

ORDINANCE NO. 22520-12-2016

AN ORDINANCE AMENDING THE FORT WORTH ENERGY CODE, BY ADOPTING THE 2015 INTERNATIONAL ENERGY CONSERVATION CODE, WITH LOCAL AMENDMENTS; AMENDING SECTIONS 7-41, 7-42, 7-43 AND 7-44 OF THE CODE OF THE CITY OF FORT WORTH (2015); REGULATING THE EFFECTIVE USE OF ENERGY AS ASSOCIATED WITH THE ERECTION, CONSTRUCTION, ENLARGEMENT, ALTERATION, REPAIR, MOVING, REMOVAL, DEMOLITION, CONVERSION, OCCUPANCY, EQUIPMENT, USE, AND MAINTENANCE OF BUILDINGS AND STRUCTURES IN THE CITY OF FORT WORTH; DEFINING CERTAIN TERMS; PROVIDING FOR THE INSPECTION OF BUILDINGS; PROVIDING FOR A SEVERABILITY CLAUSE; PROVIDING FOR A SAVINGS CLAUSE; PROVIDING FOR A PENALTY CLAUSE; PROVIDING THAT THIS ORDINANCE SHALL BE CUMULATIVE; PROVIDING FOR PUBLICATION IN PAMPHLET FORM; PROVIDING FOR PUBLICATION IN THE OFFICIAL NEWSPAPER; AND PROVIDING AN EFFECTIVE DATE.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FORT WORTH, TEXAS:

SECTION 1.

That Section 7-41 of the Code of the City of Fort Worth (2015) is hereby amended to read as follows:

Sec. 7-41. THE 2015 EDITION OF THE INTERNATIONAL ENERGY CONSERVATION CODE ADOPTED.

(a) The Energy Code of the City of Fort Worth is hereby revised and amended to conform, with certain exceptions as specified below, to the 2015 International Energy Conservation Code of the International Code Council (ICC), and the same as amended is hereby adopted as the City's Energy Code. One (1) copy of the 2015 International Energy Conservation Code, marked as Exhibit "A" is incorporated herein by reference and shall be filed in the Office of the City Secretary for permanent record and inspection.

(b) The provisions of the Building Code, Residential Code, Electrical Code, Mechanical Code, and Plumbing Code, as adopted elsewhere, shall be used as part of this code for any provision, requirement or method that does not exist in this code.

(c) Any Errata corrections, as they are discovered, are considered as part of this code since the same would have been adopted had they been known at the time of adoption.

SECTION 2.

That Section 7-42 of the Code of the City of Fort Worth (2015) is hereby amended to read as follows:

Sec. 7-42. Amendments.

The 2015 International Energy Conservation Code is hereby amended as provided in this Section:

COMMERCIAL CODE

CHAPTER 1 [CE] – SCOPE AND ADMINISTRATION

IECC SECTION C101

**IECC Section C01.1; changed to read as follows:*

C101.1 Title. This code shall be known as the Fort Worth Energy Code, and shall be cited as such. It is referred to herein as “this code.”

**IECC Section C101.3; add a second paragraph to read as follows:*

Amendments made to this code, that are determined to be appropriate to support safety, health, or environmental requirements will be identified with the notation “*(life safety)*.”

IECC SECTION C102

**IECC Section C102.1.2; added to read as follows:*

C102.1.2 Alternative compliance. A building certified by a national, state, or local accredited energy efficiency program and determined by the Energy Systems Laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the *code official*, be considered in compliance. The United States Environmental Protection Agency’s Energy Star Program certification of energy code equivalency shall be considered in compliance.

IECC SECTION C103

**IECC Sections C103.1, C103.2, C103.3, C103.3.1, C103.3.2, C103.3.3, C103.4, and C103.5; delete and replace as follows:*

C103.1 General. Construction documents and other supporting data shall be submitted as required by the code under which the permit is issued (Building, Residential, Electrical, Mechanical, or Plumbing Codes) and as noted below.

C103.2 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems, and equipment as herein governed. Details shall include, but are not limited to:

- Insulation materials and their *R*-values;
- Fenestration *U*-factors and SHGCs;
- Area-weighted *U*-factor and SHGC calculations;
- Mechanical system design criteria;
- Mechanical and service water heating system and equipment types, sizes and efficiencies;
- Economizer description;
- Equipment and systems controls;
- Fan motor horsepower (hp) and controls;
- Duct sealing, duct and pipe insulation and location;
- Lighting fixture schedule with wattage and control narrative;
- Location of daylight zones on lighting floor plans
- Air sealing details.

C103.3 Examination of documents. Document examination shall be performed under the See the applicable code under which the permit is issued. (Building, Residential, Electrical, Mechanical, or Plumbing Codes)

C103.3.1 Approval of construction documents. See the applicable code under which the permit is issued. (Building, Residential, Electrical, Mechanical or Plumbing Codes)

C103.3.2 Previous approvals. See the applicable code under which the permit is issued. (Building, Residential, Electrical, Mechanical or Plumbing Codes)

C103.3.3 Phased approval. See the applicable code under which the permit is issued. (Building, Residential, Electrical, Mechanical or Plumbing Codes)

C103.4 Amended construction documents. Changes made during construction that are not in compliance with the *approved* construction documents shall be resubmitted for approval as an amended set of construction documents.

C103.5 Retention of construction documents. See the applicable code under which the permit is issued. (Building, Residential, Electrical, Mechanical, or Plumbing Codes)

IECC SECTION C104

IECC Section C104.1, C104.2, C104.2.1, C104.2.2, C104.2.3, C104.2.4, C104.2.5, C104.2.6, C104.3, C104.4, C104.5, C104.6, C104.7, and C104.7.1; deleted and replace as follows:

C104.1 General. All construction or work for which a permit is required shall be subject to inspection by the Building Official and all such construction or work shall remain accessible and exposed for inspection purposes until approved by the Building Official.

Inspections shall be performed in the manner as specified by the code under which the permit was obtained. (Building, Residential, Electrical, Mechanical, or Plumbing Codes)

C104.2 Required Inspections. Along with the mandatory inspections required under the code which the permit was obtained, inspections shall be made to determine compliance with this code and shall include, but not be limited to, inspections for: envelope insulation *R*- and *U*-values, fenestration *U*-value, duct system *R*-value, HVAC, and water-heating equipment efficiency. (See IECC Energy Inspection Check List as provided by the department.)

C104.3 Other Inspections. In addition to the called inspections specified above, the Building Official may make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws which are enforced by the code enforcement agency.

IECC SECTION C106

*IECC Section C106.1; changed to read as follows:

C106.1 General. The codes and standards referenced in this code shall be those listed in Chapter 6, and such codes, when specifically adopted, and standards shall be considered part of the requirements of this code to the extent of 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 shall mean the Electrical Code as adopted.

The provisions of the Building Code, Residential Code, Electrical Code, Mechanical Code, and Plumbing Code, as adopted elsewhere, shall be used as part of this code for any provision, requirement or method that does not exist in this code.

IECC SECTION C107

*IECC Section C107.1, C107.2, C107.3, C107.4 and C107.5; deleted and replaced to read as follows:

C107.1 Fees. For Permits, Fees, Inspections, Certificates of Occupancy and Third Party, see the *Fort Worth Building Administrative Code*, adopted elsewhere.

IECC SECTION C108

*IECC Section C108.4; changed to read as follows:

C108.4 Failure to comply. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be considered in violation of this code and liable to a fine as specified in Section 111.

IECC SECTION C109

*IECC Section C109; deleted and replaced to read as follows:

SECTION C109 – CONSTRUCTION AND FIRE PREVENTION BOARD OF APPEALS

C109.1 Applications for appeals shall be made to the Construction and Fire Prevention Board of Appeals as authorized and provided for in the *Fort Worth Building Administrative Code*. All references to the “Board” shall be deemed to refer to the Construction and Fire Prevention Board of Appeals.

The Board shall have no authority to waive provisions required by State Law. The *code official* shall be the deciding individual as to whether a variance to the Energy Code would place the city in violation of State Law.

