amended to read as follows:

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Section 101.1. Section 101.1 of Section 101 "General" of Chapter 1 "Administration" of the 2006 International Plumbing Code is amended to read as follows:

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

Section 101.2. Section 101.2 of Section 101 "General" of Chapter 1 "Administration" of the 2006 International Plumbing Code is amended to read as follows:

101.2 Scope. The provisions of this code shall apply to the erection, installation, alteration, repairs, relocation, replacement, addition to, use, or maintenance of plumbing systems within this jurisdiction. This code shall also regulate nonflammable medical gas, inhalation anesthetic, vacuum piping, nonmedical oxygen systems, and sanitary and condensate vacuum collection systems. The installation of fuel gas distribution piping and equipment, fuel gas-fired water heaters, and water heater venting systems shall be regulated by the *International Fuel Gas Code.* Provisions in the appendices shall not apply unless specifically adopted.

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures shall comply with the *International Residential Code*.
2. Plumbing systems in existing buildings undergoing repair, alterations, additions, or change of occupancy may be permitted to comply with the *International Existing Building Code* with prior approval of the code official.

Section 102.8. Section 102.8 of Section 102 "Applicability" of Chapter 1 "Administration" of the 2006 International Plumbing Code is amended 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 13 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 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 amendments as well. Any reference to NFPA 70 or the ICC *Electrical Code* shall mean the Electrical Code as adopted.

Section 106.6.2. Section 106.6.2 of Section 106 "Permits" of Chapter 1 "Administration" of the 2006 International Plumbing Code is amended to read as follows:

106.6.2 Fee schedule. The fees for all plumbing work shall be as indicated in Appendix L of the 2006 *International Building Code.*

Section 106.6.3. Section 106.6.3 of Section 106 "Permits" of Chapter 1 "Administration" of the 2006 International Plumbing Code is amended to read as follows:

106.6.3 Fee refunds. The code official shall authorize the refunding of fees as follows:

3. The full amount of the fee paid hereunder that was erroneously paid or due to extenuating circumstances as approved by the code official.

4. Not more than 80 percent of the permit fee paid when no work or inspection has been done under a permit issued in accordance with this code.

The code official shall not authorize the refunding of any fee paid except upon written application filed by the original permittee not later than 180 days after the date of fee payment.

Section 108. Section 108 "Violations" of Chapter 1 "Administration" of the 2006 International Plumbing Code is amended by deleting Section 108.4 "Violation penalties."

Section 108.5. Section 108.5 of Section 108 "Violations" of Chapter 1 "Administration" of the 2006 International Plumbing Code is amended to read as follows:

108.5 Stop work orders. Upon notice from the code official, work on any plumbing system that is being done contrary to the provisions of this code or in a dangerous or unsafe manner shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, the owner's agent, or the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. It shall be an affirmative defense to this section that the work being done was work that person was directed by the code official to perform to remove a violation or unsafe condition.

Section 109. Section 109 "Means Of Appeal" of Chapter 1 "Administration" of the 2006 International Plumbing Code is amended in its entirety to read as follows:

SECTION 109
MEANS OF APPEAL

109.1 Construction board of appeals. Any person shall have the right to appeal a decision of the code official to the construction board of appeals. Plumbing code appeals shall be handled in accordance with the provisions set forth in Section 112 of the 2006 *International Building Code.*

Section 305.6.1. Section 305.6.1 of Section 305 "Protection of Pipes and Plumbing System Components" of Chapter 3 "General Regulations" of the 2006 International Plumbing Code is amended to read as follows:

305.6.1 Sewer depth. Building sewers shall be a minimum of 12 inches below grade.

Section 305.9. Section 305.9 of Section 305 "Protection of Pipes and Plumbing System Components" of Chapter 3 "General Regulations" of the 2006 International Plumbing Code is amended to read as follows:

305.9 Protection of components of plumbing system. Components of a plumbing system installed within 3 feet along alleyways, driveways, parking garages, or other locations in a manner in which they would be exposed to damage shall be recessed into the wall or otherwise protected in an approved manner.

Section 310. Section 310 "Washroom and Toilet Room Requirements" of Chapter 3 "General Regulations" of the 2006 International Plumbing Code is amended by deleting Sections 310.4 "Water closet compartment" and 310.5 "Urinal partitions."

Section 312.9.1. Section 312.9.1 of Section 312 "Tests and Inspections" of Chapter 3 "General Regulations" of the 2006 International Plumbing Code is amended to read as follows:

312.9.1 Inspections. Annual inspections shall be made of all backflow prevention assemblies and air gaps to determine whether they are operable. In the absence of local provisions, the owner is responsible to ensure that testing is performed.

Section 312.9.2. Section 312.9.2 of Section 312 "Tests and Inspections" of Chapter 3 "General Regulations" of the 2006 International Plumbing Code is amended to read as follows:

312.9.2 Testing. Reduced pressure principle backflow preventer assemblies, double check-valve assemblies, pressure vacuum breaker assemblies, reduced pressure detector fire protection backflow prevention assemblies, double check detector fire protection backflow prevention assemblies, hose connection backflow preventers, and spill-proof vacuum breakers shall be tested at the time of installation, immediately after repairs or relocation and at least annually. The testing procedure shall be performed in accordance with applicable local provisions. In the absence of local provisions, the owner is responsible to ensure that testing is done in accordance with one of the following standards:

ASSE 5013, ASSE 5015, ASSE 5020, ASSE 5047, ASSE 5048, ASSE 5052, ASSE 5056, CSA B64.10, OR CSA B64.10.1

Section 314.2.1. Section 314.2.1 of Section 314 "Condensate Disposal" of Chapter 3 "General Regulations" of the 2006 International Plumbing Code is amended to read as follows:

[M] 314.2.1 Condensate disposal. Condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an approved place of disposal. Condensate shall not discharge into a street, alley, sidewalk, rooftop, or other areas so as to cause a nuisance.

Section 314.2.2. Section 314.2.2 of Section 314 "Condensate Disposal" of Chapter 3 "General Regulations" of the 2006 International Plumbing Code is amended to read as follows:

[M] 314.2.2 Drain pipe materials and sizes. Components of the condensate disposal system shall be cast iron, galvanized steel, copper, cross-linked polyethylene, polybutylene, polyethylene, ABS, CPVC, or Schedule 80 PVC pipe or tubing when exposed to ultraviolet light. All components shall be selected for the pressure, temperature, and exposure rating of the installation. Condensate waste and drain line size shall not be less than 0.75 inch internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with an approved method. All horizontal sections of drain piping shall be installed in uniform alignment at a uniform slope.

Section 401.1. Section 401.1 of Section 401 "General" of Chapter 4 "Fixtures, Faucets and Fixture Fittings" of the 2006 International Plumbing Code is amended to read as follows:

401.1 Scope. This chapter shall govern the materials, design, and installation of plumbing fixtures, faucets, and fixture fittings in accordance with the type of occupancy, and shall provide for the minimum number of fixtures for various types of occupancies. The provisions of this code are meant to work in coordination with the provisions of all the other similar codes, such as the *International Building Code*. Should any conflicts arise between different codes, the code official shall determine which provision applies.

Section 403.1. Section 403.1 of Section 403 "Minimum Plumbing Facilities" of Chapter 4 "Fixtures, Faucets and Fixture Fittings" of the 2006 International Plumbing Code is amended to read as follows:

403.1 Minimum number of fixtures. Plumbing fixtures shall be provided for the type of occupancy and in the minimum number as follows:

1. Assembly Occupancies: At least one drinking fountain shall be provided at each floor level in an approved location.

   Exception: A drinking fountain need not be provided in a drinking or dining establishment.

2. Groups A, B, F, H, I, M, and S Occupancies: Buildings or portions thereof where persons are employed shall be provided with at least one water closet for each sex, except as provided for in Section 403.2.

3. Group E Occupancies: Shall be provided with fixtures as shown in Table 403.1.

4. Group R Occupancies: Shall be provided with fixtures as shown in Table 403.1.

It is recommended, but not required, that the minimum number of fixtures provided also comply with the number shown in Table 403.1. Types of occupancies not shown in Table 403.1 shall be considered individually by the code official. The number of occupants shall be determined by the *International Building Code.* Occupancy classification shall be determined in accordance with the *International Building Code.*

Section 403. Section 403 "Minimum Plumbing Facilities" of Chapter 4 "Fixtures, Faucets and Fixture Fittings" of the 2006 International Plumbing Code is amended by adding Section 403.1.2 to read as follows:

403.1.2 Finish material. Finish materials shall comply with Section 1209 of the *International Building Code.*

Section 405. Section 405 "Installation of Fixtures" of Chapter 4 "Fixtures, Faucets and Fixture Fittings" of the 2006 International Plumbing Code is amended by deleting Section 405.6 "Plumbing in mental health centers."

Section 409.2. Section 409.2 of Section 409 "Dishwashing Machines" of Chapter 4 "Fixtures, Faucets and Fixture Fittings" of the 2006 International Plumbing Code is amended to read as follows:

409.2 Water connection. The water supply to a commercial dishwashing machine shall be protected against backflow by an air gap or backflow preventer in accordance with Section 608.

Section 410.1. Section 410.1 of Section 410 "Drinking Fountains" of Chapter 4 "Fixtures, Faucets and Fixture Fittings" of the 2006 International Plumbing Code is amended to read as follows:

410.1 Approval. Drinking fountains shall conform to ASME A112.19.1M, ASME A112.19.2M, or ASME A112.19.9M, and water coolers shall conform to ARI 1010. Drinking fountains and water coolers shall conform to NSF 61, Section 9.

Exception: A drinking fountain need not be provided in a drinking or dining establishment.

Section 412.4. Section 412.4 of Section 412 "Floor and Trench Drains" of Chapter 4 "Fixtures, Faucets and Fixture Fittings" of the 2006 International Plumbing Code is amended to read as follows:

412.4 Required location. Floor drains shall be installed in the following areas:

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

2. Commercial kitchens. (In lieu of floor drains in commercial kitchens, the code official may accept floor sinks.)

Section 413.4. Section 413.4 of Section 413 "Food Waste Grinder Units" of Chapter 4 "Fixtures, Faucets and Fixture Fittings" of the 2006 International Plumbing Code is amended to read as follows:

413.4 Water supply required. All food waste grinders shall be provided with a supply of cold water. The water supply shall be protected against backflow by an air gap or with the installation of a backflow preventer in accordance with Section 608.

Section 417.5. Section 417.5 of Section 417 "Showers" of Chapter 4 "Fixtures, Faucets and Fixture Fittings" of the 2006 International Plumbing Code is amended to read as follows:

417.5 Shower floors or receptors. Floor surfaces shall be constructed of impervious, noncorrosive, nonabsorbent, and waterproof materials.

Thresholds shall be a minimum of 2 inches and a maximum of 9 inches, measured from top of the drain to top of threshold or dam. Thresholds shall be of sufficient width to accommodate a minimum 22 inch door.

Exception: Showers designed to comply with ICC/ANSI A117.1.

Section 417.5.2. Section 417.5.2 of Section 417 "Showers" of Chapter 4 "Fixtures, Faucets and Fixture Fittings" of the 2006 International Plumbing Code is amended to read as follows:

417.5.2 Shower lining. Floors under shower compartments, except where prefabricated receptors have been provided, shall be lined and made water tight utilizing material complying with Sections 417.5.2.1 through 417.5.2.4. Such liners shall turn up on all sides at least 3 inches above the finished threshold level and shall extend outward over the threshold and fastened to the outside of the threshold jamb. Liners shall be recessed and fastened to an approved backing so as not to occupy the space required for wall covering, and shall not be nailed or perforated at any point less than 1 inch above the finished threshold. Liners shall be pitched 1/4 unit vertical in 12 units horizontal (2 percent slope) and shall be sloped toward the fixture drains and be securely fastened to the waste outlet at the seepage entrance, making a water-tight joint between the liner and the outlet.

Section 417. Section 417 "Showers" of Chapter 4 "Fixtures, Faucets and Fixture Fittings" of the 2006 International Plumbing Code is amended by adding Section 417.7 to read as follows:

417.7 Test for shower receptors. Shower receptors shall be tested for water tightness by filling with water to the level of the rough threshold. The drain shall be plugged in a manner so that both sides of pans shall be subjected to the test at the point where it is clamped to the drain.

Section 419.3. Section 419.3 of Section 419 "Urinals" of Chapter 4 "Fixtures, Faucets and Fixture Fittings" of the 2006 International Plumbing Code is amended to read as follows:

419.3 Surrounding material. Wall and floor space to a point 2 feet in front of a urinal lip and 4 feet above the floor and at least 2 feet to each side of the urinal shall be waterproofed with a smooth, readily cleanable, hard, nonabsorbent material.

Section 502.3. Section 502.3 of Section 502 "Installation" of Chapter 5 "Water Heaters" of the 2006 International Plumbing Code is amended to read as follows:

502.3 Water heaters installed in attics. Attics containing a water heater shall be provided with an opening and unobstructed passageway large enough to allow removal of the water heater. The passageway shall not be less than 30 inches high and 22 inches wide and not more than 20 feet in length when measured along the centerline of the passageway from the opening to the water heater. The passageway shall have continuous solid flooring not less than 24 inches wide. A level service space at least 30 inches deep and 30 inches wide shall be present at the front or service side of the water heater. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches, or larger where such dimensions are not large enough to allow removal of the water heater.

