

ORDINANCE NO. 21554-12-2014

AN ORDINANCE AMENDING THE FORT WORTH ELECTRICAL CODE, BY ADOPTING THE 2014 NATIONAL ELECTRICAL CODE, WITH LOCAL AMENDMENTS; AMENDING SECTIONS 11-1 THROUGH 11-4 OF THE CODE OF THE CITY OF FORT WORTH(1986); REGULATING ERECTION, CONSTRUCTION, ENLARGEMENT, ALTERATION, REPAIR, MOVING, REMOVAL, DEMOLITION, CONVERSION, EQUIPMENT, DESIGN, QUALITY OF MATERIALS, USE AND MAINTENANCE OF ELECTRICAL EQUIPMENT IN THE CITY OF FORT WORTH, TEXAS; DEFINING CERTAIN TERMS; ESTABLISHING MINIMUM REQUIREMENTS FOR THE INSTALLATION, ALTERATION OR REPAIR OF ELECTRICAL SYSTEMS; PROVIDING FOR THE ISSUANCE OF PERMITS AND THE COLLECTION OF FEES THEREOF; PROVIDING FOR THE INSPECTION OF SUCH SYSTEMS; REQUIRING AND REGULATING LICENSES AND REGISTRATIONS FOR ELECTRICIANS AND PRESCRIBING THE FEES THEREFOR; PROVIDING A SEVERABILITY CLAUSE; PROVIDING 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.

Section 11-1 of the Code of the City of Fort Worth (1986) is amended to read as follows:

Sec. 11-1. 2014 EDITION OF THE NATIONAL ELECTRICAL CODE ADOPTED.

(a) The Electrical Code of the City of Fort Worth is hereby revised and amended to conform, with certain exceptions as specified below, to the 2014 edition of the National Electrical Code of the National Fire Protection Association (NFPA), and the same as amended is hereby adopted as the City's Electrical Code. One (1) copy of the 2014 National Electrical 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) This code shall serve as the electrical provisions of the *International Residential Code*, as adopted elsewhere.

SECTION 2.

That Section 11-2 of the Code of the City of Fort Worth (1986) is hereby amended to read as follows:

Sec. 11-2. Amendments.

- (a) An Administrative Section, Chapters A through F, is added to read as follows:

ADMINISTRATIVE

Chapter A Scope

SECTION A01 - GENERAL

A01.1 Title. These regulations shall be known as the "Fort Worth Electrical Code," may be cited as such, and will be referred to herein as "this code."

A01.2 Purpose.

(a) **Practical Safeguarding.** The purpose of this code is to provide minimum standards to safeguard life or limb, health, property and public welfare by regulating and controlling the design, construction, installation, quality of materials, location, operation, and maintenance or use of electrical systems and equipment, located within or on public and private buildings and premises except as excluded by Section A01.3(b); and by regulating and licensing those persons who will install or maintain such electrical equipment.

(b) **Adequacy.** This code contains provisions considered necessary for safety. Compliance therewith and proper maintenance is expected to result in an installation essentially in compliance with the minimum standards, but not necessarily efficient, convenient, or adequate for good service or future expansion of electrical use.

(c) **Intention.** This code is not intended as a design specification nor is it an instruction manual for untrained persons.

(d) The purpose of this code is not to create or otherwise establish or designate any particular class or group of persons who will or should be especially protected or benefitted by the terms of this code.

A01.3. Scope.

- (a) **Covered.** This code shall regulate:

1. The design, construction, installation, alteration, repairs, relocation, replacement, addition to, use or maintenance of electrical systems, electrical conductors, electrical equipment,

signaling and communications conductors and equipment, and fiber optic cables and raceways.

2. The installation and alteration of electrical equipment, which shall include electrical conductors, fittings, devices, signs, sign primaries, fixtures, motors, generators, starters, controls, raceways and that part of elevator installations consisting of signal systems, fans, electrical lighting fixtures, illuminated thresholds, feeder conductor and raceways to motor and generator disconnect switches and controllers and all electrical installations in connection with interlocking devices, other than on automatic elevators, located within or on public and private buildings and premises, except as excluded by paragraph (b) below.