IECC SECTION C110

*IECC Section C110; added to read as follows:

SECTION C110 – ORGANIZATION AND ENFORCEMENT

C110.1 Creation of enforcement agency. The Department of Planning and Development is hereby created as specified in the City Code and shall be referred to as “the department.”

C110.2 Powers and Duties of Code Official.

C110.2.1 General. Whenever the term “code official” is used in this code, it shall be construed to mean the Building Code Administrator or his authorized representative(s). The *code official* is hereby authorized and directed to enforce the provisions of this code. The *code official* shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

C110.2.2 Deputies. In accordance with prescribed procedures and with the approval of the appointing authority, the *code official* may appoint such number of technical officers and inspectors and other employees as shall be authorized from time to time. The *code official* may deputize such inspectors or employees as may be necessary to carry out the functions of the code enforcement agency.

For the purpose of this code, the regularly authorized deputy officials shall be per work as follows:

- Provisions involving Mechanical** – Mechanical Inspection Specialist
- Provisions involving Fuel Gas** – Plumbing Inspection Specialist
- Provisions involving Plumbing** – Plumbing Inspection Specialist
- Provisions involving Electrical** – Electrical Inspection Specialist

For all other parts, the Inspection Supervisors(s) shall be the deputy official.

C110.2.3 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the *code official* has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this code which makes the structure or premises unsafe, dangerous or hazardous, the *code official* or designee is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises be unoccupied, the *code official* shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the *code official* shall have recourse to the remedies provided by law to secure entry.

An application for a permit shall be considered as permission from an authorized representative to inspect the premises.

When the code official shall have first obtained a proper inspection warrant or other remedy provided by law to secure entry, no owner, occupant, or person having charge, care of control of any building or premises shall fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the code official for the purpose of inspection and examination pursuant to this code.

It shall be unlawful for any person to hinder or interfere with the code official, deputy or any of the inspectors in the discharge of their duties under this code.

C110.2.4 Occupancy violations. Whenever any site, building, structure or equipment therein regulated by this code or any other code is being used contrary to the provisions of this code or any other code, the *code official* may order such use discontinued and the structure, or portion thereof, vacated by notice served on any person causing such use to be continued.

Such person shall discontinue the use within the time prescribed by the *code official* after receipt of such notice to make the site, building, structure, or portion thereof, or equipment comply with the requirements of this code.

C110.2.5 Liability. The *code official*, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The *code official* or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code. Any judgment resulting therefrom shall be assumed by this jurisdiction.

C110.2.5.1 The liability exemption and defense protection provided in this section are not extended to Third Party Companies, or their employees.

C110.2.5.2 This code shall not be construed to relieve from or lessen the responsibility of any person owning, operating or controlling any building or structure for any damages to persons or property caused by defects, nor shall the code enforcement agency or its parent jurisdiction be held as assuming any such liability by reason of the inspections authorized by this code or any permits or certificates issued under this code.

C110.2.6 Modifications. Wherever there are practical difficulties involved in carrying out the provisions of this code, the *code official* shall have the authority to grant modifications for individual cases, upon application of the owner or owner's representative, provided the *code official* shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and

that such modification does not lessen health, accessibility, life and fire safety, or structural requirements. The details of any action granting modifications shall be recorded and entered in the files of the department.

C110.2.7 Alternate materials, alternate design and methods of construction. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, *fire resistance*, durability and safety.

C110.2.8 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

C110.2.9 Tests. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the *code official* shall have the authority to require tests as evidence of compliance to be made at no expense to this jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the *code official* shall approve the testing procedures. Tests shall be performed by an *approved agency*. Reports of such tests shall be retained by the *code official* for the period required for retention of public records.

C110.2.10 Material and equipment reuse. Materials, equipment and devices shall not be reused unless such elements have been reconditioned, tested, placed in good and proper working condition, and approved.

C110.2.11 Cooperation of other officials and officers. The *code official* may request, and shall receive, the assistance and cooperation of other officials of this jurisdiction so far as is required in the discharge of the duties required by this code or other pertinent law or ordinance.

IECC SECTION C111

**IECC Section C111; added to read as follows:*

C111 Violations. It shall be unlawful for any person, firm or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the same to be done in violation of this code.

Any violation cited under the Building Code, Residential Code, Electrical Code, Mechanical Code and Plumbing Code, as adopted elsewhere, that is also associated with energy-efficient provisions of this code, may also be cited as a violation of this code.

Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the *approved construction documents* or directive of the *code official*, or of a *permit* or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law.

Each day or any portion thereof during which any violation of this ordinance occurs or continues shall be deemed a separate offense and upon conviction thereof shall be punishable as prescribed by law.

CHAPTER 2 [CE] – DEFINITIONS

IECC SECTION C202 DEFINITIONS

**IECC Section C202; the following definitions are changed or are added to read as follows:*

BUILDING CODE. Building Code shall mean the *International Building Code* as adopted by this jurisdiction.

CHANGE OF OCCUPANCY. A change in the purpose or level of activity within a building that involves a change in application of the requirements of this code. The definition shall also apply to the usage of the surrounding site and access to and from the building, structure or site, as necessary to achieve the purpose of this code, and to obtain compliance with other codes and ordinances of this jurisdiction.

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

ENERGY CODE. Energy Code shall mean the *International Energy Conservation Code* as adopted by this jurisdiction.

FIRE PREVENTION CODE (FIRE CODE). Fire Prevention Code, or Fire Code, shall mean the *International Fire Code* as adopted by this jurisdiction.

FORT WORTH BUILDING ADMINISTRATIVE CODE. The Fort Worth Administrative code containing the administrative, organizational, and enforcement rules and regulations for the

Fort Worth Building, Residential, Plumbing, Fuel Gas, Mechanical, Electrical, Sign and Existing Building codes.

FUEL GAS CODE. Fuel Gas code shall mean the *International Fuel Gas Code* as adopted by this jurisdiction and shall be considered as part of the Plumbing Code. (See Plumbing Code.)

HISTORIC BUILDING. Buildings that are listed in or eligible for listing in the National Register of Historic Places, or designated or eligible for designation as historic under an appropriate state or local law.

MECHANICAL CODE. Mechanical Code shall mean the *International Mechanical Code* as adopted by this jurisdiction.

PLUMBING. For the purpose of using the *International Plumbing Code*, or the Plumbing Section of the *International Residential Code*, as adopted, shall mean:

The practice, materials and fixtures utilized in the installation, maintenance, extension and alteration of all piping, fixtures, plumbing appliances and plumbing appurtenances, within or adjacent to any structure, in connection with sanitary drainage or storm drainage facilities; venting systems, and public or private water supply systems.

For the purpose of complying with the Texas State Plumbing License Law, shall mean:

All piping, fixtures, appurtenances, and appliances, including disposal systems, drain or waste pipes, or any combination of these that:

supply, recirculate, drain, or eliminate water, gas, medical gasses and vacuum, liquids, and sewage for all personal or domestic purposes in and about buildings where persons live, work, or assemble; connect the building on its outside with the source of water, gas, or other liquid supply, or combinations of these, on the premises, or the water main on public property; and carry waste water or sewage from or within a building to the sewer service lateral on public property or the disposal or septic terminal that holds private or domestic sewage.

The installation, repair, service, maintenance, alteration, or renovation of all piping, fixtures, appurtenances, and appliances on premises where persons live, work, or assemble that supply gas, medical gasses and vacuum, water, liquids, or any combination of these, or dispose of waste water or sewage.

PLUMBING CODE. Plumbing Code shall mean the *International Plumbing Code* and the *International Fuel Gas Code* as adopted by this jurisdiction. The term “Plumbing Code” applies to both codes as one combined code.

PLUMBING SYSTEM. For the purpose of using this code, as adopted, shall mean:

Includes the water supply and distribution pipes, plumbing fixtures and traps, supports and appurtenances; water-treating or water-using equipment; soil, waste and vent pipes; sanitary drains, storm sewers and building sewers to an approved point of disposal, in addition to their respective connections, devices and appurtenances within a structure or premise.