Section 502. Section 502 "Installation" of Chapter 5 "Water Heaters" of the 2006 International Plumbing Code is amended by adding Sections 502.5 and 502.5.1 to read as follows:

502.5 Water heaters above ground or floor. When the attic, roof, mezzanine, or platform in which a water heater is installed is more than 8 feet above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

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

502.5.1 Lighting and receptacle outlets. Whenever the mezzanine or platform is not adequately lighted or access to a receptacle outlet is not obtainable from the main level, lighting and a receptacle outlet shall be provided in accordance with Section 502.1.

Section 504.6. Section 504.6 of Section 504 "Safety Devices" of Chapter 5 "Water Heaters" of the 2006 International Plumbing Code is amended to read as follows:

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

1. Not be directly connected to the drainage system.

2. Discharge through an air gap.

3. Not be smaller than the diameter of the outlet of the valve served and shall discharge full size to the air gap.

4. Serve a single relief device and shall not connect to piping serving any other relief device or equipment.

   Exception: Multiple relief devices may be installed to a single T & P discharge piping system when approved by the administrative authority and permitted by the manufacturer's installation instructions and installed with those instructions.

5. Discharge to an indirect waste receptor or to the outdoors. Where discharging to the outdoors in areas subject to freezing, discharge piping shall be first piped to an indirect waste receptor through an air gap located in a conditioned area.

6. Discharge in a manner that does not cause personal injury or structural damage.

7. Discharge to a termination point that is readily observable by the building occupants.

8. Not be trapped.

9. Be installed so as to flow by gravity.

10. Not terminate less than 6 inches or more than 24 inches above grade nor more than 6 inches above the waste receptor.

11. Not have a threaded connection at the end of such piping.

12. Not have valves or tee fittings.

13. Be constructed of those materials listed in Section 605.4 or materials tested, rated, and approved for such use in accordance with ASME A112.4.1.

Section 602. Section 602 "Water Required" of Chapter 6 "Water Supply and Distribution" of the 2006 International Plumbing Code is amended by adding Section 602.2.1 to read as follows:

602.2.1 Separate water service required. Water supplied to any residential dwelling unit shall be publicly metered separately from water provided for all other uses. For purposes of this section on metering, the apartment office shall not be considered a dwelling unit, even if it contains sleeping, kitchen, or bathroom facilities and must be metered separately from dwelling units.

Section 604. Section 604 "Design of Building Water Distribution System" of Chapter 6 "Water Supply and Distribution" of the 2006 International Plumbing Code is amended by adding Section 604.4.1 to read as follows:

604.4.1 State maximum flow rate. Where the state mandated maximum flow rate is more restrictive than those of this section, the state flow rate shall take precedence.

Table 605.3. Table 605.3 "Water Service Pipe" of Section 605 "Materials, Joints and Connections" of Chapter 6 "Water Supply and Distribution" of the 2006 International Plumbing Code is amended by deleting "Polybutylene (PB) plastic pipe and tubing" from the table.

Table 605.4. Table 605.4 "Water Distribution Pipe" of Section 605 "Materials, Joints and Connections" of Chapter 6 "Water Supply and Distribution" of the 2006 International Plumbing Code is amended by deleting "Polybutylene (PB) plastic pipe and tubing" from the table.

Section 606.1. Section 606.1 of Section 606 "Installation of the Building Water Distribution System" of Chapter 6 "Water Supply and Distribution" of the 2006 International Plumbing Code is amended by deleting items #4 and #5.

Section 606.2. Section 606.2 of Section 606 "Installation of the Building Water Distribution System" of Chapter 6 "Water Supply and Distribution" of the 2006 International Plumbing Code is amended to read as follows:

606.2 Location of shutoff valves. Shutoff valves shall be installed in the following locations:

1. On the fixture supply to each plumbing fixture other than bathtubs and showers in one- and two-family residential occupancies, and other than in individual sleeping units that are provided with unit shutoff valves in hotels, motels, boarding houses, and similar occupancies.

2. On the water supply pipe to each appliance or mechanical equipment.

Section 608.1. Section 608.1 of Section 608 "Protection of Potable Water Supply" of Chapter 6 "Water Supply and Distribution" of the 2006 International Plumbing Code is amended to read as follows:

608.1 General. A potable water supply system shall be designed, installed, and maintained in such a manner so as to prevent contamination from nonpotable liquids, solids, or gases being introduced into the potable water supply through cross-connections or any other piping connections to the system. Backflow preventer applications shall conform to applicable local regulations, Table 608.1, and as specifically stated in Sections 608.2 through 608.16.10.

Section 608.16.5. Section 608.16.5 of Section 608 "Protection of Potable Water Supply" of Chapter 6 "Water Supply and Distribution" of the 2006 International Plumbing Code is amended to read as follows:

608.16.5 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 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 608.17. Section 608.17 of Section 608 "Protection of Potable Water Supply" of Chapter 6 "Water Supply and Distribution" of the 2006 International Plumbing Code is amended to read as follows:

608.17 Protection of individual water supplies. An individual water supply shall be located and constructed so as to be safeguarded against contamination in accordance with applicable local regulations. In the absence of other local regulations, installation shall be in accordance with Sections 608.17.1 through 608.17.8.

Section 610.1. Section 610.1 of Section 610 "Disinfection of Potable Water System" of Chapter 6 "Water Supply and Distribution" of the 2006 International Plumbing Code is amended to read as follows:

610.1 General. New or repaired potable water systems shall be purged of deleterious matter and disinfected prior to utilization. The method to be followed shall be that prescribed by the health authority or water purveyor having jurisdiction or, in the absence of a prescribed method, the procedure described in either AWWA C651 or AWWA C652, or as described in this section. This requirement shall apply to "on-site" or "in-plant" fabrication of a system or to a modular portion of a system.

1. The pipe system shall be flushed with clean, potable water until dirty water does not appear at the points of outlet.

2. The system or part thereof shall be filled with a water/chlorine solution containing at least 50 parts per million of chlorine, and the system or part thereof shall be valved off and allowed to stand for 24 hours; or the system or part thereof shall be filled with a water/chlorine solution containing at least 200 parts per million of chlorine and allowed to stand for 3 hours.

3. Following the required standing time, the system shall be flushed with clean potable water until the chlorine is purged from the system.

4. The procedure shall be repeated where shown by a bacteriological examination that contamination remains present in the system.

Exception: With prior approval, the code official may waive this requirement when deemed unnecessary by the code official.

Section 712. Section 712 "Sumps and Ejectors" of Chapter 7 "Sanitary Drainage" of the 2006 International Plumbing Code is amended by adding Section 712.5 to read as follows:

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

Section 714. Section 714 "Computerized Drainage Design" of Chapter 7 "Sanitary Drainage" of the 2006 International Plumbing Code is amended in its entirety to read as follows:

SECTION 714
ENGINEERED DRAINAGE DESIGN

714.1 Design of drainage system. The sizing, design, and layout of the drainage system shall be permitted to be designed by approved design methods.

Section 802.1.6. Section 802.1.6 of Section 802 "Indirect Wastes" of Chapter 8 "Indirect/Special Waste" of the 2006 International Plumbing Code is amended to read as follows:

802.1.6 Domestic dishwashing machines. Domestic dishwashing machines shall discharge indirectly through an air gap or air break into a standpipe or waste receptor in accordance with Section 802.2, or discharge into a wye-branch fitting on the tailpiece of the kitchen sink or the dishwasher connection of a food waste grinder. The waste line of a domestic dishwashing machine discharging into a kitchen sink tailpiece or food waste grinder shall connect to an air gap or the waste line shall rise and be securely fastened to the underside of the sink rim or counter.

Section 802.4. Section 802.4 of Section 802 "Indirect Wastes" of Chapter 8 "Indirect/Special Waste" of the 2006 International Plumbing Code is amended to read as follows:

802.4 Standpipes. Standpipes shall be individually trapped. Standpipes shall extend a minimum of 18 inches and a maximum of 42 inches above the trap weir. Access shall be provided to all standpipes and drains for rodding. No standpipe shall be installed below the ground.

Section 904.1. Section 904.1 of Section 904 "Vent Terminals" of Chapter 9 "Vents" of the 2006 International Plumbing Code is amended to read as follows:

904.1 Roof extension. All open vent pipes that extend through a roof shall be terminated at least 6 inches above the roof, except that where a roof is to be used for any purpose other than weather protection, the vent extensions shall be run at least 7 feet above the roof.

Section 906.1. Section 906.1 of Section 906 "Fixture Vents" of Chapter 9 "Vents" of the 2006 International Plumbing Code is amended in its entirety to read as follows:

906.1 Distance of trap from vent. Each fixture trap shall have a protecting vent located so that the slope and the developed length in the fixture drain from the trap weir to the vent fitting are within the requirements set forth in Table 906.1.

Section 912.1. Section 912.1 of Section 912 "Combination Drain and Vent System" of Chapter 9 "Vents" of the 2006 International Plumbing Code is amended to read as follows:

912.1 Type of fixture. A combination drain and vent system shall not serve fixtures other than floor drains, standpipes, and indirect waste receptors. Combination drain and vent systems shall not receive the discharge from a food waste grinder or clinical sink.

Section 1002. Section 1002 "Trap Requirements" of Chapter 10 "Traps, Interceptors and Separators" of the 2006 International Plumbing Code is amended by deleting Section 1002.10 "Plumbing in mental health centers."

Section 1101.8. Section 1101.8 of Section 1101 "General" of Chapter 11 "Storm Drainage" of the 2006 International Plumbing Code is amended to read as follows:

1101.8 Cleanouts required. Cleanouts shall be installed in the building storm drainage system and shall comply with the provisions of this code for sanitary drainage pipe cleanouts.

Exception: Subsurface drainage system.

Section 1106.1. Section 1106.1 of Section 1106 "Size of Conductors, Leaders and Storm Drains" of Chapter 11 "Storm Drainage" of the 2006 International Plumbing Code is amended to read as follows:

1106.1 General. The size of the vertical conductors and leaders, building storm drains, building storm sewers, and any horizontal branches of such drains or sewers shall be based on 6 inches per hour rainfall rate.

Section 1107.3. Section 1107.3 of Section 1107 "Secondary (Emergency) Roof Drains" of Chapter 11 "Storm Drainage" of the 2006 International Plumbing Code is amended to read as follows:

1107.3 Sizing of secondary drains. Secondary (emergency) roof drain systems shall be sized in accordance with Section 1106. Scuppers shall be sized to prevent the depth of ponding water from exceeding that for which the roof was designed as determined by Section 1101.7. Scuppers shall not have an opening dimension of less than 4 inches. The flow through the primary system shall not be considered when sizing the secondary roof drain system.

Section 1202. Section 1202 "Medical Gases" of Chapter 12 "Special Piping and Storage Systems" of the 2006 International Plumbing Code is amended in its entirety to read as follows:

SECTION 1202
MEDICAL GASES

[F] 1202.1 Nonflammable medical gases. Nonflammable medical gas systems, inhalation anesthetic systems, and vacuum piping systems shall be designed and installed in accordance with NFPA 99C.

Exception: This section shall not apply to portable systems or cylinder storage.

2006 International Plumbing Code. The 2006 International Plumbing Code is amended by adding Appendix I "Irrigation Systems" to read as follows:

APPENDIX I

IRRIGATION SYSTEMS

I101.1 Scope. This appendix applies to the installation, alteration, repairs, relocation, replacement, addition to, use, or maintenance of irrigation systems within the city. This appendix regulates the installation of backflow prevention devices, control valves, automatic irrigation controllers, control wiring, and water conservation required for the proper design, installation, and operation of irrigation systems. All irrigation systems must comply with the provisions of this appendix and with Title 30, Texas Administrative Code, Chapter 344.

I101.2 Purpose. The purpose of this appendix is to require all irrigation systems to be designed, installed, maintained, altered, repaired, serviced, and operated in a manner that will promote water conservation.

I101.3 Definitions. The following words and terms shall have the meanings shown herein.

DESIGN. The act of determining the various elements of a landscape irrigation system that will include, but not be limited to, elements such as collecting site specific information, defining the scope of the project, defining plant watering needs, selecting and laying out emission devices, locating system components, conducting hydraulics calculations, identifying any local regulatory requirements, or scheduling irrigation work at a site. Completion of the various components will result in an irrigation plan.

DESIGN PRESSURE. The pressure that is required for an emission device to operate properly. Design pressure is calculated by adding the operating pressure necessary at an emission device to the total of all pressure losses accumulated from an emission device to the water source.

EMISSION DEVICE. Any device that is contained within an irrigation system and that is used to apply water. Common emission devices in an irrigation system include, but are not limited to, spray and rotary sprinkler heads and drip irrigation emitters.

EMPLOYED. Engaged or hired to provide consulting services or perform any activity relating to the sale, design, installation, maintenance, alteration, repair, or service to irrigation systems. A person is employed if that person is in an employer-employee relationship as defined by Internal Revenue Code, Title 26, United States Code Service, Section 3212(d), based on the behavioral control, financial control, and the type of relationship involved in performing employment related tasks.

HEAD-TO-HEAD SPACING. The spacing of spray or rotary sprinkler heads equal to the manufacturer's published radius of the head.

HYDRAULICS. The science of dynamic and static water; the mathematical computation of determining pressure losses and pressure requirements of an irrigation system.