3. Registration and licensing of those persons who will install or maintain such electrical equipment.

4. This code shall be used as the electrical provisions of the Residential Code.

(b) Not Covered. This code does not cover:

1. Installations in ships, watercraft other than floating buildings, railway rolling stock, aircraft, or automotive vehicles.
2. Installations underground in mines.
3. The installation and equipment employed by a railway utility in the exercise of its functions as a utility, and located outdoors or in buildings used exclusively for that purpose, but the provisions of this code shall apply to installations and equipment used for light, heat, power, decoration, amusement, and all other purposes located within or on such buildings or premises.
4. Installations by or for communications agencies in connection with the operation of signals or the transmission of intelligence, nor to the employee making such installation by or for such agencies, but the provisions of this code shall apply to installations for heat, decoration, amusement, ventilating equipment, and general lighting not attached to and power not directly used in connection with installations for communications, signals, and the transmission of intelligence.
5. The installation, alteration or repair of electrical equipment installed by or for an electrical supply agency for the use of such agency in the generation, transmission, distribution or metering of electricity when such equipment is located within or on such buildings or premises used by such agency for said purposes, or when such equipment is located on public thoroughfares or legally established or recognized easements;

However, the provisions of this code shall apply to:

- a. all other electrical installations or equipment used for any other purposes not specifically excepted herein and located within or on such buildings or premises; and

- b. electrical distribution in Mobile Home or Manufactured Home Parks and Recreational Vehicle Parks shall be in accordance with Article 110.90 thru 110.92, Article 550.1 and Article 551.1; and
 - c. service entrance conductors that connect directly to the service equipment disconnecting means shall be sized as required by this code.
6. Special radio equipment used exclusively for radio transmissions by persons or organizations licensed to operate by the Federal Communications Commission; however, the provisions of this code shall apply to all electrical equipment used for power supply to radio transmitting equipment.
7. The installation, alteration, or repair of electrical equipment for the operation of signals or the transmission of intelligence, or to installations of communications facilities by or for communications agencies.
8. Any work involved in the manufacturing or testing of electrical equipment or apparatus, except that this exception shall not include any permanent wiring.
9. Installation in mobile dwelling structures, trailers and other structures designed for portability.
10. Installation and maintenance of outdoor security lighting and appurtenances to outdoor security lighting which are owned, operated and maintained by an electric utility and installed on property owned by the utility or for which a written agreement is entered into between the utility and the property owner granting to the utility the right to construct, operate and maintain outdoor security lighting and appurtenances to outdoor security lighting; provided that the utility:
 - a. remains responsible for the safe operations and maintenance of the installation;
 - b. adheres to the provisions of the National Electrical Code or its successor;
 - c. installs the security lighting on utility owned facilities; and,
 - d. complies with all other applicable ordinances, rules and regulations of the City of Fort Worth.
11. Installation, maintenance, and removal of outdoor temporary electrical power facilities that have been approved by the Board which are owned, installed, operated, and maintained by an electrical utility, on property owned by the utility or for which a written agreement is entered into between the utility and the property owner granting the utility the right to install, maintain, operate, and remove the outdoor temporary electric power facilities or on a dedicated utility easement, and used for the purpose of providing temporary electric power during the construction of single family residences; provided that the utility:
 - a. remains responsible for the safe operations and maintenance of the installation;
 - b. adheres to the provisions of the National Electrical Code or its successor;
 - c. complies with all other applicable ordinances, rules and regulations of the City of Fort Worth; and,

- d. terminates service if requested by the Code Official for public safety and health reasons because a known dangerous condition exists.

A01.4 Severability. If a section, subsection, sentence, clause or phrase of this code is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this code.

SECTION A02 - APPLICABILITY

A02.1 General. The provisions of this code shall apply to all matters affecting or relating to structures and premises, as set forth in Section A01. Where, in a specific case, different sections of this code specify different materials, methods of construction or other requirements, the most restrictive shall govern.