PROJECTION FACTOR. The ratio of the horizontal depth of the overhang, eave or permanently attached shading device, divided by the distance measured vertically from the bottom of the fenestration glazing to the underside of the overhang, eave or permanently attached shading device. (See IECC Equation 4-5)

RESIDENTIAL BUILDING. For this code, includes detached one- and two- family dwellings and multiple single family dwellings (townhouses) as well as R-2, R-3 and R-4 buildings three stories or less in height above grade. Residential buildings on a Podium building, not exceeding three stories in height above the podium level, may also be considered as Residential Buildings if constructed the same as they would be if on grade with no elevator shafts, interior stair shafts, etc. that would connect conditioned residential space above with the podium level below.

RESIDENTIAL CODE. Residential Code shall mean the *International Residential Code* as adopted by this jurisdiction.

CHAPTER 3 [CE] – GENERAL REQUIREMENTS

IECC SECTION C303 MATERIALS, SYSTEMS AND EQUIPMENT

**IECC Section C303.2.1; deleted and replaced to read as follows:*

303.2.1 Protection of exposed foundation insulation. Because of “very heavy” termite classification, designs employing exterior insulation of basements or slabs shall not be utilized.

CHAPTER 4 [CE] – COMMERCIAL ENERGY EFFICIENCY

IECC SECTION C402 BUILDING ENVELOPE REQUIREMENTS

**IECC Section C402.1.1; add an item 4 to read as follows:*

4. (*life safety*) In order to provide a tenable work environment in unheated warehouses, heaters that exceed the energy limitations of item 1 or 2 above may be installed in the dock area without requiring the entire warehouse to comply with the envelope provisions, with the following stipulations:

- a. This exemption shall not apply if heaters are installed throughout the entire warehouse, even if just to prevent pipe freezing.
- b. This provision shall not apply to other conditioned spaces inside the warehouse, e.g. offices, restrooms, break rooms, etc. which must individually be separated from the warehouse with a compliant envelope.
- c. Loading Dock weather seals of Section C402.5.6 must be installed.

**IECC Section C402.2.2.1; added to read as follows:*

C402.2.2.1 Attic equipment. Where equipment installed in the attic is required a working area and access pathway in accordance with this or other codes, as applicable, the insulation under such walkway or platform shall not be reduced unless compensated for through an approved method such as the usage of a performance (computer) energy review compliance report.

**IECC Section C402.2.7; added to read as follows:*

C402.2.7 Insulation installed in walls. To insure that insulation remains in place, insulation installed in walls shall be totally enclosed on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing, netting or other equivalent material approved by the building official.

**IECC Section C402.4.1; an exception is added to read as follows:*

C402.4.1 Maximum Area. The vertical fenestration area (not including opaque doors and opaque spandrel panels) shall not be greater than 30 percent of the gross above-grade wall area. The skylight area shall not be greater than 3 percent of the gross roof area

Exception: (*life safety*) When installing the minimum smoke and heat vents required under Fire Code Section 910, the area of such vents (skylights) may exceed 3%, but only by the amount needed to meet the requirement of that section.

**IECC Section C402.4.1.1 added to read as follows:*

C402.4.1.1 Roll up or roll away wall sections. Roll up or roll away walls, doors or windows, or folding doors and windows providing access for the interior atmosphere, conditioned air and/or noise to flow to the outside, usually associated with interior assemblies connecting to outside dining, patio or sidewalk area, will not be accepted.

Exception: Such openings may be accepted when all of the following conditions are met:

1. A kill switch is associated with each opening such that the air conditioning and/or heat is deactivated when the door/window is open. Fresh air and fans are allowed to be operational. This deactivation does not apply to the kitchen area.
2. In the following zonings (H, NS, TU, MU-1, MU-2, and any new form based zoning adopted by Council), as defined in the Zoning Code, such openings may be used for any size tenant space.
3. In other zonings, such openings are only permitted in tenant spaces less than 3,000 sq.ft. or in a portion of the tenant space that has been subdivided with a partition and doors to be less than 3,000 sq.ft.

*IECC Section C402.5.7; an exception is added to read as follows:

C402.5.7 Vestibules. Building entrance shall be protected with an enclosed vestibule, with all doors opening into and out of the vestibule equipped with self-closing devices. Vestibules shall be designed so that in passing through the vestibule it is not necessary for the interior and exterior doors to open at the same time. The installation of one or more revolving doors in the building entrance shall not eliminate the requirement that a vestibule be provided any doors adjacent to revolving doors.

Exception: Vestibules are not required for the following:

1. Buildings in *Climate Zones* 1 and 2.
2. Doors not intended to be used by the public, such as doors to mechanical or electrical equipment rooms, or intended solely for employee use.
3. Doors opening directly from a *sleeping unit* or dwelling unit.
4. Door that open directly form a space less than 3,000 square feet (298 m²) in area.
5. Revolving doors.
6. Doors that have an air curtain with a velocity of not less than 6.56 feet per second (2 m/s) at the floor that have been tested in accordance with ASNI/AMCA 220 and installed in accordance with the manufacturer's instructions. Manual or automatic controls shall be provided that will operate the air curtain with the opening and closing of the door. Air Curtains and their controls shall comply with Section C408.2.3
7. (*life safety*) Doors provided for and only used as Fire Access openings in accordance with Fire Code Section 903.2.11.1 or 2306.6.1.

IECC SECTION C405 ELECTRICAL POWER AND LIGHTING SYSTEMS

*IECC Section C405.2; changed to read as follows:

C405.2 Lighting controls (Mandatory). Lighting systems shall be provided with controls as specified in Sections C405.2.1, C405.2.2, C405.2.3, C405.2.4 and C405.2.5

Exceptions: Lighting controls are not required for the following:

1. Areas designated as security or emergency areas that must be continuously lighted, inclusive of areas of incarceration.
2. Interior exit stairways, interior exit ramps, and exit passageways.
3. Emergency egress lighting that is normally off.

*IECC Section C405.5.1; changed to read as follows:

C405.5.1 Exterior building lighting power. The total exterior lighting power allowance for all exterior building applications is the sum of the base site allowance plus the individual allowances for areas that are to be illuminated and are permitted in Table C405.5.1(2) for the applicable lighting zone. Tradeoffs area allowed only among exterior lighting applications listed in Table C405.5.1(2), Tradable Surfaces section. The lighting zone for the building exterior is determined from Table C405.5.1(1), and as further detailed in Tables C405.5.1(3) and C405.5.1(4).

{Exceptions unchanged.}

*IECC Table C405.5.1(1); changed and Table C405.5.1 (3) and (4) added to read as follows:

Table 405.5.1(1)¹
Exterior Lighting Zones

Lighting Zone	Description
1	Developed areas of national parks, state parks, forest land, and rural areas
2	Areas predominantly consisting of residential zoning, neighborhood business districts, light industrial with limited nighttime use and residential mixed use areas.
3	All other areas
4	High-activity commercial districts in major metropolitan areas as designated by the local land use planning authority.

1. Enforcement of this table shall be accomplished through the use of Table 505.6.2(3) and (4).

Table 405.5.1(3)^{1,2,3,4}
Exterior Lighting Zones

Lighting Zones	Description	Equivalent Fort Worth Zoning Classification
1	Developed areas of national parks, state parks, forest land, and rural areas.	Developed areas of city parks.
2	Areas predominantly consisting of residential zoning, neighborhood business districts, light industrial with limited nighttime use and residential mixed use areas.	All uses in MU-1, MU-1G, MU-2, MU-2G
3	All other areas.	
4	High-activity commercial districts in major metropolitan areas as designated by the local land use planning authority.	All uses in H

1. All PD's shall be as the main use or zoning identified in the PD
2. When more than one use on the property vertically, the use of the lowest floor shall determine the zone.
3. When more than one use across the property horizontally, the highest zone classification shall be permitted.
4. Except for **H** or **MU** zonings and any unlisted zoning districts, all other categories shall be designated by use as specified in Table 505.6.2(4).