INSPECTOR. A licensed plumbing inspector, water district operator, other governmental entity, or irrigation inspector who inspects irrigation systems and performs other enforcement duties for a municipality or water district as an employee or as a contractor.

INSTALLER. A person who connects an irrigation system to a private or public raw or potable water supply system or any water supply, who is licensed according to Title 30, Texas Administrative Code, Chapter 30.

IRRIGATION INSPECTOR. A person who inspects irrigation systems and performs other enforcement duties for a municipality or water district as an employee or as a contractor and is required to be licensed under Title 30, Texas Administrative Code, Chapter 30.

IRRIGATION PLAN. A scaled drawing of a landscape irrigation system which lists required information, the scope of the project, and represents the changes made in the installation of the irrigation system.

IRRIGATION SERVICES. Selling, designing, installing, maintaining, altering, repairing, servicing, permitting, providing consulting services regarding, or connecting an irrigation system to a water supply.

IRRIGATION SYSTEM. An assembly of component parts that is permanently installed for the controlled distribution and conservation of water to irrigate any type of landscape vegetation in any location, and/or to reduce dust or control erosion. This term does not include a system that is used on or by an agricultural operation as defined by Texas Agricultural Code Section 251.002.

IRRIGATION TECHNICIAN. A person who works under the supervision of a licensed irrigator to install, maintain, alter, repair, service, or supervise installation of an irrigation system, including the connection of such system in or to a private or public, raw or potable water supply system or any water supply, and who is required to be licensed under Title 30, Texas Administrative Code, Chapter 30.

IRRIGATION ZONE. A subdivision of an irrigation system with a matched precipitation rate based on plant material type (such as turf, shrubs, or trees), microclimate factors (such as sun/shade ratio), topographic features (such as slope), and soil conditions (such as sand, loam, clay, or combination) or for hydrological control.

IRRIGATOR. A person who sells, designs, offers consultations regarding, installs, maintains, alters, repairs, services, or supervises the installation of an irrigation system, including the connection of such system to a private or public, raw or potable water supply system, or any water supply, and who is required to be licensed under Title 30, Texas Administrative Code, Chapter 30.

IRRIGATOR-IN-CHARGE. The irrigator responsible for all irrigation work performed by an exempt business owner, including, but not limited to, obtaining permits, developing design plans, supervising the work of other irrigators or irrigation technicians, and installing, selling, maintaining, altering, repairing, or servicing a landscape irrigation system.

LANDSCAPE IRRIGATION. The science of applying the necessary amount of water to promote or sustain healthy growth of plant material or turf.

LICENSE. An occupational license that is issued by the Texas Commission on Environmental Quality under Title 30, Texas Administrative Code, Chapter 30, to an individual that authorizes the individual to engage in an activity that is covered by Title 30, Texas Administrative Code, Chapter 30.

MAINLINE. A pipe within an irrigation system that delivers water from the water source to the individual zone valves.

MAINTENANCE CHECKLIST. A document made available to the irrigation system's owner or owner's representative that contains information regarding the operation and maintenance of the irrigation system, including, but not limited to, checking and repairing the irrigation system, setting the automatic controller, checking the rain or moisture sensor, cleaning filters, pruning grass and plants away from irrigation emitters, using and operating the irrigation system, the precipitation rates of each irrigation zone within the system, any water conservation measures currently in effect from the water purveyor, the name of the water purveyor, a suggested seasonal or monthly watering schedule based on current evapotranspiration data for the geographic region, and the minimum water requirements for the plant material in each zone based on the soil type and plant material where the system is installed.

MAJOR MAINTENANCE, ALTERATION, REPAIR, OR SERVICE. Any activity that involves opening to the atmosphere the irrigation mainline at any point prior to the discharge side of any irrigation zone control valve. This includes, but is not limited to, repairing or connecting into a main supply pipe, replacing a zone control valve, or repairing a zone control valve in a manner that opens the system to the atmosphere.

MASTER VALVE. A remote control valve located after the backflow prevention device that controls the flow of water to the irrigation system mainline.

MATCHED PRECIPITATION RATE. The condition in which all sprinkler heads within an irrigation zone apply water at the same rate**.**

PASS-THROUGH CONTRACT. A written contract between a contractor or builder and a licensed irrigator or exempt business owner to perform part or all of the irrigation services relating to an irrigation system.

RECLAIMED WATER. Domestic or municipal wastewater which has been treated to a quality suitable for beneficial use, such as landscape irrigation.

RECORDS OF LANDSCAPE IRRIGATION ACTIVITIES. The irrigation plans, contracts, warranty information, invoices, copies of permits, and other documents that relate to the installation, maintenance, alteration, repair, or service of a landscape irrigation system.

STATIC WATER PRESSURE. The pressure of water when it is not moving.

SUPERVISION. The on-the-job oversight and direction by a licensed irrigator who is fulfilling his or her professional responsibility to the client and/or employer in compliance with local or state requirements. Also a licensed installer working under the direction of a licensed irrigator or beginning January 1, 2009, an irrigation technician who is working under the direction of a licensed irrigator to install, maintain, alter, repair, or service an irrigation system.

WATER CONSERVATION. The design, installation, service, and operation of an irrigation system in a manner that prevents the waste of water, promotes the most efficient use of water, and applies the least amount of water that is required to maintain healthy individual plant material or turf, reduce dust, and control erosion.

ZONE FLOW. A measurement, in gallons per minute or gallons per hour, of the actual flow of water through a zone valve, calculated by individually opening each zone valve and obtaining a valid reading after the pressure has stabilized. For design purposes, the zone flow is the total flow of all nozzles in the zone at a specific pressure.

ZONE VALVE. An automatic valve that controls a single zone of a landscape irrigation system.

I101.4 License. Any person who connects an irrigation system to the water supply in the city must hold a valid license, as defined by Title 30, Texas Administrative Code, Chapter 30, and Texas Occupations Code, Chapter 1903, or as defined by Title 22 of the Texas Administrative Code, Chapter 365, and required by Chapter 1301 of the Texas Occupations Code.

Exemption: A homeowner is not required to be licensed in accordance with Title 12, Texas Occupations Code Section 1903.002(c)(1) if the homeowner is performing irrigation work in a building or on a premises owned and occupied by the homeowner as the homeowner's homestead. A homeowner who installs an irrigation system must meet the standards contained in Title 30, Texas Administrative Code, Chapter 344, regarding spacing, water pressure, spraying water over impervious materials, rain and freeze sensors, backflow prevention, and isolation valves.

I101.5 Permit. Any person or homeowner installing an irrigation system in the city is required to obtain a permit from the city. Any plan approved for a permit must be in compliance with the requirements of this appendix.

Exemptions:

1. An irrigation system that is an on-site sewage disposal system, as defined by Texas Health and Safety Code, Section 355.002; or

2. An irrigation system used on or by an agricultural operation as defined by Section 251.002, Texas Agriculture Code; or

3. An irrigation system connected to a groundwater well used by the property owner for domestic use.

I101.6 Backflow prevention methods and devices.

1. Any irrigation system that is connected to the potable water supply must be connected through a backflow prevention method approved by the Texas Commission on Environmental Quality (TCEQ). The backflow prevention device must be approved by: the American Society of Sanitary Engineers; the Foundation for Cross-Connection Control and Hydraulic Research, University of Southern California; the *International Plumbing Code*; or any other laboratory that has equivalent capabilities for both the laboratory and field evaluation of backflow prevention assemblies. The backflow prevention device must be installed in accordance with the laboratory approval standards or if the approval does not include specific installation information, the manufacturer's current published recommendations.

2. If conditions that present a health hazard exist, one of the following methods must be used to prevent backflow:

a. An air gap may be used if:

   i. There is an unobstructed physical separation; and

   ii. The distance from the lowest point of the water supply outlet to the flood rim of the fixture or assembly into which the outlet discharges is at least one inch or twice the diameter of the water supply outlet, whichever is greater.

b. Reduced pressure principle backflow prevention assemblies may be used if:

   i. The device is installed at a minimum of 12 inches above ground in a location that will ensure that the assembly will not be submerged; and

   ii. Drainage is provided for any water that may be discharged through the assembly relief valve.

c. Pressure vacuum breakers may be used if:

   i. No back-pressure condition will occur; and

   ii. The device is installed at a minimum of 12 inches above any downstream piping and the highest downstream opening. Pop-up sprinklers are measured from the retracted position from the top of the sprinkler.

d. Atmospheric vacuum breakers may be used if:

   i. No back-pressure will be present;

   ii. There are no shutoff valves downstream from the atmospheric vacuum breaker;

   iii. The device is installed at a minimum of 6 inches above any downstream piping and the highest downstream opening. Pop-up sprinklers are measured from the retracted position from the top of the sprinkler;

   iv. There is no continuous pressure on the supply side of the atmospheric vacuum breaker for more than 12 hours in any 24 hour period; and

   v. A separate atmospheric vacuum breaker is installed on the discharge side of each irrigation control valve between the valve and all the emission devices that the valve controls.

3. Backflow prevention devices used in applications designated as health hazards must be tested upon installation and annually thereafter.

4. If there are no conditions that present a health hazard, double check valve backflow prevention assemblies may be used to prevent backflow if the device is tested upon installation and test cocks are used for testing only**.**

5. If a double check valve is installed below ground:

   a. Test cocks must be plugged, except when the double check valve is being tested;

b. Test cock plugs must be threaded, water-tight, and made of non-ferrous material;

c. A y-type strainer is installed on the inlet side of the double check valve;

d. There must be a clearance between any fill material and the bottom of the double check valve to allow space for testing and repair; and

e. There must be space on the side of the double check valve to test and repair the double check valve.

6. If an existing irrigation system without a backflow-prevention assembly requires major maintenance, alteration, repair, or service, the system must be connected to the potable water supply through an approved, properly installed backflow prevention method before any major maintenance, alteration, repair, or service is performed.

7. If an irrigation system is connected to a potable water supply through a double check valve, pressure vacuum breaker, or reduced pressure principle backflow assembly and includes an automatic master valve on the system, the automatic master valve must be installed on the discharge side of the backflow prevention assembly.

8. The irrigator shall ensure the backflow prevention device is tested by a licensed backflow prevention assembly tester prior to being placed in service and the test results provided to the local water purveyor and the irrigation system's owner or owner's representative within 10 business days of testing of the backflow prevention device.

I101.7 Specific conditions and cross-connection control.

1. Before any chemical is added to an irrigation system connected to the potable water supply, the irrigation system must be connected through a reduced pressure principle backflow prevention assembly or air gap.

2. Connection of any additional water source to an irrigation system that is connected to the potable water supply can only be done if the irrigation system is connected to the potable water supply through a reduced-pressure principle backflow prevention assembly or an air gap.

3. Irrigation system components with chemical additives induced by aspiration, injection, or emission system connected to any potable water supply must be connected through a reduced pressure principle backflow device.

4. If an irrigation system is designed or installed on a property that is served by an on-site sewage facility, as defined in Title 30, Texas Administrative Code, Chapter 285, then:

   a. All irrigation piping and valves must meet the separation distances from the on-site sewage facilities system as required for a private water line in Title 30, Texas Administrative Code, Section 285.91(10);

   b. Any connections using a private or public potable water source that is not the city's potable water system must be connected to the water source through a reduced pressure principle

backflow prevention assembly as defined in Title 30, Texas Administrative Code, Section 344.50; and

c. Any water from the irrigation system that is applied to the surface of the area utilized by the on-site sewage facility system must be controlled on a separate irrigation zone or zones so as to allow complete control of any irrigation to that area so that there will not be excess water that would prevent the on-site sewage facilities system from operating effectively.

I101.8 Irrigation plan design: Minimum standards.

1. An irrigator shall prepare an irrigation plan for each site where a new irrigation system will be installed. A paper or electronic copy of the irrigation plan must be on the job site at all times during the installation of the irrigation system. A drawing showing the actual installation of the system is due to each irrigation system owner after all new irrigation system installations. During the installation of the irrigation system, variances from the original plan may be authorized by the licensed irrigator if the variance from the plan does not:

   a. Diminish the operational integrity of the irrigation system;

   b. Violate any requirements of this appendix; and

   c. Go unnoted in red on the irrigation plan.

2. The irrigation plan must include complete coverage of the area to be irrigated. If a system does not provide complete coverage of the area to be irrigated, it must be noted on the irrigation plan.

3. All irrigation plans used for construction must be drawn to scale. The plan must include, at a minimum, the following information:

   a. The irrigator's seal, signature, and date of signing;

   b. All major physical features and the boundaries of the areas to be watered;

   c. A North arrow;

   d. A legend;

   e. The zone flow measurement for each zone;

   f. Location and type of each:

      i. Controller; and

      ii. Sensor (i.e., rain and freeze);

   g. Location, type, and size of each:

      i. Water source, including, but not limited to, a water meter and point(s) of connection;

      ii. Backflow prevention device;

iii. Water emission device, including, but not limited to, spray heads, rotary sprinkler heads, quick-couplers, bubblers, drip, or micro-sprays;

iv. Valve, including, but not limited to, zone valves, master valves, and isolation valves;

v. Pressure regulation component; and

vi. Main line and lateral piping.

h. The scale used; and

i. The design pressure.

I101.9 Design and installation: Minimum requirements.

1. No irrigation design or installation shall require the use of any component, including the water meter, in a way which exceeds the manufacturer's published performance limitations for the component.