A02.2 Existing installations. Except as otherwise provided for in this chapter, electrical systems and equipment lawfully in existence at the time of the adoption of this code may have their use, maintenance or repair continued if the use, maintenance or repair is in accordance with the original design, if no hazard to life, health or property has been created by such electrical system and equipment, and if the electrical system and equipment are maintained in good repair.

A02.3 Maintenance. Electrical systems, equipment, materials and appurtenances, both existing and new, and parts thereof shall be maintained in proper operating condition in accordance with the original design and in a safe, hazard-free condition. Devices or safeguards that are required by this code shall be maintained in compliance with the code edition under which installed. The owner or the owner's designated agent shall be responsible for the maintenance of the electrical systems and equipment. To determine compliance with this provision, the Code Official shall have the authority to require that the electrical systems and equipment be re-inspected.

A02.4 Additions, alterations and repairs. Additions, alterations, renovations and repairs to electrical systems shall conform to that required for new electrical systems and equipment without requiring that the existing electrical systems or equipment comply with all of the requirements of this code. Additions, alterations, renovations and repairs shall not cause existing electrical systems or equipment to become unsafe, hazardous or overloaded.

Minor additions, alterations, renovations and repairs to existing electrical systems and equipment shall be permitted in the same manner and arrangement as was in the existing system, provided that such repairs or replacement are not hazardous and are approved.

A02.5 Change of occupancy. It shall be unlawful to make a change of occupancy which will subject the structure or site to any special provision of this code applicable to the new occupancy without approval of the Code Official. The Code Official shall certify that such structure or site meets the intent of the provisions of law governing installations for the proposed new occupancy and that such change of occupancy does not result in any hazard to the public health, safety or welfare.

No change shall be made in the use or occupancy of any structure or site unless such

structure or site is made to comply with the requirements of this code. Subject to the approval of the Code Official, the use or occupancy shall be permitted to be changed and allowed to be occupied for purposes in other groups without conforming to all the requirements of this code for those groups, provided the new or proposed use is less hazardous, based on life and fire risk, than the existing use.

A02.6 Historic buildings. The provisions of this code relating to the construction, alteration, repair, enlargement, restoration, relocation or moving of buildings or structures shall not be mandatory for existing buildings or structures identified and classified by the state or local jurisdiction as historic buildings when such buildings or structures are judged by the Code Official to be safe and in the public interest of health, safety and welfare regarding any proposed construction, alteration, repair, enlargement, restoration, relocation or moving of buildings.

Exception: Buildings undergoing a change of occupancy.

A02.7 Moved buildings. Electrical systems and equipment that are a part of buildings or structures moved into or within the jurisdiction shall comply with the provisions of this code for new installations.

EXCEPTIONS: The factory installed and inspected systems of:

1. HUD or Texas State approved mobile and manufactured homes.
2. Texas State approved modular homes.
3. Texas State approved industrialized buildings.

A02.8 Referenced codes and standards. The codes referenced herein, when specifically adopted, along with the standards listed in Chapter F shall be considered part of the requirements of this code to the prescribed extent of each 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.

A02.9 Requirements not covered by code. Any requirements necessary for the strength, stability or proper operation of an existing or proposed electrical system, or for the public safety, health and general welfare, not specifically covered by this code, shall be determined by the Code Official.

A02.10 Minimum Building Standards Code. As provided for in Section 7-67, and as further detailed in Sections 7-87, 7-88, 7-89, 7-90 and 7-91 of the City Code, which is more specifically known as the Minimum Building Standards Code, those provisions setting minimum standards that relate to Electrical Code items for buildings and structures shall be considered as part of this code.

Enforcement of these sections may be performed by other departments or divisions of the City of Fort Worth. However, as provisions of this code, final interpretation, appeals of interpretation, requests for variances, etc. shall be handled as described in this code.

SECTION A03 - APPROVAL

A03.1 Modifications. Whenever 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, provided the Code Official shall first find that special individual reason makes the strict letter of this code impractical and that the modification is in compliance with the intent and purpose of this code and does not lessen health, life and fire-safety requirements. The details of action granting modifications shall be recorded and entered in the files of the inspection department.