Table 405.5.1(4) ¹												
USES – As classified by the Zoning Code		A, AR, B, R-1, R-2, CR, C, D, UR, MH	ER, E	FR, F, G	I	J, K	AG	CF	TU	NS/T 4R	NS/T 4	NS/T 5
Household Living	All dwellings, inclusive of: One-family and two-family dwellings, townhouse, rowhouse, multifamily apartment, manufactured housing, mobile home, cluster housing, etc.	2	2	2	2	2	1	2	2	2	2	2
Group Living	Boarding or lodging house, community home, fraternity or sorority house, Group Homes I, Halfway House, Shelter, etc.	2	2	2	2	2	1	2	2	2	2	2
	Group Home II	2	2	3	3	3	1	3	3	3	3	3
Education	College or University, Day care center (child or adult) Kindergarten, School, elementary or secondary (public or private), etc.	2	2	3	3	3	2	3	3	3	3	3

Government	Animal Shelter, governmental office facility, probation or parole office	2	2	2	2	2	2	2	2	2	2	2
	Correctional Facility	3	3	3	4	4	3	3	3	3	3	3
	Government maintenance facility, governmental vehicle storage/junkyard	2	2	2	3	3	2	2	3	3	3	3
	Museum, library or fine art center (govt. operated or controlled)	2	2	2	2	2	2	2	2	2	2	2
Health Care Facilities	Assisted living facility, blood bank, care facility, hospice, massage therapy and spa, health services facility (including doctor's office or medical clinic)	2	2	2	2	2	1	2	2	2	2	2
	Ambulance dispatch station, hospital, nursing home with full medical services	2	2	3	3	3	1	3	3	3	3	3
Recreation	Center (community recreation or welfare), country club, neighborhood recreation center	2	2	3	3	3	2	2	3	3	3	3
	Golf course, park or playground	1	1	1	1	1	1	1	1	1	1	1
	Golf driving range	2	2	3	3	3	2	2	3	3	3	3
Religious	Place of worship and auxiliary use	2	2	2	2	2	2	2	2	2	2	2
Utilities	Electric power substation, power plant or central station light, wastewater (sewage) treatment facility, water supply, treatment or storage facility.	3	3	4	4	4	3	4	4	4	4	4
	Gas lift compressor, gas line compressor stations, telecommunications towers and antennas, utility transmission or distribution line	2	2	3	3	3	2	3	3	3	3	3

	USES	A, AR, B, R-1, R-2, CR, C, D, UR, MH	ER, E	FR, F, G	I	J, K	AG	CF	TU	NS/T 4R	NS/T 4	NS/T 5
Entertainment and Eating	Amusement (indoor and outdoor), baseball/softball facility (commercial), bowling alley, bar, tavern, cocktail lounge, club (private or teen), circus, drive-in restaurant or business, Gambling facility (including bingo), indoor recreation, racing (horse, dog or automotive), shooting or weapons firing range, stable (commercial), riding, boarding or rodeo arena, sexually oriented business, swimming pool (commercial), theater (drive-in, movie theater or auditorium)	2	2	3	3	3	2	3	3	3	3	3
	Health or recreation club, lodge or civic club, massage parlor,	2	2	2	2	2	1	2	2	2	2	2

	museum/cultural facility, restaurant, café, cafeteria.											
Lodging	Bed and breakfast home and inn, hotel, motel or inn, Recreational vehicle park	2	2	2	2	2	1	2	2	2	2	2
Office	Bank, financial institution, offices	2	2	2	2	2	1	2	2	2	2	2
Retail sales and service	Business college or commercial school, Home improvement store, Large retail store, Mini-warehouses,	2	2	3	3	3	2	3	3	3	3	3
	All other "Retail sales and service" uses as listed in the Zoning Code	2	2	2	2	2	1	2	2	2	2	2
	All other "Vehicle sales & service" as listed in the Zoning Code	2	2	3	3	3	2	3	3	3	3	3
Light Industrial Services	Assaying, Blacksmithing or wagon shop, carpet and rug cleaning, furniture sales, with outside storage/display (new/used), outdoor sales and storage, pattern shop, rubber stamping, shearing/punching, rubber stamp manufacture.	2	2	2	2	2	1	2	2	2	2	2
	All other "Light Industrial Services" as listed in the Zoning Code.	2	2	3	3	3	2	3	3	3	3	3
Heavy Industrial Manufacturing	All "Heavy Industrial Manufacturing" as listed in the Zoning Code	2	2	3	3	3	2	3	3	3	3	3

	USES	A, AR, B, R-1, R-2, CR, C, D, UR, MH	ER, E	FR, F, G	I	J, K	AG	CF	TU	NS/T4R	NS/T4	NS/T5
Transportation	Airport, aviation field, helistop or landing area, passenger station, railroad freight or classification yard, railroad roundhouse or RR car repair shop, railroad tracks: team, spur, loading or storage, terminal: truck, freight, rail or water	2	2	3	3	3	2	3	3	3	3	3
Waste Related	Landfill, recycling center, household hazardous waste or waste tire facility, recycling collection facility, salvage yard (other than automotive)	2	2	3	3	3	3	3	3	3	3	3
	Pet cemetery	2	2	2	2	2	1	2	2	2	2	2
Wholesale	Wholesale: bakery, produce market or wholesale house, wholesale office or sample room	2	2	3	3	3	2	3	3	3	3	3
Agriculture	Agriculture, stockyards or feeding pens (commercial), green house or plant nursery	2	2	2	2	2	1	2	2	2	2	2
Gas wells	Fresh Water Fracture Ponds & Production, gas drilling & production, oil drilling & production	2	2	2	2	2	1	2	2	2	2	2

1. This table was created using the following parameters:
 - a. All parks are protected with Zone 1.
 - b. All nocturnal areas, golf courses and AG zoning are reduced in lighting zone from the other zonings for each use.
 - c. All H zoning is Zone 4.
 - d. All MU zoning is Zone 2.
 - e. All estimated 8 a.m. to 5 p.m. businesses that might occur next to residential are assigned Zone 2.
 - f. A zone increase was permitted for uses that might require extra security, e.g. correctional facilities, power plants, etc.

CHAPTER 5 [CE] – EXISTING BUILDINGS

IECC SECTION C501 GENERAL

**IECC Section C501.6; changed to read as follows:*

C501.6 Historic buildings. Any building or structure that is listed in the State or National Register of Historic Places; designated as a historic property, or identified by the Historic Officer as eligible for designation, 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, are exempt from the following items, unless judged by the Building Official as a life safety hazard.

Exempted provisions are as follows:

1. Exterior envelope inclusive of vestibules in the exterior envelope.
2. Interior envelope, separating interior conditioned space from interior non-conditioned space, when considered historically significant.
3. Placement, design or installation of light fixtures considered to contribute to the historical significance or ambiance. However, non-historical fixtures shall comply.
4. Any other item determined to be historically significant.

IECC SECTION C503 ALTERATIONS

**IECC Section C503.1; add a second paragraph after the exceptions to read as follows:*

Compliance methods permitted by this code or former codes may include a variety of above code options. Such above code options may have been used to allow another design parameter to be reduced. In order to insure that such above code upgrades are not later remodeled away, unless it can be shown that the total building after remodel complies with code, all replacement material, equipment and/or systems shall meet the **most restrictive requirement** of:

1. having an equivalent reduction of energy usage as the replaced material, equipment and/or system; or,
2. comply with the prescriptive provisions of this code.

*IECC Section C503.3.1; add a second paragraph to read as follows:

(life safety) When the insulation is on top of the roof deck and the insulation is removed, repaired or replaced, new insulation is required to be installed. If the new insulation is to be installed on top of the roof deck, the new insulation shall attempt to meet the R-value as required by this code unless doing so endangers the building by interfering with the roof drainage system. If compliance with this code does so endanger the building, at a minimum the insulation R-value shall be not less than what was removed.

RESIDENTIAL CODE

CHAPTER 1 [RE] – SCOPE AND ADMINISTRATION

IECC SECTION R102

**IECC Section R102; add R102.1.2 to read as follows:*

R102.1.2 Alternative compliance. A building certified by a national, state, or local accredited energy efficiency program and determined by the Energy Systems Laboratory to be in compliance with the energy efficiency requirements of this section may, at the option of the Code Official, be considered in compliance. The United States Environmental Protection Agency's Energy Star Program certification of energy code equivalency shall be considered in compliance. Regardless of the program or the path to compliance, each one- and two-family dwelling shall be tested for air and duct leakage as prescribed in Section R402.4 and R403.3.3 respectively.