2. Spacing.

   a. The maximum spacing between emission devices must not exceed the manufacturer's published radius or spacing of the device(s). The radius or spacing is determined by referring to the manufacturer's published specifications for a specific emission device at a specific operating pressure.

   b. New irrigation systems shall not utilize above-ground spray emission devices in landscapes that are less than 48 inches not including the impervious surfaces in either length or width and which contain impervious pedestrian or vehicular traffic surfaces along two or more perimeters. If pop-up sprays or rotary sprinkler heads are used in a new irrigation system, the sprinkler heads must direct flow away from any adjacent surface and shall not be installed closer than 4 inches from a hardscape, including, but not limited to, a building foundation, fence, concrete, asphalt, pavers, or stones set with mortar.

   c. Narrow paved walkways, jogging paths, golf cart paths or other small areas located in cemeteries, parks, golf courses, or other public areas may be exempted from this requirement if the runoff drains into a landscaped area.

3. Water pressure. Emission devices must be installed to operate at the minimum and not above the maximum sprinkler head pressure as published by the manufacturer for the nozzle and head spacing that is used. Methods to achieve the water pressure requirements include, but are not limited to, flow control valves, a pressure regulator, or pressure compensating spray heads.

4. Piping. Piping in irrigation systems must be designed and installed so that the flow of water in the pipe will not exceed a velocity of 5 feet per second for polyvinyl chloride (PVC) pipe.

5. Irrigation zones. Irrigation systems shall have separate zones based on plant material type, microclimate factors, topographic features, soil conditions, and hydrological requirements.

6. Matched precipitation rate. Zones must be designed and installed so that all of the emission devices in that zone irrigate at the same precipitation rate.

7. Irrigation systems shall not spray water over surfaces made of concrete, asphalt, brick, wood, stones set with mortar, or any other impervious material, such as, but not limited to, walls, fences, sidewalks, streets, etc.

8. Master valve. When provided, a master valve shall be installed on the discharge side of the backflow prevention device on all new installations.

9. PVC pipe primer solvent. All new irrigation systems that are installed using PVC pipe and fittings shall be primed with a purple primer prior to applying the PVC cement in accordance with the *International Plumbing Code*, Section 605.

10. Rain and freeze sensors.

    a. Any commercial, industrial, multi-family, or residential customer class irrigation system installed within the city on or after January 1, 2009, must be equipped with rain and freeze sensors.

    b. Any commercial, industrial, or multi-family customer class irrigation system installed within the city before January 1, 2009, may not be operated after January 1, 2010, without being equipped with rain and freeze sensors.

    c. Any residential customer class irrigation system installed within the city before January 1, 2009, may not be operated after January 1, 2011, without being equipped with rain and freeze sensors. If a person repairs or replaces more than 50 percent of a residential customer class irrigation system before January 1, 2011, then such irrigation system must be equipped with rain and freeze sensors.

    d. Any rain and freeze sensor shall be installed according to the manufacturer's published recommendation and shall be from a list approved by the public works director.

    e. Repairs to existing automatic irrigation systems that require replacement of an existing controller shall include a rain and freeze sensor designed to inhibit or interrupt operation of the irrigation system during periods of freezing temperatures and rainfall.

11. Isolation valve. All new irrigation systems must include a lockable isolation valve between the water meter and the backflow prevention device.

12. Depth coverage of piping. Piping in all irrigation systems must be installed according to the manufacturer's published specifications for depth coverage of piping.

    a. If the manufacturer has not published specifications for depth coverage of piping, the piping must be installed to provide minimum depth coverage of 6 inches of select backfill, between the top of the pipe and the natural grade of the topsoil. All portions of the irrigation system that fail to meet this standard must be noted on the irrigation plan. If the area being irrigated has rock at a depth of 6 inches or less, select backfill may be mounded over the pipe. Mounding must be noted on the irrigation plan and discussed with the irrigation system owner or owner's representative to address any safety issues.

b. If a utility, man-made structure, or roots create an unavoidable obstacle, which makes the 6 inch depth coverage requirement impractical, the piping shall be installed to provide a minimum of 2 inches of select backfill between the top of the pipe and the natural grade of the topsoil.

c. All trenches and holes created during installation of an irrigation system must be backfilled and compacted to the original grade.

13. Wiring irrigation systems.

a. Underground electrical wiring used to connect an automatic controller to any electrical component of the irrigation system must be listed by Underwriters Laboratories as acceptable for burial underground.

b. Electrical wiring that connects any electrical components of an irrigation system must be sized according to the manufacturer's recommendation.

c. Electrical wire splices which may be exposed to moisture must be waterproof as certified by the wire splice manufacturer.

d. Underground electrical wiring that connects an automatic controller to any electrical component of the irrigation system must be buried with a minimum of 6 inches of select backfill.

14. Water contained within the piping of an irrigation system is deemed to be non-potable. No drinking or domestic water usage, including, but not limited to, filling swimming pools or decorative fountains, shall be connected to an irrigation system. If a hose bib (an outdoor water faucet that has hose threads on the spout) is connected to an irrigation system for the purpose of providing supplemental water to an area, the hose bib must be installed using a quick coupler key on a quick coupler installed in a covered purple valve box, and the hose bib and any hoses connected to the bib must be labeled "non-potable, not safe for drinking." An isolation valve must be installed upstream of a quick coupler connecting a hose bib to an irrigation system.

15. Beginning January 1, 2010, either a licensed irrigator or a licensed irrigation technician shall be on-site at all times while the landscape irrigation system is being installed. When an irrigator is not on-site, the irrigator shall be responsible for ensuring that a licensed irrigation technician is on-site to supervise the installation of the irrigation system.

I101.10 Completion of irrigation system installation. Upon completion of the irrigation system, the irrigator or irrigation technician who provided supervision for the on-site installation shall be required to complete four items:

1. A final "walk through" with the irrigation system's owner or the owner's representative to explain the operation of the system.

2. The maintenance checklist on which the irrigator or irrigation technician shall obtain the signature of the irrigation system's owner or owner's representative and shall sign, date, and seal the checklist. If the irrigation system's owner or owner's representative is unwilling or unable to sign the maintenance checklist, the irrigator shall note the time and date of the refusal on the irrigation system's owner or owner's representative's signature line. The irrigation system owner or owner's representative will be given the original maintenance checklist and a duplicate copy of the maintenance checklist shall be maintained by the irrigator. The items on the maintenance checklist shall include, but are not limited to:

    a. The manufacturer's manual for the automatic controller, if the system is automatic;

    b. A seasonal (spring, summer, fall, winter) watering schedule based on either current/real time evapotranspiration or monthly historical reference evapotranspiration (historical ET) data, monthly effective rainfall estimates, plant landscape coefficient factors, and site factors;

    c. A list of components, such as the nozzle, pump filters, and other such components, that require maintenance and the recommended frequency for the service; and

    d. The statement, "This irrigation system has been installed in accordance with all applicable state and local laws, ordinances, rules, regulations, or orders. I have tested the system and determined that it has been installed according to the Irrigation Plan and is properly adjusted for the most efficient application of water at this time."

3. A permanent sticker which contains the irrigator's name, license number, company name, telephone number, and the dates of the warranty period shall be affixed to each automatic controller installed by the irrigator or irrigation technician. If the irrigation system is manual, the sticker shall be affixed to the original maintenance checklist. The information contained on the sticker must be printed with waterproof ink.

4. The irrigation plan indicating the actual installation of the system must be provided to the irrigation system's owner or owner's representative.

I101.11 Maintenance, alteration, repair, or service of irrigation systems.

1. The licensed irrigator is responsible for all work that the irrigator performed during the maintenance, alteration, repair, or service of an irrigation system during the warranty period. The irrigator or business owner is not responsible for the professional negligence of any other irrigator who subsequently conducts any irrigation service on the same irrigation system.

2. All trenches and holes created during the maintenance, alteration, repair, or service of an irrigation system must be returned to the original grade with compacted select backfill.

3. Purple PVC pipe primer solvent must be used on all pipes and fittings used in the maintenance, alteration, repair, or service of an irrigation system in accordance with the *International Plumbing Code*, Section 605.

4. When maintenance, alteration, repair, or service of an irrigation system involves excavation work at the water meter or backflow prevention device, a lockable isolation valve shall be installed, if an isolation valve is not present.

I101.12 Reclaimed water. Reclaimed water may be utilized in landscape irrigation systems if:

1. There is no direct contact with edible crops, unless the crop is pasteurized before consumption;

2. The irrigation system does not spray water across property lines that do not belong to the irrigation system's owner;

3. The irrigation system is installed using purple components;

4. The domestic potable water line is connected using an air gap or a reduced pressure principle backflow prevention device, in accordance with Title 30, Texas Administrative Code, Section 290.47(i);

5. A minimum of an 8 inch by 8 inch sign, in English and Spanish, is prominently posted on/in the area that is being irrigated, that reads, "RECLAIMED WATER – DO NOT DRINK" and "AGUA DE RECUPERACIÓN – NO BEBER"; and

6. Backflow prevention on the reclaimed water supply line shall be in accordance with city ordinances.

SECTION 6. That Section 8-9 "International Fuel Gas Code" of Chapter 8 of Development Standards and Construction Codes of the City of Irving, Texas, is hereby amended to read as follows:

Sec. 8-9. International Fuel Gas Code.

(c) **Fuel Gas Code.** The 2006 edition of the International Fuel Gas Code with amendments, modifications, and deletions as specified in this section is adopted as the fuel gas code for the City of Irving, Texas.

(d) **Amendments, modifications, and deletions to the 2006 International Fuel Gas Code.** Amendments, modifications, and deletions to the 2006 *International Fuel Gas Code* are adopted as follows:

Section 101.1. Section 101.1 of Section 101 "General" of Chapter 1 "Administration" of the 2006 International Fuel Gas Code is amended to read as follows:

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

Section 101.2. Section 101.2 of Section 101 "General" of Chapter 1 "Administration" of the 2006 International Fuel Gas Code is amended to read as follows:

101.2 Scope. This code shall apply to the installation of fuel gas piping systems, fuel gas utilization equipment, gaseous hydrogen systems, and related accessories in accordance with Sections 101.2.1 through 101.2.5.

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures

shall comply with the *International Residential Code*.

2. As an alternative to the provisions of this code, fuel gas piping systems, fuel gas utilization equipment, and related accessories in existing buildings that are undergoing repairs, alterations, changes in occupancy, or construction of additions may be permitted to comply with the provisions of the *International Existing Building Code* with prior approval of the code official.

Section 102.2. Section 102.2 of Section 102 "Applicability" of Chapter 1 "Administration" of the 2006 International Fuel Gas Code is amended to read as follows:

102.2 Existing installations. Except as otherwise provided for in this chapter, a provision in this code shall not require the removal, alteration, or abandonment of, nor prevent the continued utilization and maintenance of, existing installations lawfully in existence at the time of the adoption of this code.

Exception: Existing dwelling units shall comply with Section 621.2.

Section 102.8. Section 102.8 of Section 102 "Applicability" of Chapter 1 "Administration" of the 2006 International Fuel Gas Code is amended 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 ICC *Electrical Code* shall mean the Electrical Code as adopted.

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

Section 106.5.2. Section 106.5.2 of Section 106 "Permits" of Chapter 1 "Administration" of the 2006 International Fuel Gas Code is amended to read as follows:

106.5.2 Fee schedule. The fees for work shall be as indicated in Appendix L of the 2006 *International Building Code.*

Section 106.5.3. Section 106.5.3 of Section 106 "Permits" of Chapter 1 "Administration" of the 2006 International Fuel Gas Code is amended to read as follows:

106.5.3 Fee refunds. The code official shall authorize the refunding of fees as follows:

1. The full amount of the fee paid hereunder that was erroneously paid or due to extenuating circumstances as approved by the code official.

2. Not more than 80 percent of the permit fee paid when no work or inspection has been done under a permit issued in accordance with this code.

The code official shall not authorize the refunding of any fee paid except upon written application filed by the original permitee not later than 180 days after the date of fee payment.

Section 108. Section 108 "Violations" of Chapter 1 "Administration" of the 2006 International Fuel Gas Code is amended by deleting Section 108.4 "Violation penalties."

Section 108.5. Section 108.5 of Section 108 "Violations" of Chapter 1 "Administration" of the 2006 International Fuel Gas Code is amended to read as follows:

108.5 Stop work orders. Upon notice from the code official that work is being done contrary to the provisions of this code or in a dangerous or unsafe manner, such work shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, the owner's agent, or the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. It shall be an affirmative defense to this section that the work being done was work that person was directed by the code official to perform to remove a violation or unsafe condition.

Section 109. Section 109 "Means of Appeal" of Chapter 1 "Administration" of the 2006 International Fuel Gas Code is amended in its entirety to read as follows:

SECTION 109
MEANS OF APPEAL

109.1 Construction board of appeals. Any person shall have the right to appeal a decision of the code official to the construction board of appeals. Fuel Gas Code appeals shall be handled in accordance with the provisions set forth in Section 112 of the 2006 *International Building Code.*

Section 304.10. Section 304.10 of Section 304 "Combustion, Ventilation and Dilution Air" of Chapter 3 "General Regulations" of the 2006 International Fuel Gas Code is amended to read as follows:

304.10 Louvers and grilles. The required size of openings for combustion, ventilation, and dilution air shall be based on the net free area of each opening. Where the free area through a design of louver, grille, or screen is known, it shall be used in calculating the size opening required to provide the free area specified. Where the design and free area of louvers and grilles are not known, it shall be assumed that wood louvers will have 25-percent free area and metal louvers and grilles will have 50-percent free area. Screens shall have a mesh size not smaller than 1/4 inch. Nonmotorized louvers and grilles shall be fixed in the open position. Motorized louvers shall be interlocked with the appliance so that they are proven to be in the full open position prior to main burner ignition and during main burner operation. Means shall be provided to prevent the main burner from igniting if the louvers fail to open during burner start-up and to shut down the main burner if the louvers close during operation.