A03.2 Alternative materials, methods, equipment and appliances. The provisions of this code are not intended to prevent the installation of any material or to prohibit any method of construction not specifically prescribed by this code, provided that any such alternative has been approved by the Code Official.

The Code Official may approve any alternate, provided that the proposed design is satisfactory and complies with 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.

A03.3 Required testing. 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 the jurisdiction.

A03.3.1 Test methods. 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.

A03.3.2 Testing agency. All tests shall be performed by an approved agency.

A03.3.3 Test reports. Reports of tests shall be retained by the Code Official for the period required for retention of public records.

A03.4 Material, equipment and appliance reuse. Materials, equipment, appliances and devices shall not be reused unless such elements have been reconditioned, tested and placed in good and proper working condition and approved.

SECTION A04 - VIOLATIONS

A04.1 Unlawful acts. It shall be unlawful for any person, firm or corporation to erect, construct, alter, repair, remove, demolish or utilize any electrical system or equipment, or cause same to be done, in conflict with or in violation of any of the provisions of this code.

A04.1.1 Unsafe building. Failure to correct an unsafe building as provided for in Sections A04.5, C06.4.1 or C06.4.2 shall constitute a violation of this code.

A04.2 Violation penalties. Any person, firm or corporation violating any of the provisions of this code 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 code. Each day or any portion thereof during which any violation of this code occurs or continues shall be deemed a separate offense and upon conviction thereof shall be punishable as herein provided.

A04.3 Stop work orders. Upon notice from the code official, work on any electrical 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, or to the owner's agent, or to the person doing the work or causing such work to be done. Where an emergency exists, the code official shall not be required to give a written notice prior to stopping the work. Such work shall not resume until authorized by the code official to proceed.

A04.4 Abatement of violation. The imposition of the penalties herein prescribed shall not preclude the legal officer of the jurisdiction from instituting appropriate action to prevent unlawful construction or to restrain, correct or abate a violation, or to prevent illegal occupancy of a building, structure or premises, or to stop an illegal act, conduct, business or utilization of the electrical on or about any premises.

A04.5 Unsafe electrical systems or equipment. Any electrical system or equipment regulated by this code that is unsafe or that constitutes a fire or health hazard, insanitary condition, or is otherwise dangerous to human life is hereby declared unsafe. Any use of an electrical system or equipment regulated by this code constituting a hazard to safety, health or public welfare by reason of improper installation, inadequate maintenance, dilapidation, obsolescence, fire hazard, disaster, damage or abandonment is hereby declared an unsafe use. Any such unsafe equipment is hereby declared to be a public nuisance and shall be abated by repair, rehabilitation, demolition or removal.

When any electrical system or equipment is maintained in violation of this code, and in violation of any notice issued pursuant to the provisions of this section, the code official may institute any appropriate action to prevent, restrain, correct or abate the violation.

All buildings or structures subjected to damage by deterioration or by fire shall be inspected by the code official, and all unsafe wiring or electrical equipment shall be repaired or replaced.

Any work covered or concealed without inspection shall be considered to constitute an unsafe structure. Such consideration as an unsafe structure shall exist every day until the work is inspected and approved as being in compliance with this code. Inspections will not be performed until a valid active permit is obtained in accordance with this code.

A04.5.1 Authority to condemn. Whenever the code official determines that any electrical system or equipment, or portion thereof, regulated by this code has become hazardous to life, health or property or has become insanitary, or is otherwise dangerous to

human life, the code official shall order in writing that such electrical system or equipment either be removed or restored to a safe or sanitary condition. A time limit for compliance with such order shall be specified in the written notice. No person shall use or maintain defective electrical after receiving such notice.

A04.5.2 Authority to order disconnection of utilities. The code official shall have the authority to order disconnection of any energy source or utility service supplied to a building, structure or equipment regulated by this code when it is determined that the equipment or any portion thereof has become hazardous or insanitary. Written notice of such order to disconnect service and the causes therefor shall be given within 24 hours to the owner and occupant of such building, structure or premises, provided, however, that in cases of immediate danger to life or property, such disconnection shall be made immediately without such notice. If not notified prior to disconnecting, the owner or occupant of the building, structure or service systems shall be notified in writing, as soon as practical thereafter.