IECC SECTION R103

**IECC Sections R103.1, R103.2, R103.3, R103.3.1, R103.3.2, R103.3.3, R103.4 and R103.5; delete and replace as follows:*

R103.1 General. Construction documents and other supporting data shall be submitted as required by the code under which the permit is issued (Building, Residential, Electrical, Mechanical, or Plumbing Codes) and as noted below.

R103.2 Information on construction documents. Construction documents shall be drawn to scale upon suitable material. Construction documents shall be of sufficient clarity to indicate the location, nature and extent of the work proposed, and show in sufficient detail pertinent data and features of the building, systems and equipment as herein governed. Details shall include, but are not limited to:

- Insulation materials and their *R*-values;
- Fenestration *U*-factors and SHGCs;
- Area-weighted *U*-factor and SHGC calculations;
- Mechanical system design criteria;
- Mechanical and service water heating system and equipment types, sizes and efficiencies;
- Equipment and systems controls;
- Duct sealing, duct and pipe insulation and location;
- Air sealing details.

For Residential plans, either as an insert on the plans or as a separate attachment, a representation of the Energy Certificate required by Section R401.3 shall be depicted with the information inserted as follows:

<p><i>(Builder Name if desired)</i></p> <p>Residential Energy Efficiency Certificate</p>
<p>This energy certificate shall be posted as required by City ordinance. This residential unit was built in accordance with the <u>2015 Fort Worth Energy Code</u> with the following energy compliance materials.</p> <p>Insulation: Wall: _____ Roof/Attic/Ceiling: _____ Floor: _____ Ducts: _____</p> <p>Windows: U-factor _____ SHGC _____</p> <p>Doors: U-factor _____ Duct Leakage Rate _____ Envelope Leakage Rate _____</p> <p>Heating: _____ Cooling: _____ Water Heater: _____ Other: _____</p>

Where necessary, the certificate may be expanded to include other items. In order to allow mass production of labels for Master Home plans, no address is required to be specified. However, a builder may desire to add an address line or a house model number. Posting of the certificate shall be as specified in Section R401.3.

R103.3 Examination of documents. See the applicable code under which the permit is issued. (Building, Residential, Electrical, Mechanical or Plumbing Codes)

R103.3.1 Approval of construction documents. See the applicable code under which the permit is issued. (Building, Residential, Electrical, Mechanical or Plumbing Codes)

R103.3.2 Previous approvals. See the applicable code under which the permit is issued. (Building, Residential, Electrical, Mechanical or Plumbing Codes)

R103.3.3 Phased approval. See the applicable code under which the permit is issued. (Building, Residential, Electrical, Mechanical or Plumbing Codes)

R103.4 Amended construction documents. Changes made during construction that are not in compliance with the *approved* construction documents shall be resubmitted for approval as an amended set of construction documents.

R103.5 Retention of construction documents. See the applicable code under which the permit is issued. (Building, Residential, Electrical, Mechanical or Plumbing Codes)

IECC SECTION R104

**IECC Section R104.1, R104.2, R104.2.1, R104.2.2, R104.2.3, R104.2.4, R104.2.5, R104.3, R104.4, R104.5, R104.6, R104.7 and R104.7.1; deleted and replace as follows:*

R104.1 General. All construction or work for which a permit is required shall be subject to inspection by the Building Official and all such construction or work shall remain accessible and exposed for inspection purposes until approved by the Building Official.

Inspections shall be performed in the manner as specified by the code under which the permit was obtained. (Building, Residential, Electrical, Mechanical or Plumbing Codes)

R104.2 Required Inspections. Along with the mandatory inspections required under the code which the permit was obtained, inspections shall be made to determine compliance with this code and shall include, but not be limited to, inspections for: envelope insulation *R*- and *U*-values, fenestration *U*-value, duct system *R*-value, and HVAC and water-heating equipment efficiency. (See IECC Energy Inspection Check List as provided by the department.)

R104.3 Other Inspections. In addition to the called inspections specified above, the Building Official may make or require other inspections of any construction work to ascertain compliance with the provisions of this code and other laws which are enforced by the code enforcement agency.

IECC SECTION R106

**IECC Section C106.1; changed to read as follows:*

R106.1 General. The codes and standards referenced in this code shall be those listed in Chapter 6, and such codes, when specifically adopted, and standards shall be considered part of the requirements of this code to the extent of 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 shall mean the Electrical Code as adopted.

The provisions of the Building Code, Residential Code, Electrical Code, Mechanical Code and Plumbing Code, as adopted elsewhere, shall be used as part of this code for any provision, requirement or method that does not exist in this code.

IECC SECTION R107

**IECC Section R107.1, R107.2, R107.3, R107.4 and R107.5; deleted and replaced to read as follows:*

R107.1 Fees. For Permits, Fees, Inspections, Certificates of Occupancy and Third Party, see the *Fort Worth Building Administrative Code*, adopted elsewhere.

IECC SECTION R108

**IECC Section R108.4; changed to read as follows:*

R108.4 Failure to comply. Any person who shall continue any work after having been served with a stop work order, except such work as that person is directed to perform to remove a violation or unsafe condition, shall be considered in violation of this code and liable to a fine as specified in Section R111.

IECC SECTION R109

**IECC Section R109; deleted and replaced to read as follows:*

SECTION R109 CONSTRUCTION AND FIRE PREVENTION BOARD OF APPEALS

R109.1 Applications for appeals shall be made to the Construction and Fire Prevention Board of Appeals as authorized and provided for in the *Fort Worth Building Administrative Code*. All references to the “Board” shall be deemed to refer to the Construction and Fire Prevention Board of Appeals.

The Board shall have no authority to waive provisions required by State Law. The *code official* shall be the deciding individual as to whether a variance to the Energy Code would place the city in violation of State Law.

IECC SECTION R110

**IECC Section R110; added to read as follows:*

SECTION R110 ORGANIZATION AND ENFORCEMENT

R110.1 Creation of enforcement agency. The Department of Planning and Development is hereby created as specified in the City Code and shall be referred to as “the department.”

R110.2 Powers and Duties of Code Official.

R110.2.1 General. Whenever the term “code official” is used in this code, it shall be construed to mean the Building Code Administrator or his authorized representative(s). The *code official* is hereby authorized and directed to enforce the provisions of this code. The *code official* shall have the authority to render interpretations of this code and to adopt policies and procedures in order to clarify the application of its provisions. Such interpretations, policies and procedures shall be in compliance with the intent and purpose of this code. Such policies and procedures shall not have the effect of waiving requirements specifically provided for in this code.

R110.2.2 Deputies. In accordance with prescribed procedures and with the approval of the appointing authority, the *code official* may appoint such number of technical officers and inspectors and other employees as shall be authorized from time to time. The *code official* may deputize such inspectors or employees as may be necessary to carry out the functions of the code enforcement agency.

For the purpose of this code, the regularly authorized deputy officials shall be per work as follows:

- Provisions involving Mechanical** – Mechanical Inspection Specialist
- Provisions involving Fuel Gas** – Plumbing Inspection Specialist
- Provisions involving Plumbing** – Plumbing Inspection Specialist
- Provisions involving Electrical** – Electrical Inspection Specialist

For all other parts, the Inspection Supervisors(s) shall be the deputy official.

R110.2.3 Right of entry. Where it is necessary to make an inspection to enforce the provisions of this code, or where the *code official* has reasonable cause to believe that there exists in a structure or upon a premises a condition which is contrary to or in violation of this

code which makes the structure or premises unsafe, dangerous or hazardous, the *code official* or designee is authorized to enter the structure or premises at reasonable times to inspect or to perform the duties imposed by this code, provided that if such structure or premises be occupied that credentials be presented to the occupant and entry requested. If such structure or premises be unoccupied, the *code official* shall first make a reasonable effort to locate the owner or other person having charge or control of the structure or premises and request entry. If entry is refused, the *code official* shall have recourse to the remedies provided by law to secure entry.