Section 304.11. Section 304.11 of Section 304 "Combustion, Ventilation and Dilution Air" of Chapter 3 "General Regulations" of the 2006 International Fuel Gas Code is amended to read as follows:

304.11 Combustion air ducts. Combustion air ducts shall comply with all of the following:

1. Ducts shall be constructed of galvanized steel complying with Chapter 6 of the *International Mechanical Code* or of a material having equivalent corrosion resistance, strength, and rigidity.

Exception: Within dwelling units, unobstructed stud and joist spaces shall not be prohibited from conveying combustion air, provided that not more than one required fireblock is removed.

2. Ducts shall terminate in an unobstructed space allowing free movement of combustion air to the appliances.

3. Ducts shall serve a single enclosure.

4. Ducts shall not serve both upper and lower combustion air openings where both such openings are used. The separation between ducts serving upper and lower combustion air openings shall be maintained to the source of combustion air.

5. Ducts shall not be screened where terminating in an attic space.

6. Horizontal upper combustion air ducts shall not slope downward toward the source of combustion air.

7. The remaining space surrounding a chimney liner, gas vent, special gas vent, or plastic piping installed within a masonry, metal, or factory-built chimney shall not be used to supply combustion air.

   Exception: Direct-vent gas-fired appliances designed for installation in a solid fuel-burning fireplace where installed in accordance with the manufacturer's instructions.

8. Combustion air intake openings located on the exterior of a building shall have the lowest side of such openings located not less than 12 inches vertically from the adjoining grade level or the manufacturer's recommendation, whichever is more stringent**.**

Section 305. Section 305 "Installation" of Chapter 3 "General Regulations" of the 2006 International Fuel Gas Code is amended by deleting Section 305.5 "Private garages."

Section 305.7. Section 305.7 of Section 305 "Installation" of Chapter 3 "General Regulations" of the 2006 International Fuel Gas Code is amended to read as follows:

305.7 Clearances from grade. Equipment and appliances installed at grade level shall be supported on a level concrete slab or other approved material extending a minimum of 3 inches above adjoining grade or shall be suspended a minimum of 6 inches above adjoining grade.

Section 306.3. Section 306.3 of Section 306 "Access and Service Space" of Chapter 3 "General Regulations" of the 2006 International Fuel Gas Code is amended to read as follows:

[M] 306.3 Appliances in attics. Attics containing appliances requiring access shall be provided with an opening and unobstructed passageway large enough to allow removal of the largest component of the appliance. The passageway shall not be less than 30 inches high and 22 inches wide and not more than 20 feet in length when measured along the centerline of the passageway from the opening to the equipment. The passageway shall have continuous solid flooring not less than 24 inches wide. A level service space not less than 30 inches deep and 30 inches wide shall be present at the front or service

side of the equipment. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches, or larger, where such dimensions are not large enough to allow removal of the largest component of the appliance. As a minimum, for access to the attic space, provide one of the following:

1. A permanent stair.

2. A pull down stair.

3. An access door from an upper floor level.

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

Exceptions:

1. The passageway and level service space are not required where the appliance is capable of being serviced and removed through the required opening.

2. Where the passageway is not less than 6 feet high for its entire length, the passageway shall be not greater than 50 feet in length.

Section 306.5. Section 306.5 of Section 306 "Access and Service Space" of Chapter 3 "General Regulations" of the 2006 International Fuel Gas Code is amended to read as follows:

[M] 306.5 Equipment and appliances on roofs or elevated structures. Where equipment and appliances requiring access are installed on roofs or elevated structures at an aggregate height exceeding 16 feet, such access shall be provided by a permanent approved means of access. Permanent exterior ladders providing roof access need not extend closer than 12 feet to the finish grade or floor level below and shall extend to the equipment's and appliance's level service space. Such access shall not require climbing over obstructions greater than 30 inches high or walking on roofs having a slope greater than four units vertical in 12 units horizontal (33-percent slope).

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

1. The side railing shall extend above the parapet or roof edge not less than 30 inches.

2. Ladders shall have a rung spacing not to exceed 14 inches on center.

3. Ladders shall have a toe spacing not less than 6 inches deep.

4. There shall be a minimum of 18 inches between rails.

5. Rungs shall have a minimum diameter of 0.75-inch and shall be capable of withstanding a 300-pound load.

6. Ladders over 30 feet in height shall be provided with offset sections and landings capable of withstanding a load of 100 pounds per square foot.

7. Ladders shall be protected against corrosion by approved means.

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

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

Section 306.5.1. Section 306.5.1 of Section 306 "Access and Service Space" of Chapter 3 "General Regulations" of the 2006 International Fuel Gas Code is amended to read as follows:

[M] 306.5.1 Sloped roofs. Where appliances, equipment, fans, or other components that require service are installed on roofs having slopes greater than 4 units vertical in 12 units horizontal and having an edge more than 30 inches 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 not be less than 30 inches in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches above the platform, shall be constructed so as to prevent the passage of a 21-inch-diameter sphere and shall comply with the loading requirements for guards specified in the *International Building Code*.

Section 306. Section 306 "Access and Service Space" of Chapter 3 "General Regulations" of the 2006 International Fuel Gas Code is amended by adding Sections 306.7 and 306.7.1 to read as follows:

306.7 Water heaters above ground or floor. When the attic, roof, mezzanine, or platform on which a water heater is installed is more than 8 feet above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

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

306.7.1 Lighting and receptacle outlets. Whenever the mezzanine or platform is not adequately lighted or access to a receptacle outlet is not obtainable from the main level, lighting and a receptacle outlet shall be provided in accordance with Section 306.3.1.

Section 401.5. Section 401.5 of Section 401 "General" of Chapter 4 "Gas Piping Installations" of the 2006 International Fuel Gas Code is amended to read as follows:

401.5 Identification. For other than steel pipe, exposed piping shall be identified by a yellow label marked "Gas" in black letters. The marking shall be spaced at intervals not exceeding 5 feet. The marking shall not be required on pipe located in the same room as the equipment served.

Both ends of each section of medium pressure corrugated stainless steel tubing (CSST) 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 402.3. Section 402.3 of Section 402 "Pipe Sizing" of Chapter 4 "Gas Piping Installations" of the 2006 International Fuel Gas Code is amended to read as follows:

402.3 Sizing. Gas piping shall be sized in accordance with one of the following:

1. Pipe sizing tables or sizing equations in accordance with Section 402.4.

2. The sizing tables included in a listed piping system's manufacturer's installation instructions.

3. Other approved engineering methods.

Exception: Corrugated stainless steel tubing (CSST) shall be a minimum of 1/2" (18 EHD).

Section 404.9. Section 404.9 of Section 404 "Piping System Installation" of Chapter 4 "Gas Piping Installations" of the 2006 International Fuel Gas Code is amended to read as follows:

404.9 Minimum burial depth. Underground piping systems shall be installed a minimum depth of 18 inches top of pipe below grade.

Section 404. Section 404 "Piping System Installation" of Chapter 4 "Gas Piping Installations" of the 2006 International Fuel Gas Code is amended by deleting Section 404.9.1 "Individual outside appliances."

Section 406.1. Section 406.1 of Section 406 "Inspection, Testing and Purging" of Chapter 4 "Gas Piping Installations" of the 2006 International Fuel Gas Code is amended to read as follows:

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 406.1.1 through 406.1.5 to determine compliance with the provisions of this code. The permit holder shall give reasonable advance notice to the code 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 406.4. Section 406.4 of Section 406 "Inspection, Testing and Purging" of Chapter 4 "Gas Piping Installations" of the 2006 International Fuel Gas Code is amended to read as follows:

406.4 Test pressure measurement. Test pressure shall be measured with a manometer 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.

Section 406.4.1. Section 406.4.1 of Section 406 "Inspection, Testing and Purging" of Chapter 4 "Gas Piping Installations" of the 2006 International Fuel Gas Code is amended to read as follows:

406.4.1 Test pressure. The test pressure to be used shall not be 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 6 inches of mercury, measured with a manometer or slope gauge. For tests requiring a pressure of 3 psig, diaphragm gauges shall utilize a dial with a minimum diameter of 3-1/2 inches, 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 3-1/2 inches, 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 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 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 not be less than one and one-half times the proposed maximum working pressure.

Section 406.4.2. Section 406.4.2 of Section 406 "Inspection, Testing and Purging" of Chapter 4 "Gas Piping Installations" of the 2006 International Fuel Gas Code is amended to read as follows:

406.4.2 Test duration. Test duration shall be held for a length of time satisfactory to the code official, but in no case for less than 15 minutes. For welded piping and for piping carrying gas at pressures in excess of 14 inches water column pressure (3.48 kPa), the test duration shall be held for a length of time satisfactory to the code official, but in no case for less than 30 minutes.

Section 409. Section 409 "Shutoff Valves" of Chapter 4 "Gas Piping Installations" of the 2006 International Fuel Gas Code is amended by adding Section 409.1.4 to read as follows:

409.1.4 Valves in CSST installations. Shutoff valves installed with corrugated stainless steel tubing (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. Section 410.1 of Section 410 "Flow Controls" of Chapter 4 "Gas Piping Installations" of the 2006 International Fuel Gas Code is amended to read as follows:

410.1 Pressure regulators. A line pressure regulator shall be installed where the appliance is designed to operate at a lower pressure than the supply pressure. Line gas pressure regulators shall be listed as complying with ANSI Z21.80. Access shall be provided to pressure regulators. Pressure regulators shall be protected from physical damage. Regulators installed on the exterior of the building shall be approved for outdoor installation.

Access to regulators shall comply with the requirements for access to appliances as specified in Section 306.

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

Section 614.6. Section 614.6 of Section 614 "Clothes Dryer Exhaust" of Chapter 6 "Specific Appliances" of the 2006 International Fuel Gas Code is amended to read as follows:

[M] 614.6 Domestic clothes dryer ducts. Exhaust ducts for domestic clothes dryers shall be constructed of metal and shall have a smooth interior finish. The exhaust duct shall be a minimum nominal size of 4 inches in diameter. The entire exhaust system shall be supported and secured in place. The male end of the duct at overlapped duct joints shall extend in the direction of airflow. Clothes dryer transition ducts used to connect the appliance to the exhaust duct system shall be metal and limited to a single length not to exceed 8 feet and shall be listed and labeled for the application. Transition ducts shall not be concealed within construction. The size of the duct shall not be reduced along its developed length or at the point of termination.

Section 614.6.1. Section 614.6.1 of Section 614 "Clothes Dryer Exhaust" of Chapter 6 "Specific Appliances" of the 2006 International Fuel Gas Code is amended to read as follows:

[M] 614.6.1 Maximum length. The maximum length of a clothes dryer exhaust duct shall not exceed 35 feet from the dryer location to the outlet terminal. The maximum length of the duct shall be reduced 2-1/2 feet for each 45 degree bend and 5 feet for each 90 degree bend. The maximum length of the exhaust duct does not include the transition duct.

Exception: Where the make and model of the clothes dryer to be installed is known and the manufacturer's installation instructions for such dryer are provided to the code official, the maximum length of the exhaust duct, including any transition duct, shall be permitted to be in accordance with the dryer manufacturer's installation instructions, and provided that a 4 inch by 6 inch sign red in color with white letters is permanently affixed to the structure stating the following:

Warning: Dryer must be approved for vent length not to exceed
40 feet total developed length (TDL)
Duct Size: (Number)
Total Developed Length: (Number)

Section 621.2. Section 621.2 of Section 621 "Unvented Room Heaters" of Chapter 6 "Specific Appliances" of the 2006 International Fuel Gas Code is amended to read 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.

Section 624.1.1. Section 624.1.1 of Section 624 "Water Heaters" of Chapter 6 "Specific Appliances" of the 2006 International Fuel Gas Code is amended to read as follows:

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 the *International Plumbing Code.*

SECTION 7. That Section 8-10 "International Mechanical Code" of Chapter 8 of Development Standards and Construction Codes of the City of Irving, Texas, is hereby amended to read as follows:

Sec. 8-10. International Mechanical Code.

(e) **Mechanical Code.** The 2006 edition of the International Mechanical Code with amendments, modifications, and deletions as specified in this section is adopted as the mechanical code for the City of Irving, Texas.

(f) **Amendments, modifications, and deletions to the 2006 International Mechanical Code.** Amendments, modifications, and deletions to the 2006 *International Mechanical Code* are adopted as follows:

Section 101.1. Section 101.1 of Section 101 "General" of Chapter 1 "Administration" of the 2006 International Mechanical Code is amended to read as follows:

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

Section 101.2. Section 101.2 of Section 101 "General" of Chapter 1 "Administration" of the 2006 International Mechanical Code is amended to read as follows:

101.2 Scope. This code shall regulate the design, installation, maintenance, alteration, and inspection of mechanical systems that are permanently installed and utilized to provide control of environmental conditions and related processes within buildings. This code shall also regulate those mechanical systems, system components, equipment, and appliances specifically addressed herein. The installation of fuel gas distribution piping and equipment, fuel gas-fired appliances, and fuel gas-fired appliance venting systems shall be regulated by the *International Fuel Gas Code.*

Exceptions:

1. Detached one- and two-family dwellings and multiple single-family dwellings (townhouses) not more than three stories high with separate means of egress and their accessory structures shall comply with the *International Residential Code*.
2. Mechanical systems in existing buildings undergoing repair, alterations, additions, or change of occupancy may be permitted to comply with the *International Existing Building Code* with prior approval of the code official.

Section 102.8. Section 102.8 of Section 102 "Applicability" of Chapter 1 "Administration" of the 2006 International Mechanical Code is amended 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 amendments as well. Any reference to NFPA 70 or the ICC *Electrical Code* shall mean the Electrical Code as adopted.

Section 106.5.2. Section 106.5.2 of Section 106 "Permits" of Chapter 1 "Administration" of the 2006 International Mechanical Code is amended to read as follows:

106.5.2 Fee schedule. The fees for mechanical work shall be as indicated in Appendix L of the 2006 *International Building Code.*

Section 106.5.3. Section 106.5.3 of Section 106 "Permits" of Chapter 1 "Administration" of the 2006 International Mechanical Code is amended to read as follows:

106.5.3 Fee refunds. The code official shall authorize the refunding of fees as follows:

1. The full amount of the fee paid hereunder that was erroneously paid, or due to extenuating circumstances as approved by the code official.

2. Not more than 80 percent of the permit fee paid when no work or inspection has been done under a permit issued in accordance with this code.

The code official shall not authorize the refunding of any fee paid, except upon written application filed by the original permitee not later than 180 days after the date of fee payment.

Section 108. Section 108 "Violations" of Chapter 1 "Administration" of the 2006 International Mechanical Code is amended by deleting Section 108.4 "Violation penalties."

Section 108.5. Section 108.5 of Section 108 "Violations" of Chapter 1 "Administration" of the 2006 International Mechanical Code is amended to read as follows:

108.5 Stop work orders. Upon notice from the code official that mechanical work is being done contrary to the provisions of this code or in a dangerous or unsafe manner, such work shall immediately cease. Such notice shall be in writing and shall be given to the owner of the property, to the owner's agent, or to the person doing the work. The notice shall state the conditions under which work is authorized to resume. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. It shall be an affirmative defense to this section that the work being done was work that person was directed by the code official to perform to remove a violation or unsafe condition.

Section 109. Section 109 "Means of Appeal" of Chapter 1 "Administration" of the 2006 International Mechanical Code is amended in its entirety to read as follows:

SECTION 109
MEANS OF APPEAL

109.1 Construction board of appeals. Any person shall have the right to appeal a decision of the code official to the construction board of appeals. Mechanical Code appeals shall be handled in accordance with the provisions set forth in Section 112 of the 2006 *International Building Code.*

Section 304. Section 304 "Installation" of Chapter 3 "General Regulations" of the 2006 International Mechanical Code is amended by deleting Section 304.6 "Private garages."

Section 304.9. Section 304.9 of Section 304 "Installation" of Chapter 3 "General Regulations" of the 2006 International Mechanical Code is amended to read as follows:

304.9 Clearances from grade. Equipment and appliances installed at grade level shall be supported on a level concrete slab or other approved material extending above adjoining grade a minimum of 3 inches or shall be suspended a minimum of 6 inches above adjoining grade.

Section 306.3. Section 306.3 of Section 306 "Access and Service Space" of Chapter 3 "General Regulations" of the 2006 International Mechanical Code is amended to read as follows:

306.3 Appliances in attics. Attics containing appliances requiring access shall be provided with an opening and unobstructed passageway large enough to allow removal of the largest appliance. The passageway shall not be less than 30 inches high and 22 inches wide and not more than 20 feet in length measured along the center line of the passageway from the opening to the appliance. The passageway shall have continuous solid flooring not less than 24 inches wide. A level service space not less than 30 inches deep and 30 inches wide shall be present at the front or service side of the appliance. The clear access opening dimensions shall be a minimum of 20 inches by 30 inches, or larger where such dimensions are not large enough to allow removal of the largest appliance. As a minimum, for access to the attic space, provide one of the following:

1. A permanent stair.

2. A pull down stair.

3. An access door from an upper floor level.

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

Exceptions:

1. The passageway and level service space are not required where the appliance is capable of being serviced and removed through the required opening.

2. Where the passageway is unobstructed and not less than 6 feet high and 22 inches wide for its entire length, the passageway shall be not greater than 50 feet in length.

Section 306.5. Section 306.5 of Section 306 "Access and Service Space" of Chapter 3 "General Regulations" of the 2006 International Mechanical Code is amended to read as follows:

306.5 Equipment and appliances on roofs or elevated structures. Where equipment and appliances requiring access are installed on roofs or elevated structures at an aggregate height exceeding 16 feet, such access shall be provided by a permanent approved means of access. Permanent exterior ladders providing roof access need not extend closer than 12 feet to the finish grade or floor level below and shall extend to the equipment's and appliance's level service space. Such access shall not require climbing over obstructions greater than 30 inches high or walking on roofs having a slope greater than 4 units vertical in 12 units horizontal (33-percent slope).

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

1. The side railing shall extend above the parapet or roof edge not less than 30 inches.

2. Ladders shall have rung spacing not to exceed 14 inches on center.

3. Ladders shall have a toe spacing not less than 6 inches deep.

4. There shall be a minimum of 18 inches between rails.

5. Rungs shall have a minimum 0.75-inch diameter and be capable of withstanding a 300-pound load.

6. Ladders over 30 feet in height shall be provided with offset sections and landings capable of withstanding 100 pounds per square foot.

7. Ladders shall be protected against corrosion by approved means.

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

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

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

Section 306.5.1. Section 306.5.1 of Section 306 "Access and Service Space" of Chapter 3 "General Regulations" of the 2006 International Mechanical Code is amended to read as follows:

306.5.1 Sloped roofs. Where appliances, equipment, fans, or other components that require service are installed on roofs having slopes greater than 4 units vertical in 12 units horizontal and having an edge more than 30 inches 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 in any dimension and shall be provided with guards. The guards shall extend not less than 42 inches above the platform, shall be constructed so as to prevent the passage of a 21-inch-diameter sphere, and shall comply with the loading requirements for guards specified in the *International Building Code*.

Section 306. Section 306 "Access and Service Space" of Chapter 3 "General Regulations" of the 2006 International Mechanical Code is amended by adding Section 306.6 and Section 306.6.1 to read as follows:

306.6 Water heaters above ground or floor. When the mezzanine or platform on which a water heater is installed is more than 8 feet above the ground or floor level, it shall be made accessible by a stairway or permanent ladder fastened to the building.

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

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

Section 307.2.1. Section 307.2.1 of Section 307 "Condensate Disposal" of Chapter 3 "General Regulations" of the 2006 International Mechanical Code is amended to read as follows:

307.2.1 Condensate disposal. Condensate from all cooling coils and evaporators shall be conveyed from the drain pan outlet to an approved place of disposal. Condensate shall not discharge into a street, alley, sidewalk, rooftop, or other areas so as to cause a nuisance.

Section 307.2.2. Section 307.2.2 of Section 307 "Condensate Disposal" of Chapter 3 "General Regulations" of the 2006 International Mechanical Code is amended to read as follows:

307.2.2 Drain pipe materials and sizes. Components of the condensate disposal system shall be cast iron, galvanized steel, copper, cross-linked polyethylene, polybutylene, polyethylene, ABS, CPVC, or schedule 80 PVC pipe or tubing when exposed to ultraviolet light. All components shall be selected for the pressure, temperature, and exposure rating of the installation. Condensate waste and drain line size shall be not less than 3/4-inch internal diameter and shall not decrease in size from the drain pan connection to the place of condensate disposal. Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with an approved method. All horizontal sections of drain piping shall be installed in uniform alignment at a uniform slope.

Section 307.2.3. Section 307.2.3 of Section 307 "Condensate Disposal" of Chapter 3 "General Regulations" of the 2006 International Mechanical Code is amended to read as follows:

307.2.3 Auxiliary and secondary drain systems. In addition to the requirements of Section 307.2.1, a secondary drain or auxiliary drain pan shall be required for each cooling or evaporator coil or fuel-fired appliance that produces condensate, where damage to any building components will occur as a result of overflow from the equipment drain pan or stoppage in the condensate drain piping. One of the following methods shall be used:

1. An auxiliary drain pan with a separate drain shall be provided under the coils on which condensation will occur. The auxiliary drain pan shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The pan shall have a minimum depth of 1.5 inches, shall not be less than 3 inches larger than the unit or the coil dimensions in width and length, and shall be constructed of corrosion-resistant material. Metallic pans shall have a minimum thickness of not less than 0.0276-inch galvanized sheet metal. Nonmetallic pans shall have a minimum thickness of not less than 0.0625 inch.

2. A separate overflow drain line shall be connected to the drain pan provided with the equipment. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at a higher level than the primary drain connection. However, the conspicuous point shall not create a hazard such as dripping over a walking surface or other areas so as to create a nuisance.

3. An auxiliary drain pan without a separate drain line shall be provided under the coils on which condensate will occur. Such pan shall be equipped with a water-level detection device conforming to UL 508 that will shut off the equipment served prior to overflow of the pan. The auxiliary drain pan shall be constructed in accordance with Item 1 of this section.

4. A water level detection device conforming to UL 508 shall be provided that will shut off the equipment served in the event that the primary drain is blocked. The device shall be installed in the primary drain line, the overflow drain line, or in the equipment-supplied drain pan, located at a point higher than the primary drain line connection and below the overflow rim of such pan.

   Exception: Fuel-fired appliances that automatically shut down operation in the event of a stoppage in the condensate drainage system.

Section 403.2.1. Section 403.2.1 of Section 403 "Mechanical Ventilation" of Chapter 4 "Ventilation" of the 2006 International Mechanical Code is amended to read as follows:

403.2.1 Recirculation of air. The air required by Section 403.3 shall not be recirculated. Air in excess of that required by Section 403.3 shall not be prohibited from being recirculated as a component of supply air to building spaces, except that:

1. Ventilation air shall not be recirculated from one dwelling to another or to dissimilar occupancies.

2. Supply air to a swimming pool and associated deck areas shall not be recirculated unless such air is dehumidified to maintain the relative humidity of the area at 60 percent or less. Air from this area shall not be recirculated to other spaces where 10 percent or more of the resulting supply airstream consists of air recirculated from these spaces.

3. Where mechanical exhaust is required by Note b in Table 403.3, recirculation of air from such spaces shall be prohibited. All air supplied to such spaces shall be exhausted, including any air in excess of that required by Table 403.3.

4. Where mechanical exhaust is required by Note h in Table 403.3, mechanical exhaust is required and recirculation is prohibited where 10 percent or more of the resulting supply airstream consists of air recirculated from these spaces.

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

Table 403.3, Note g. Note g of Table 403.3 "Required Outdoor Ventilation Air" of Section 403 "Mechanical Ventilation" of Chapter 4 "Ventilation" of the 2006 International Mechanical Code is amended to read as follows:

g. Transfer air permitted in accordance with Section 403.2.2. Toilet rooms within private dwellings that contain only a water closet, lavatory, or combination thereof may be ventilated with an approved mechanical recirculating fan or similar device designed to remove odors from the air.

Section 501.2. Section 501.2 of Section 501 "General" of Chapter 5 "Exhaust Systems" of the 2006 International Mechanical Code is amended to read as follows:

501.2 Exhaust discharge. The air removed by every mechanical exhaust system shall be discharged outdoors at a point where it will not cause a nuisance and not less than the distances specified in Section 501.2.1. The air shall be discharged to a location from which it cannot again be readily drawn in by a ventilating system. Air shall not be exhausted into an attic or crawl space.

Exceptions:

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

2. Commercial cooking recirculating systems.

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

Section 504.6. Section 504.6 of Section 504 "Clothes Dryer Exhaust" of Chapter 5 "Exhaust Systems" of the 2006 International Mechanical Code is amended to read as follows:

504.6 Domestic clothes dryer ducts. Exhaust ducts for domestic clothes dryers shall be constructed of metal and shall have a smooth interior finish. The exhaust duct shall be a minimum nominal size of 4 inches in diameter. The entire exhaust system shall be supported and secured in place. The male end of the duct at overlapped duct joints shall extend in the direction of airflow. Clothes dryer transition ducts used to connect the appliance to the exhaust duct system shall be limited to single lengths not to exceed 8 feet and shall be listed and labeled for the application. Transition ducts shall not be concealed within construction. The size of duct shall not be reduced along its developed length nor at the point of termination.

Section 504.6.1. Section 504.6.1 of Section 504 "Clothes Dryer Exhaust" of Chapter 5 "Exhaust Systems" of the 2006 International Mechanical Code is amended to read as follows:

504.6.1 Maximum length. The maximum length of a clothes dryer exhaust duct shall not exceed 35 feet from the dryer location to the outlet terminal. The maximum length of the duct shall be reduced 2-1/2 feet for each 45 degree bend and 5 feet for each 90 degree bend. The maximum length of the exhaust duct does not include the transition duct.