An application for a permit shall be considered as permission from an authorized representative to inspect the premises.

When the code official shall have first obtained a proper inspection warrant or other remedy provided by law to secure entry, no owner, occupant, or person having charge, care of control of any building or premises shall fail or neglect, after proper request is made as herein provided, to promptly permit entry therein by the code official for the purpose of inspection and examination pursuant to this code.

It shall be unlawful for any person to hinder or interfere with the code official, deputy or any of the inspectors in the discharge of their duties under this code.

R110.2.4 Occupancy violations. Whenever any site, building, structure or equipment therein regulated by this code or any other code is being used contrary to the provisions of this code or any other code, the *code official* may order such use discontinued and the structure, or portion thereof, vacated by notice served on any person causing such use to be continued.

Such person shall discontinue the use within the time prescribed by the *code official* after receipt of such notice to make the site, building, structure, or portion thereof, or equipment comply with the requirements of this code.

R110.2.5 Liability. The *code official*, member of the board of appeals or employee charged with the enforcement of this code, while acting for the jurisdiction in good faith and without malice in the discharge of the duties required by this code or other pertinent law or ordinance, shall not thereby be rendered liable personally and is hereby relieved from personal liability for any damage accruing to persons or property as a result of any act or by reason of an act or omission in the discharge of official duties. Any suit instituted against an officer or employee because of an act performed by that officer or employee in the lawful discharge of duties and under the provisions of this code shall be defended by legal representative of the jurisdiction until the final termination of the proceedings. The *code official* or any subordinate shall not be liable for cost in any action, suit or proceeding that is instituted in pursuance of the provisions of this code. Any judgment resulting therefrom shall be assumed by this jurisdiction.

R110.2.5.1 The liability exemption and defense protection provided in this section are not extended to Third Party Companies, or their employees.

R110.2.5.2 This code shall not be construed to relieve from or lessen the responsibility of any person owning, operating or controlling any building or structure for any damages to

persons or property caused by defects, nor shall the code enforcement agency or its parent jurisdiction be held as assuming any such liability by reason of the inspections authorized by this code or any permits or certificates issued under this code.

R110.2.6 Modifications. Wherever there are practical difficulties involved in carrying out the provisions of this code, the *code official* shall have the authority to grant modifications for individual cases, upon application of the owner or owner's representative, provided the *code official* shall first find that special individual reason makes the strict letter of this code impractical and the modification is in compliance with the intent and purpose of this code and that such modification does not lessen health, accessibility, life and fire safety, or structural requirements. The details of any action granting modifications shall be recorded and entered in the files of the department.

R110.2.7 Alternate materials, alternate design and methods of construction. The provisions of this code are not intended to prevent the installation of any material or to prohibit any design or method of construction not specifically prescribed by this code, provided that any such alternative has been *approved*. An alternative material, design or method of construction shall be *approved* where the *code official* finds that the proposed design is satisfactory and complies with the intent of the provisions of this code, and that the material, method or work offered is, for the purpose intended, at least the equivalent of that prescribed in this code in quality, strength, effectiveness, *fire resistance*, durability and safety.

R110.2.8 Research reports. Supporting data, where necessary to assist in the approval of materials or assemblies not specifically provided for in this code, shall consist of valid research reports from *approved* sources.

R110.2.9 Tests. Whenever there is insufficient evidence of compliance with the provisions of this code, or evidence that a material or method does not conform to the requirements of this code, or in order to substantiate claims for alternative materials or methods, the *code official* shall have the authority to require tests as evidence of compliance to be made at no expense to this jurisdiction. Test methods shall be as specified in this code or by other recognized test standards. In the absence of recognized and accepted test methods, the *code official* shall approve the testing procedures. Tests shall be performed by an *approved agency*. Reports of such tests shall be retained by the *code official* for the period required for retention of public records.

R110.2.10 Material and equipment reuse. Materials, equipment and devices shall not be reused unless such elements have been reconditioned, tested, placed in good and proper working condition, and approved.

R110.2.11 Cooperation of other officials and officers. The *code official* may request, and shall receive, the assistance and cooperation of other officials of this jurisdiction so far as is required in the discharge of the duties required by this code or other pertinent law or ordinance.

IECC SECTION R111

*IECC Section R111; added to read as follows:

R111 Violations. It shall be unlawful for any person, firm or corporation to erect, construct, enlarge, alter, repair, move, improve, remove, convert or demolish, equip, use, occupy or maintain any building or structure or cause or permit the same to be done in violation of this code.

Any violation cited under the Building Code, Residential Code, Electrical Code, Mechanical Code and Plumbing Code, as adopted elsewhere, that is also associated with energy-efficient provisions of this code, may also be cited as a violation of this code.

Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who erects, constructs, alters or repairs a building or structure in violation of the *approved construction documents* or directive of the *code official*, or of a *permit* or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law.

Each day or any portion thereof during which any violation of this ordinance occurs or continues shall be deemed a separate offense and upon conviction thereof shall be punishable as prescribed by law.

CHAPTER 2 [RE] – DEFINITIONS

IECC SECTION R202 DEFINITIONS

*IECC Section R202; the following definitions are added to read as follows:

BUILDING CODE. Building Code shall mean the *International Building Code* as adopted by this jurisdiction.

CHANGE OF OCCUPANCY. A change in the purpose or level of activity within a building that involves a change in application of the requirements of this code. The definition shall also apply to the usage of the surrounding site and access to and from the building, structure or site, as necessary to achieve the purpose of this code, and to obtain compliance with other codes and ordinances of this jurisdiction.

CODE OFFICIAL. The officer or other designated authority charged with the administration and enforcement of this code, or a duly authorized representative. For the purpose of this code,

the *code official* shall be the Building Code Administrator, and his regularly authorized deputy shall be as listed in R110.2.2.

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

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

ENERGY CODE. Energy Code shall mean the *International Energy Conservation Code* as adopted by this jurisdiction.

FIRE PREVENTION CODE (FIRE CODE). Fire Prevention Code, or Fire Code, shall mean the *International Fire Code* as adopted by this jurisdiction.

FUEL GAS CODE. Fuel Gas code shall mean the *International Fuel Gas Code* as adopted by this jurisdiction and shall be considered as part of the Plumbing Code. (See Plumbing Code.)

HISTORIC BUILDING. Buildings that are listed in or eligible for listing in the National Register of Historic Places, or designated or eligible for designation as historic under an appropriate state or local law.

MECHANICAL CODE. Mechanical Code shall mean the *International Mechanical Code* as adopted by this jurisdiction.

PLUMBING. For the purpose of using the *International Plumbing Code*, or the Plumbing Section of the *International Residential Code*, as adopted, shall mean:

The practice, materials and fixtures utilized in the installation, maintenance, extension and alteration of all piping, fixtures, plumbing appliances and plumbing appurtenances, within or adjacent to any structure, in connection with sanitary drainage or storm drainage facilities; venting systems, and public or private water supply systems.

For the purpose of complying with the Texas State Plumbing License Law, shall mean:

All piping, fixtures, appurtenances, and appliances, including disposal systems, drain or waste pipes, or any combination of these that:

supply, recirculate, drain, or eliminate water, gas, medical gasses and vacuum, liquids, and sewage for all personal or domestic purposes in and about buildings where persons live, work, or assemble; connect the building on its outside with the source of water, gas, or other liquid supply, or combinations of these, on the premises, or the water main on public property; and carry waste water or sewage from or within a building to the sewer service lateral on public property or the disposal or septic terminal that holds private or domestic sewage.

The installation, repair, service, maintenance, alteration, or renovation of all piping, fixtures, appurtenances, and appliances on premises where persons live, work, or assemble that supply gas, medical gasses and vacuum, water, liquids, or any combination of these, or dispose of waste water or sewage.

PLUMBING CODE. Plumbing Code shall mean the *International Plumbing Code* and the *International Fuel Gas Code* as adopted by this jurisdiction. The term “Plumbing Code” applies to both codes as one combined code.