Exception: Where the make and model of the clothes dryer to be installed is known and the manufacturer's installation instructions for such dryer are provided to the code official, the maximum length of the exhaust duct, including any transition duct, shall be permitted to be in accordance with the dryer manufacturer's installation instructions, and provided that a 4 inch by 6 inch sign red in color with white letters is permanently affixed to the structure stating the following:

Warning: Dryer must be approved for vent length not to exceed
40 feet total developed length (TDL).
Duct Size: (Number)
Total Developed Length: (Number)

Section 607.5.1. Section 607.5.1 of Section 607 "Duct and Transfer Openings" of Chapter 6 "Duct Systems" of the 2006 International Mechanical Code is amended to read as follows:

[B] 607.5.1 Fire walls. Ducts and air transfer openings permitted in fire walls in accordance with Section 705.11 of the *International Building Code* shall be protected with listed fire dampers installed in accordance with their listing. For hazardous exhaust systems, see Sections 510.1-510.9 of this code.

SECTION 8. That Section 8-11 "National Electrical Code" of Chapter 8 of Development Standards and Construction Codes of the City of Irving, Texas, is hereby amended to read as follows:

Sec. 8-11. National Electrical Code.

(a) **Electrical Code**. The 2008 edition of the National Electrical Code with amendments, modifications, and deletions as specified in this section is adopted as the electrical code for the City of Irving, Texas.

(b) **Amendments, modifications, and deletions to the 2008 National Electrical Code.** Amendments, modifications, and deletions to the 2008 *National Electrical Code* are adopted as follows:

Section 90.3. Section 90.3 of Article 90 "Introduction" of the 2008 National Electrical Code is amended to read as follows:

90.3 Code Arrangement. This *Code* is divided into the introduction and nine chapters, as shown in Figure 90.3. Chapters 1, 2, 3, and 4 apply generally; Chapters 5, 6, and 7 apply to special occupancies, special equipment, or other special conditions. These latter chapters supplement or modify the general rules. Chapters 1 through 4 apply except as amended by Chapters 5, 6, and 7 for the particular conditions.

Chapter 8 covers communications systems and is not subject to the requirements of Chapters 1 through 7 except where the requirements are specifically referenced in Chapter 8.

Chapter 9 consists of tables that are applicable as referenced.

Annexes are not part of the requirements of this *Code* but are included for informational purposes only, except Annex H, which is adopted and made a part of this *Code*.

Article 100. Article 100 "Definitions" of Chapter 1 "General" of the 2008 National Electrical Code is amended by changing the definition of the term "Authority Having Jurisdiction" to read as follows:

Authority Having Jurisdiction. The city of Irving director of planning and inspections or a duly authorized representative.

Article 100. Article 100 "Definitions" of Chapter 1 "General" of the 2008 National Electrical Code is amended by adding the following definitions to read as follows:

Building Official. The city of Irving director of planning and inspections or a duly authorized representative.

Section 230.2(A). Section 230.2(A) of Article 230 "Services" of Chapter 2 "Wiring and Protection" of the 2008 National Electrical Code is amended to read as follows:

[230.2 Number of Services.]

(A) Special Conditions. Additional services shall be permitted to supply the following:

(1) Fire pumps

(2) Emergency systems

(3) Legally required standby systems

(4) Optional standby systems

(5) Parallel power production systems

(6) For multifamily dwellings, two or more laterals or sets of service conductors shall be permitted to a building when both of the following conditions are met:

a. The building has six or more individual gang meters and all meters are grouped at the same location; and

b. Each lateral or service conductors originate from the same point of service area.

Section II. Section II of Article 230 "Services" of Chapter 2 "Wiring and Protection" of the 2008 National Electrical Code is amended to read as follows:

II. Overhead Service-Drop Conductors. For new building construction and for new service conductor installations, conductors shall be installed underground.

Section 230.71(A). Section 230.71(A) of Article 230 "Services" of Chapter 2 "Wiring and Protection" of the 2008 National Electrical Code is amended to read as follows:

[230.71 Maximum Number of Disconnects.]

(A) General. The service disconnecting means for each service permitted by 230.2, or for each set of service-entrance conductors permitted by 230.40, Exception Nos. 1, 3, 4, or 5, shall consist of not more than six switches or sets of circuit breakers, or a combination of not more than six switches and sets of circuit breakers, mounted in a single enclosure, in a group of separate enclosures, or in or on a switchboard. There shall be not more than six sets of disconnects per service grouped in any one location.

For the purpose of this section, disconnecting means installed as part of listed equipment, and used solely for the following shall not be considered a service disconnecting means:

(1) Power monitoring equipment

(2) Surge-protective devices(s)

(3) Control circuit of the ground-fault protection system

(4) Power-operable service disconnecting means

Exception: Multi-occupant buildings. Individual service disconnecting means is limited to six for each occupant. The number of individual disconnects at one location may exceed six.

Section 300.11(A). Section 300.11(A) of Article 300 "Wiring Methods" of Chapter 3 "Wiring Methods and Materials" of the 2008 National Electrical Code is amended to read as follows.

[300.11 Securing and Supporting.]

(A) Secured in Place. Raceways, cable assemblies, boxes, cabinets, and fittings shall be securely fastened in place. Support wires that do not provide secure support shall not be permitted as the sole support. Support wires and associated fittings that provide secure support and that are installed in addition to the ceiling grid support wires may be permitted as the sole support unless not deemed sufficient support by the inspector. Where independent support wires are used, they shall be secured at both ends. Cables and raceways shall not be supported by ceiling grids.

Exception: Ceiling grid support wires may be used for structural supports when the associated wiring is located in that area, not more than two raceways or cables supported per wire, with a maximum nominal metric designation 16 (trade size ½").

(1) Fire-Rated Assemblies. Wiring located within the cavity of a fire-rated floor-ceiling or roof-ceiling assembly shall not be secured to, or supported by, the ceiling assembly, including the ceiling support wires. An independent means of secure support shall be provided and shall be permitted to be attached to the assembly. Where independent support wires are used, they shall be distinguishable by color, tagging, or other effective means from those that are part of the fire-rated design.

Exception: The ceiling support system shall be permitted to support wiring and equipment that have been tested as part of the fire-rated assembly.

FPN: One method of determining fire rating is testing in accordance with NFPA 251-2006, *Standard Methods of Tests of Fire Resistance of Building Construction and Materials.*

(2) Non–Fire-Rated Assemblies. Wiring located within the cavity of a non–fire-rated floor–ceiling or roof–ceiling assembly shall not be secured to, or supported by, the ceiling assembly, including the ceiling support wires. An independent means of secure support shall be provided and shall be permitted to be attached to the assembly.

Exception: The ceiling support system shall be permitted to support branch-circuit wiring and associated equipment where installed in accordance with the ceiling system manufacturer's instructions.

Section 310.15(B)(6). Section 310.15(B)(6) of Article 310 "Conductors for General Wiring" of Chapter 3 "Wiring Methods and Materials" of the 2008 National Electrical Code is amended to read as follows.

[310.15 Ampacities for Conductors Rated 0-2000 Volts.]

[(B) Tables.]

(6) 120/240-Volt, 3-Wire, Single-Phase Dwelling Services and Feeders. For individual dwelling units of one-family, two-family, and multifamily dwellings, conductors, as listed in Table 310.15(B)(6), shall be permitted as 120/240-volt, 3-wire, single-phase service-entrance conductors, service-lateral conductors, and feeder conductors that serve as the main power feeder to each dwelling unit and are installed in raceway or cable with or without an equipment grounding conductor. For application of

this section, the main power feeder shall be the feeder between the main disconnect and the panelboard that supplies, either by branch circuits or by feeders, or both, all loads that are a part or associated with the dwelling unit. The feeder conductors to a dwelling unit shall not be required to have an allowable ampacity rating greater than their service-entrance conductors. The grounded conductor shall be permitted to be smaller than the ungrounded conductors, provided the requirements of 215.2, 220.61, and 230.42 are met. This section shall not be used in conjunction with 220.82.

Section 334.10. Section 334.10 of Article 334 "Nonmetallic-Sheathed Cable: Types NM, NMC, and NMS" of Chapter 3 "Wiring Methods and Materials" of the 2008 National Electrical Code is amended to read as follows:

334.10 Uses Permitted. Type NM, Type NMC, and Type NMS cables shall be permitted to be used in the following:

(1) One- and two-family dwellings.

(2) Multifamily dwellings permitted to be of Types III, IV, and V construction except as prohibited in 334.12.

(3) Other structures permitted to be of Types III, IV, and V construction except as prohibited in 334.12. Cables shall be concealed within walls, floors, or ceilings that provide a thermal barrier of material that has at least a 15-minute finish rating as identified in listings of fire-rated assemblies.

FPN No. 1: Types of building construction and occupancy classifications are defined in NFPA 220-2006, *Standard on Types of Building Construction,* or the applicable building code, or both.

FPN No. 2: See Annex E for determination of building types [NFPA 220, Table 3-1].

(4) Cable trays in structures permitted to be Types III, IV, or V where the cables are identified for the use.

FPN: See 310.10 for temperature limitation of conductors.

(5) In any multifamily dwelling not exceeding three floors above grade.

Exception: An additional level shall be permitted in multifamily dwellings where the entire structure is protected throughout by an approved automatic sprinkler system.

(6) Other structures not exceeding three floors above grade.

Note: In (5) and (6) above: For the purpose of this article, the first floor of a building shall be that floor that has 50 percent or more of the exterior wall surface area level with or above finished grade. One additional level that is the first level and not designed for human habitation and used only for vehicle parking, storage, or similar use shall be permitted.

(A) Type NM. Type NM cable shall be permitted as follows:

(1) For both exposed and concealed work in normally dry locations except as prohibited by 334.10(3)

(2) To be installed or fished in air voids in masonry block or tile walls

(B) Type NMC. Type NMC cable shall be permitted as follows:

(1) For both exposed and concealed work in a dry, moist, damp, or corrosive locations, except as prohibited by 334.10(3)

(2) In outside and inside walls of masonry block or tile

(3) In a shallow chase in masonry, concrete, or adobe protected against nails or screws by a steel plate at least 1/16 inch thick and covered with plaster, adobe, or similar finish

(C) Type NMS. Type NMS cable shall be permitted as follows:

(1) For both exposed and concealed work in normally dry locations except as prohibited by 334.10(3)

(2) To be installed or fished in air voids in masonry block or tile walls

Section 334.12(A). Section 334.12(A) of Article 334 "Nonmetallic-Sheathed Cable: Types NM, NMC, and NMS" of Chapter 3 "Wiring Methods and Materials" of the 2008 National Electrical Code is amended to read as follows:

[334.12 Uses Not Permitted.]

(A) Types NM, NMC, and NMS. Types NM, NMC, and NMS cables shall not be used as follows:

(1) In any dwelling or structure not specifically permitted in 334.10(1), (2), and (3)

Exception: Type NM, NMC, and NMS cable shall be permitted in Type I and II construction when installed within raceways permitted to be installed in Type I and II construction.

(2) Exposed in dropped or suspended ceilings in other than one- and two-family and multifamily dwellings

(3) As service-entrance cable

(4) In commercial garages having hazardous (classified) locations as defined in 511.3

(5) In theaters and similar locations, except where permitted in 518.4(B)

(6) In motion picture studios

(7) In storage battery rooms

(8) In hoistways or on elevators or escalators

(9) Embedded in poured cement, concrete, or aggregate

(10) In hazardous (classified) locations, except where permitted by the following:

a. 501.10(B)(3)
b. 502.10(B)(3)
c. 504.20

(11) In metal frame structures.

Section 500.8(A). Section 500.8(A) of Article 500 "Hazardous (Classified) Locations, Classes I, II, and III, Divisions 1 and 2" of Chapter 5 "Special Occupancies" of the 2008 National Electrical Code is amended to read as follows:

[500.8 Equipment.]

(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

(3) Evidence acceptable to the authority having jurisdiction such as a manufacturer's self-evaluation or an engineering judgment signed and sealed by a qualified Registered Professional Engineer.

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

Section 505.7(A). Section 505.7(A) of Article 505 "Class I, Zone 0, 1, and 2 Locations" of Chapter 5 "Special Occupancies" of the 2008 National Electrical Code is amended to read as follows:

[505.7 Special Precaution.]

(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 Registered Professional Engineer.

Section 517.18(A). Section 517.18(A) of Article 517 "Health Care Facilities" of Chapter 5 "Special Occupancies" of the 2008 National Electrical Code is amended to read as follows:

[517.18 General Care Areas.]

(A) Patient Bed Location. Each patient bed location shall be supplied by at least two branch circuits, one from the emergency system and one from the normal system. At least one branch circuit from the emergency system shall supply an outlet(s) only at that bed location. All branch circuits from the normal system shall originate in the same panelboard. The branch circuit supplied by the critical branch serving patient bed locations shall not be part of a multiwire branch circuit.

Exception No. 1: Branch circuits serving only special-purpose outlets or receptacles, such as portable X-ray outlets, shall not be required to be served from the same distribution panel or panels.

Exception No. 2: Requirements of 517.18(A) shall not apply to patient bed locations in clinics, medical and dental offices, and outpatient facilities; psychiatric, substance abuse, and rehabilitation hospitals; sleeping rooms of nursing homes and limited care facilities meeting the requirements of 517.10(B)(2).