PLUMBING SYSTEM. For the purpose of using this code, as adopted, shall mean: Includes the water supply and distribution pipes, plumbing fixtures and traps, supports and appurtenances; water-treating or water-using equipment; soil, waste and vent pipes; sanitary drains, storm sewers and building sewers to an approved point of disposal, in addition to their respective connections, devices and appurtenances within a structure or premise.

PROJECTION FACTOR. The ratio of the horizontal depth of the overhang, eave or permanently attached shading device, divided by the distance measured vertically from the bottom of the fenestration glazing to the underside of the overhang, eave or permanently attached shading device.

RESIDENTIAL BUILDING. For this code, includes detached one- and two- family dwellings and multiple single family dwellings (townhouses) as well as R-2, R-3 and R-4 buildings three stories or less in height above grade. Residential buildings on a Podium building, not exceeding three stories in height above the podium level, may also be considered as Residential Buildings if constructed the same as they would be if on grade with no elevator shafts, interior stair shafts, etc. that would connect conditioned residential space above with the podium level below.

RESIDENTIAL CODE. Residential Code shall mean the *International Residential Code* as adopted by this jurisdiction.

CHAPTER 3 [RE] – GENERAL REQUIREMENTS

IECC SECTION R303 MATERIALS, SYSTEMS AND EQUIPMENT

**IECC Section R303.2.1; deleted and replaced to read as follows:*

R303.2.1 Protection of exposed foundation insulation. Because of “very heavy” termite classification, designs employing exterior insulation of basements or slabs shall not be utilized.

CHAPTER 4 [RE] – RESIDENTIAL ENERGY EFFICIENCY

IECC SECTION R402 BUILDING THERMAL ENVELOPE

*IECC Section R402.2.2.1; added to read as follows:

R402.2.2.1 Attic equipment. Where equipment installed in the attic is required a working area and access pathway in accordance with this or other codes, as applicable, the insulation under such walkway or platform shall not be reduced unless compensated for through an approved method such as the usage of a performance (computer) energy review compliance report.

*IECC Section R402.2.14; added to read as follows:

R402.2.14 Insulation installed in walls. To insure that insulation remains in place, insulation installed in walls shall be totally enclosed on all sides consisting of framing lumber, gypsum, sheathing, wood structural panel sheathing, netting or other equivalent material approved by the building official.

*IECC Section R402.3.2; add paragraph and table following the exception to read as follows:

Where vertical fenestration is shaded by an overhang, eave, or permanently attached shading device, the SHGC required in Table R402.1.2 shall be reduced by using the multipliers in Table R402.3.2 SHGC Multipliers for Permanent Projections.

**TABLE R402.3.2
SHGC Multipliers for Permanent Projections ^a**

Projection Factor	SHGC Multiplier (all Other Orientation)	SHGC Multiplier (North Oriented)
0 - 0.10	1.00	1.00
>0.10 – 0.20	0.91	0.95
>0.20 – 0.30	0.82	0.91
>0.30 – 0.40	0.74	0.87
>0.40 – 0.50	0.67	0.84

>0.50 – 0.60	0.61	0.81
>0.60 – 0.70	0.56	0.78
>0.70 – 0.80	0.51	0.76
>0.80 – 0.90	0.47	0.75
>0.90 – 1.00	0.44	0.73

^a North oriented means within 45 degrees of true north.

**IECC Section R402.4.1.2; add a second paragraph and exception to read as follows:*

Mandatory testing shall only be performed by individuals that are certified to perform air infiltration testing by national or state organizations as approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed by; or have any financial interest in the company that constructs the structure.

Exception: One- and two-family dwellings less than 6000 square feet (557 m²) with not less than 2 nor more than 6 bedrooms are permitted an air leakage rate not exceeding four air changes per hour when complying with table 402.4.1.2.

**IECC Table R402.4.1.2; added to read as follows:*

**TABLE R402.4.1.2
ESL 4ACH50 PRESCRIPTIVE TRADEOFF CODE EQUIVALENCY COMPLIANCE^a**

Component	Option #1	Option #2
Walls and roof framing	Conventional wood framing	
Ductwork location	Unconditioned attic	
HVAC system ^b	All electric w/heat pump for heating or electric cooling and natural gas heating	
Wall insulation <i>R</i> -value	R13 + R3 ^c	
Fenestration <i>U</i> -value	≤ 0.32	
Fenestration SHGC	≤ 0.25	
Ceiling <i>R</i> -value	> R49	
Duct insulation <i>R</i> -value	R8	R6
Radiant barrier required	No	Yes

^a Except for the values listed in the table, all other mandatory code provisions are applicable.

^b Electric resistance strip heating does not qualify for this tradeoff.

^c The first value listed is the *R*-value of cavity insulation, the second value is the *R*-value of the continuous insulation or insulated siding.

**IECC SECTION R403
SYSTEMS**

*IECC Section R403.3.3; add a final paragraph to read as follows:

Mandatory testing shall only be performed by individuals that are certified to perform duct testing leakage testing certified by national or state organizations as approved by the building official. The certified individuals must be an independent third-party entity, and may not be employed; or have any financial interest in the company that constructs the structure.

**IECC SECTION R405
SIMULATED PERFORMANCE ALTERNATIVE (PERFORMANCE)**

*IECC Section R405.6.2; changed to read as follows:

R405.6.2 Specific approval. Performance analysis tools meeting the applicable provision of Section R405 shall be permitted to be approved. Tools are permitted to be approved based on meeting a specified threshold for a jurisdiction. The code official shall be permitted to approve tools for a specified application or limited scope. Acceptable performance software simulation tools may include, but are not limited to, REM Rate™, Energy Gauge and IC3. Other performance software programs accredited by RESNET BESTEST and having the ability to provide a report as outlined in R405.4.2 may also be deemed acceptable performance simulation programs and may be considered by the building official.

*IECC Table R406.4; changed to read as follows:

**TABLE R406.4¹
MAXIMUM ENERGY RATING INDEX**

CLIMATE ZONE	ENERGY RATING INDEX
3	65

¹ This table is effective until August 31, 2019.

**TABLE R406.4²
MAXIMUM ENERGY RATING INDEX**

CLIMATE ZONE	ENERGY RATING INDEX
3	63

² The table is effective from September 1, 2019 to August 31, 2022.

TABLE R406.4³
MAXIMUM ENERGY RATING INDEX

CLIMATE ZONE	ENERGY RATING INDEX
3	59

³ This table is effective on or after September 1, 2022.

CHAPTER 5 [RE] – EXISTING BUILDINGS

IECC SECTION R501 GENERAL

**IECC Section R501.6; changed to read as follows:*

R501.6 Historic buildings. No provision of this chapter relating to the construction, repair, alteration, restoration and movement of structures, and change of occupancy shall be mandatory for historic buildings provided a report has been approved by the code official and signed by the owner, a registered design professional, or a representative of the State Historic Preservation Office, or the historic preservation authority having jurisdiction, demonstrating that compliance with that provision would threaten, degrade, or destroy the historic form, fabric, or function of the building.

IECC SECTION R503 ALTERATIONS

**IECC Section R503.1; add a final paragraph to read as follows:*

Compliance methods permitted by this code or former codes may include a variety of above code options. Such above code options may have been used to allow another design parameter to be reduced. In order to insure that such above code upgrades are not later remodeled away, unless it can be shown that the total building after remodel complies with code, all replacement material, equipment and/or systems shall meet the **most restrictive requirement** of:

1. having an equivalent reduction of energy usage as the replaced material, equipment and/or system; or,
2. comply with the prescriptive provisions of this code.

*IECC Section R503.1.1.2; added to read as follows:

R503.1.1.2 Roof insulation above deck. *(life safety)* When the insulation is on top of the roof deck and the insulation is removed, repaired or replaced, new insulation is required to be installed. If the new insulation is to be installed on top of the roof deck, the new insulation shall attempt to meet the R-value as required by this code unless doing so endangers the building by interfering with the roof drainage system. If compliance with this code does so endanger the building, at a minimum the insulation R-value shall be not less than what was removed.

SECTION 3.

Section 7-43 of the Code of the City of Fort Worth (2015) is amended to read as follows:

Sec. 7-43. Effect of conflict with other ordinances.

This article shall be cumulative of all provisions of ordinances of the Code of the City of Fort Worth, Texas (2015), affecting Energy Code provisions, as amended, and shall not repeal any of the provisions of such ordinances, except in those instances where provisions of such ordinances are in direct conflict with the provisions of this ordinance.

SECTION 4.

Section 7-44 of the Code of the City of Fort Worth (2015) is amended to read as follows:

Sec. 7-44. Penalty for violation.

Any person, firm, or corporation violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punishable by a fine not to exceed Two Thousand Dollars (\$2,000.00) for all violations involving fire safety, or public health and sanitation and shall be fined not more than Five Hundred Dollars (\$500.00) for all other violations of this ordinance. Each day or any portion thereof during which any violation of this ordinance occurs or continues shall be deemed a separate offense and upon conviction thereof shall be punishable as herein provided.

SECTION 5.

This article shall be cumulative of all provisions of ordinances of the Code of the City of Fort Worth, Texas (2015), affecting Energy Code provisions, as amended, and shall not repeal any of the provisions of such ordinances, except in those instances where provisions of such ordinances are in direct conflict with the provisions of this ordinance.

SECTION 6.

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

SECTION 7.

Any person, firm, or corporation violating any of the provisions of this ordinance shall be deemed guilty of a misdemeanor and upon conviction thereof shall be punishable by a fine not to exceed Two Thousand Dollars (\$2,000.00) for all violations involving fire safety, or public health and sanitation and shall be fined not more than Five Hundred Dollars (\$500.00) for all other violations of this ordinance. Each day or any portion thereof during which any violation of this ordinance occurs or continues shall be deemed a separate offense and upon conviction thereof shall be punishable as herein provided.

SECTION 8.

All rights and remedies of the City of Fort Worth, Texas are expressly saved as to any and all violations of the previous codes, or any other ordinances affecting construction and fire safety, which have accrued at the time of the effective date of this ordinance: and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such ordinances, same shall not be affected by this ordinance but may be prosecuted until final disposition by the courts.

SECTION 9.

A copy of the 2015 International Energy Conservation Code, together with the local amendments contained in this ordinance, shall be filed in the office of the City Secretary for permanent record and inspection.

SECTION 10.

The Department of Planning and Development of the City of Fort Worth, Texas, is hereby authorized to publish this ordinance in pamphlet form for general distribution among the public, and the operative provisions of this ordinance as so published shall be admissible in evidence in all courts without further proof than the production thereof, as provided in Chapter XXV, Section 3, of the Charter of the City of Fort Worth, Texas.

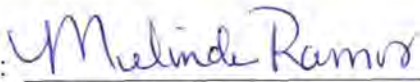
SECTION 11.

The City Secretary of the City of Fort Worth, is hereby directed to publish the caption and Sections 1, 7, 9, 11 and 12 of this ordinance for two (2) days in the official newspaper of the City of Fort Worth, Texas as authorized by Section 2, Chapter XXV of the Charter of the City of Fort Worth, Texas and by Section 52.013 (a) of the Texas Local Government Code.

SECTION 12.

This ordinance shall take effect upon January 1, 2017.

APPROVED AS TO FORM AND LEGALITY:

By: 

Melinda Ramos
Sr. Assistant City Attorney



Mary J. Kayser
City Secretary

Adopted: December 6, 2016

Effective: January 1, 2017

Published: December 18, 2016

City of Fort Worth, Texas
Mayor and Council Communication

COUNCIL ACTION: Approved on 12/6/2016 - Ordinance No. 22517-12-2016, 22518-12-2016, 22519-12-2016, 22520-12-2016, 22521-12-2016, 22522-12-2016, 22523-12-2016 & 22524-12-2016

DATE: Tuesday, December 6, 2016

REFERENCE NO.: G-18892

LOG NAME: 06ADOPT AND AMEND 2015 I-CODES

SUBJECT:

Adopt Ordinances Adopting and Amending the 2015 Editions of the International Building Code, International Residential Code, International Mechanical Code, International Plumbing Code, International Fuel Gas Code, International Existing Building Code, International Energy Conservation Code and the Fort Worth Building Administrative Code and Adopt Ordinance Adopting the 2015 International Fire Code with Local Amendments (ALL COUNCIL DISTRICTS)

RECOMMENDATION:

It is recommended that the City Council adopt the attached eight ordinances which include the following:

1. Adoption of the 2015 International Building Code with local amendments as the Building Code of the City of Fort Worth;
 2. Adoption of the 2015 International Residential Code with local amendments as the Residential Code of the City of Fort Worth;
 3. Adoption of the 2015 International Mechanical Code with local amendments as the Mechanical Code of the City of Fort Worth;
 4. Adoption of the 2015 International Plumbing Code and the 2015 International Fuel Gas Code with local amendments as the Plumbing Code of the City of Fort Worth;
 5. Adoption of the 2015 International Existing Building Code with local amendments as the Existing Building Code of the City of Fort Worth;
 6. Adoption of the 2015 International Energy Conservation Code with local amendments as the Energy Code of the City of Fort Worth;
 7. Adoption of the Fort Worth Building Administrative Code; and
 8. Adoption of the 2015 Internal Fire Code and local amendments.
-

DISCUSSION:

The Fire and Planning and Development Departments have worked to consolidate and coordinate the amendments in their respective Fire and Building Codes into a single action before the City Council. The City of Fort Worth has adopted model codes from the International Code Council (ICC), with local amendments, as the construction codes for the City since 2004. These model codes are reviewed and updated annually through a national code adoption process. Every three years these changes are

codified and published for local adoption. Fort Worth has historically adopted newly published Codes every six years, most recently adopting the 2009 Codes in 2011. The 2015 edition of ICC codes are the latest published version offered for adoption. The State of Texas has adopted the 2015 International Energy Conservation Code (IECC) as the energy code for the State. Planning and Development staff recommends adopting the 2015 International Codes as the construction codes for the City of Fort Worth.

Construction codes change with the development of new products, materials, construction methods, technology and as a result of evaluations of natural and man-made disasters. Adoption of current codes has a positive impact on the City's ISO rating.

The City of Fort Worth local amendments are based on the amendments recommended for regional adoption by the North Central Texas Council of Governments and our local practices. A committee was formed to review the City's local amendments including representatives from the Development Advisory Committee, the Construction Fire Prevention Board of Appeals, the AIA, the Fort Worth Builders Association, FWISD and TEXO the Association of General Contractors. The Development Advisory Committee and the Construction Board of Appeals have been briefed on the proposed amendments. The Construction and Fire Prevention Board of Appeals recommended approval of the adoption of the Codes on November 11, 2016.

The construction code ordinances will have an effective date of January 1, 2017 for all provisions except Section 423 of the International Building Code which will be effective April 1, 2017.

The attached ordinance for the Fire Department reflects transition of the Fort Worth Fire Code to the 2015 International Fire Code (IFC) with Local Amendments. All local amendments recommended for the 2015 IFC have been reviewed by the Fire and Planning & Development Departments and have met the approval of the Construction and Fire Prevention Board of Appeals for recommended adoption at their public hearing on November 11, 2016.

This action impacts ALL COUNCIL DISTRICTS.

This M&C does not request approval of a contract with a business entity.

FISCAL INFORMATION / CERTIFICATION:

The Director of Finance certifies that approval of these recommendations will have no material effect on City funds.

FUND IDENTIFIERS (FIDs):

TO

Fund	Department ID	Account	Project ID	Program	Activity	Budget Year	Reference # (Chartfield 2)	Amount

FROM

Fund	Department ID	Account	Project ID	Program	Activity	Budget Year	Reference # (Chartfield 2)	Amount

CERTIFICATIONS:

Fernando Costa (6122)

Randle Harwood (6101)

Allison Gray (8030)

Originating Department Head:

Additional Information Contact:

IECC®

2015
INTERNATIONAL CODES®

INTERNATIONAL
Energy Conservation
Code®

A Member of the International
Code Family®

 ICC INTERNATIONAL
CODE COUNCIL®

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Secretary's
Office to view
this document