Exception No. 3: A general care patient bed location served from two separate transfer switches on the emergency system shall not be required to have circuits from the normal system.

Section 517.19(A). Section 517.19(A) of Article 517 "Health Care Facilities" of Chapter 5 "Special Occupancies" of the 2008 National Electrical Code is amended to read as follows:

[517.19 Critical Care Areas.]

(A) Patient Bed Location Branch Circuits. Each patient bed location shall be supplied by at least two branch circuits, one or more from the emergency system and one or more circuits from the normal system. At least one branch circuit from the emergency system shall supply an outlet(s) only at that bed location. All branch circuits from the normal system shall be from a single panelboard. Emergency system receptacles shall be identified and shall also indicate the panelboard and circuit number supplying them. The branch circuit supplied by the critical branch serving patient bed locations shall not be part of a multiwire branch circuit.

Exception No. 1: Branch circuits serving only special-purpose receptacles or equipment in critical care areas shall be permitted to be served by other panelboards.

Exception No. 2: Critical care locations served from two separate transfer switches on the emergency system shall not be required to have circuits from the normal system.

Section 680.25(A). Section 680.25(A) of Article 680 "Swimming Pools, Fountains, and Similar Installations" of Chapter 6 "Special Equipment" of the 2008 National Electrical Code is amended to read as follows:

[680.25 Feeders.]

(A) Wiring Methods. Feeders shall be installed in rigid metal conduit, intermediate metal conduit, liquid-tight flexible nonmetallic conduit, rigid polyvinyl chloride conduit, or reinforced thermosetting resin conduit. Electrical metallic tubing shall be permitted where installed on or within a building, and electrical nonmetallic tubing shall be permitted where installed within a building, or nonmetallic-sheathed cable or type SE cable shall be permitted where installed within or on the building served. Aluminum conduits shall not be permitted in the pool area where subject to corrosion.

Exception: An existing feeder between an existing remote panelboard and service equipment shall be permitted to run in flexible metal conduit or an approved cable assembly that includes an equipment grounding conductor within its outer sheath. The equipment grounding conductor shall comply with 250.24(A)(5).

Annex H. Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended by deleting the first paragraph (italicized) of Annex H.

Section 80.2. Section 80.2 of Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended in its entirety to read as follows:

80.2 Definitions.

Authority Having Jurisdiction. The city of Irving director of planning and inspections or a duly authorized representative.

Chief Electrical Inspector. An electrical inspector who either is the authority having jurisdiction or is designated by the authority having jurisdiction and is responsible for administering the requirements of this *Code*.

Electrical Inspector. An individual meeting the requirements of 80.27 and authorized to perform electrical inspections.

Homeowner. Any person who has qualified their property as a homestead and who resides therein.

Section 80.9. Section 80.9 of Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended by adding subsection (D) to read as follows:

[80.9 Application.]

(D) Homeowner Installations, Additions, Alterations, or Repairs. Allowable homeowner electrical work shall be limited to the installation or repair of feeders and branch circuits.

Section 80.13(2). Section 80.13(2) of Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended to read as follows:

[80.13 Authority.]

(2) When the use of any electrical equipment or its installations is found to be dangerous to human life or property, the authority having jurisdiction shall be empowered to have the premises disconnected from its source of electric supply. In case of emergency or when necessary for the safety of persons or property, the authority having jurisdiction may cause the disconnection of any electrical equipment without notice. When such equipment or installation has been disconnected, a notice shall be placed thereon listing the causes for the disconnection and the penalty for disregarding the notice. Written notice of such disconnection and the causes therefor shall be given to the owners, the occupant, or both, of such building, structure, or premises. It shall be unlawful for any person to remove said notice, to reconnect the electric equipment to its source of electric supply, or to use or permit to be used electric power in any such electric equipment until such causes for the disconnection have been remedied to the satisfaction of the inspection authorities.

Section 80.13(13). Section 80.13(13) of Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended to read as follows:

[80.13 Authority.]

(13) Whenever any installation subject to inspection prior to use is covered or concealed without having first been inspected, the authority having jurisdiction shall be permitted to require that such work be exposed for inspection. The authority having jurisdiction shall be notified when the installation is ready for inspection.

Section 80.15. Section 80.15 of Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended in its entirety to read as follows:

80.15 Construction Board of Appeals.

Means of Appeal. Any person shall have the right to appeal a decision of the authority having jurisdiction to the construction board of appeals. Electrical code appeals shall be handled in accordance with the provisions set forth in Section 112 of the 2006 *International Building Code.*

Section 80.19(C). Section 80.19(C) of Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended to read as follows:

[80.19 Permits and Approvals.]

(C) Issuance of Permits. The authority having jurisdiction shall be authorized to establish and issue permits, certificates, notices, and approvals, or orders pertaining to electrical safety hazards pursuant to 80.23, except that no permit shall be required to execute any of the classes of electrical work specified in the following:

(1) Installation or replacement of equipment such as lamps and of electric utilization equipment approved for connection to suitable permanently installed receptacles. Replacement of flush or snap switches, fuses, lamp sockets, and receptacles, and other minor maintenance and repair work, such as replacing worn cords and tightening connections on a wiring device.

(2) The process of manufacturing, testing, servicing, or repairing electrical equipment or apparatus.

(3) Installation, alteration, or repairing of any wiring, devices, appliances, or equipment for the operation of signal or the transmission of intelligence, where such wiring, devices, appliances, or equipment operates at a voltage not exceeding 50 volts between conductors and do not include generating or transforming equipment.

Section 80.19(E). Section 80.19(E) of Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended to read as follows:

[80.19 Permits and Approvals.]

(E) Fees. Fees shall be in accordance with Appendix L of the 2006 *International Building Code*.

Section 80.19(F). Section 80.19(F) of Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended to read as follows:

[80.19 Permits and Approvals.]

(F) Inspection and Approvals.

(1) Upon completion of any installation of electrical equipment that has been made under a permit other than an annual permit, it shall be the duty of the person, firm, or corporation making the installation to notify the Electrical Inspector, who shall inspect the work within a reasonable time.

(2) If the authority having jurisdiction finds the installation to be in conformity with the requirements of this *Code* and all applicable ordinances, orders, rules, and regulations, after payments of all required fees, the Electrical Inspector may issue to the person, firm, or corporation making the installation a notice of approval. When a certificate of temporary approval is issued authorizing the connection of an installation, such temporary certificate should be issued for a set time period with the expiration date noted on the permit. The permit will also be revocable by the Electrical Inspector.

(3) When any portion of the electrical installation within the jurisdiction of an Electrical Inspector is to be hidden from view by the permanent placement of parts of the building, the person, firm, or corporation installing the equipment shall notify the Electrical Inspector, and such equipment shall not be concealed until it has been approved by the Electrical Inspector.

(4) At regular intervals, the Electrical Inspector having jurisdiction may visit all buildings and premises where work may be done under an electrical permit and shall inspect all electrical installations and equipment installed under such permits. The Electrical Inspector shall issue a notice of approval for such work as is found to be in conformity with the provisions of this *Code* and all applicable ordinances, orders, rules, and regulations, after payments of all required fees. The Electrical Inspector may require the building contractor to remove any obstacle that in any manner conceals electrical wiring that has been covered without approval. The Electrical Inspector shall not approve the work until he or she is satisfied that it is in compliance with the provisions of this code.

(5) If, upon inspection, any installation is found not to be fully in conformity with the provisions of this *Code*, and all applicable ordinances, orders, rules, and regulations, the Electrical Inspector making the inspection shall at once forward to the person, firm, or corporation making the installation a written notice stating the defects that have been found to exist.

(6) Any commercial or residential building owner, lessee, or authorized agent who wishes to obtain an electrical service release or temporary power shall apply to the authority having jurisdiction, pay the applicable fee, and provide access for the inspection in order to receive approval from the Electrical Inspector.

(7) A reinspection fee may be assessed for each inspection or reinspection when such work for which inspection is called is not complete, when corrections called for are not made, or for failure to provide access on the date for which inspection is requested. To obtain a reinspection, the applicant shall pay a reinspection fee as provided in Appendix L of the 2006 *International Building Code* and request an inspection from the authority having jurisdiction.

Section 80.19(H). Section 80.19(H) of Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended in its entirety to read as follows:

[80.19 Permits and Approvals.]

(H) Applications and Extensions. Applications and extensions of permits shall be in accordance with Section 105 of the 2006 *International Building Code.*

Annex H. Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended by deleting Section 80.23 "Notice of Violations, Penalties."

Section 80.25(B). Section 80.25(B) of Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended to read as follows:

[80.25 Connection to Electricity Supply.]

(B) Special Consideration. By special permission of the authority having jurisdiction, temporary power shall be permitted to be supplied to the premises for specific needs of the construction project. The authority having jurisdiction shall determine what needs are permitted under this provision.

Section 80.25(C). Section 80.25(C) of Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended to read as follows:

[80.25 Connection to Electricity Supply.]

(C) Notification. It is unlawful for any person to make a connection to a supply of electricity for any electrical equipment or any electrical installation for which a permit is required, or which has been disconnected by the order of the authority having jurisdiction, without first obtaining a notice of approval from the authority having jurisdiction.

Section 80.25(E). Section 80.25(E) of Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended to read as follows:

[80.25 Connection to Electricity Supply.]

(E) Disconnection. If in the judgment of the authority having jurisdiction, any electrical installation in any building or on any premises may be unsafe to persons or property, the Electrical Inspector may cause the installation to be disconnected from the source of electrical supply, may seal the control switches in an open or disconnected position, give notice at the site, or notify the electric company serving the premises. It is unlawful for any person to cause or permit electric current to be supplied to a sealed electrical installation until it has been made safe and the Electrical Inspector has issued a certificate of approval for it.

Annex H. Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended by deleting Section 80.27 "Inspector's Qualifications."

Section 80.29. Section 80.29 of Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended to read as follows:

80.29 Liability for Damages. Article 80 shall not be construed to affect the responsibility or liability of any party owning, designing, operating, controlling, or installing any electrical equipment for damages to persons or property caused by a defect therein, nor shall the City of Irving or any of its employees be held as assuming any such liability by reason of the inspection, reinspection, or other examination authorized.

Annex H. Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended by deleting Section 80.31 "Validity."

Annex H. Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended by deleting Section 80.33 "Repeal of Conflicting Acts."

Annex H. Annex H "Administration and Enforcement" of the 2008 National Electrical Code is amended by deleting Section 80.35 "Effective Date."

SECTION 9. That Section 8-22 "Manufactured home community or recreational vehicle community permit" of Chapter 8 of The Code of Civil and Criminal Ordinances of the City of Irving, Texas, is hereby amended by changing (b) to read as follows:

(b) It is unlawful for any person to locate or relocate, alter, extend, or construct a manufactured home, recreational vehicle, or accessory building, within a manufactured home community or recreational vehicle community unless he or she has a valid permit issued by the building official in the name of such person for the specific placement, alteration, extension, or construction. All manufactured home, recreational vehicle, and accessory building placements, alterations, extensions, or

construction shall comply with applicable codes, ordinances and the zoning ordinance. Setbacks and separations shall be maintained for all manufactured homes, recreational vehicles, accessory buildings and other structures as follows:

(1) Porches and accessory buildings must be a minimum of 5 feet from an interior street and/or from any adjacent manufactured home or recreational vehicle.

(2) A carport may be attached to the manufactured home or recreational vehicle unit it serves but may not be closer than 5 feet to any adjacent manufactured home or recreational vehicle.

(3) A freestanding accessory structure shall be no closer than 5 feet to a manufactured home or recreational vehicle at any point. It is an affirmative defense to this section that the accessory structure is located within 8 inches of the manufactured home or recreational vehicle it serves. It is an additional affirmative defense to this section that neither the manufactured home nor the accessory structure has been moved since October 26, 2000.

(4) Between any end of manufactured home or recreation vehicle and private roadway: 5 feet.

(5) Between any side of manufactured home or recreational vehicle and private roadway: 10 feet.

(6) Separations between manufactured homes or recreational vehicles:

a. Front side to back side: 15 feet.

b. Front side to end: 15 feet.

c. End to end: 10 feet.

d. End to back side: 10 feet.

e. Front side to front side: 20 feet.

f. Back side to back side: 15 feet.

SECTION 10. That terms and provisions of this ordinance shall be deemed to be severable and that if the validity of any section, subsection, sentence, clause, or phrase of this ordinance should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause, or phrase of this ordinance.

SECTION 11. That it is the intent of the Irving City Council that pending prosecutions, brought under the previous code, which this ordinance replaces, should continue under the terms and penalties of said code and be saved from dismissal as if said prior ordinances had not been repealed.

SECTION 12. Any person violating or failing to comply with any provision of this chapter shall be fined upon conviction not less than one dollar ($1.00) nor more than five hundred dollars ($500.00). However, if the complaint alleges that the offense was committed intentionally, knowingly, or recklessly, any person violating or failing to comply with any provision of this chapter shall be fined upon conviction not less than one dollar ($1.00) nor more than two thousand dollars ($2,000.00). Each day any violation of any provision of this chapter continues constitutes a separate offense

SECTION 13. That this ordinance shall become effective on January 4, 2010.

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF IRVING, TEXAS, on December 3, 2009.

_____
HERBERT A. GEARS
MAYOR

ATTEST:

_____
Janice Carroll, TRMC
City Secretary

APPROVED AS TO FORM:

_____
Charles R. Anderson
City Attorney