A04.5.3 Connection after order to disconnect. No person shall make connections from any energy, fuel, power supply or water distribution system or supply energy, fuel or water to any equipment regulated by this code that has been disconnected or ordered to be disconnected by the code official or the use of which has been ordered to be discontinued by the code official until the code official authorizes the reconnection and use of such equipment.

Chapter B

ORGANIZATION AND ENFORCEMENT

SECTION B01 - ORGANIZATION

B01.1 Code Official. Whenever the term "code official" is used in this code, it shall be construed to mean the Building Official. The Building Official shall not be removed from office except for cause and after full opportunity to be heard on specific and relevant charges. For the purpose of enforcement, the term code official shall include his authorized representative(s).

B01.2 Deputies. In accordance with the prescribed procedures of this jurisdiction, the code official shall have the authority to appoint deputy code officials, other related technical officers, inspectors, and other employees

B01.3 Department having jurisdiction. Unless otherwise provided for by law, the office of the code official shall be part of the Planning and Development Department.

B01.4 Restriction of employees. An official or employee connected with the Planning and Development Inspection Section shall not be engaged in or directly or indirectly connected with the furnishing of labor, materials or appliances for the construction, alteration or maintenance of a building; and such officer or employee shall not engage in any work that conflicts with official duties or with the interests of the department.

Further no official or employee shall be permitted to work for, or be connected with, any electrical contractor, electrical manufacturer or wholesale supply company, or do any electrical work while employed as an inspector by the city.

B01.5 Liability. The code official charged with the enforcement of this code, acting 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 personally liable for damages that may accrue to persons or property as a result of an act or by reason of an act or omission in the discharge of such duties. A suit brought against the code official or employee because of such act or omission performed by the code official or employee in the enforcement of any provision of such codes or other pertinent laws or ordinances implemented through the enforcement of this code or enforced by the code enforcement agency shall be defended by this jurisdiction until final termination of such proceedings and any judgment resulting therefrom shall be assumed by this jurisdiction.

The liability exemption and defense protection provided in this section are not extended to Third Party Companies, nor their employees.

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.

SECTION B02 - DUTIES AND POWERS OF THE CODE OFFICIAL

B02.1 General. The code official shall enforce all of the provisions of this code and shall act on any question relative to the installation, alteration, repair, maintenance or operation of all electrical systems, devices and equipment except as otherwise specifically provided for by statutory requirements or as provided for in Sections B02.2 through B02.9.

The code official shall have the power to render interpretations of this code as may be deemed necessary in order to clarify the application of the provisions of this code. Such interpretations shall be in conformity with the intent and the purpose of this code.

B02.2 Rule-making authority. The code official shall have authority as necessary in the interest of public health, safety and general welfare to adopt and promulgate rules and regulations to interpret and implement the provisions of this code to secure the intent thereof and to designate requirements applicable because of local climatic or other conditions. Such rules shall not have the effect of waiving requirements specifically provided for in this code, or of violating accepted engineering practice involving public safety.

B02.3 Applications and permits. The code official shall receive applications and issue permits for the installation and alteration of electrical systems, inspect the premises for which such permits have been issued, and enforce compliance with the provisions of this code.

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

B02.4 Inspections. The code official shall make all of the required inspections, or shall accept reports of inspection by approved agencies or individuals. All reports of such inspections shall be in writing and be certified by a responsible officer of such approved agency or by the responsible individual. The code official is authorized to require expert opinion, as deemed necessary, to report upon unusual technical issues that arise, at no expense to the jurisdiction.

B02.3 Right of entry. Whenever it is necessary to make an inspection to enforce the provisions of this code, or whenever the code official has reasonable cause to believe that there exists in a building or upon any premises any condition or violation of this code which make the building or premises unsafe, insanitary, dangerous or hazardous, the code official shall have the authority to enter the building or premises at all reasonable times to inspect the same or to perform the duties imposed upon the code official by this code. If such building or premises is occupied, the code official shall present credentials to the occupant and request entry. If such building or premises is unoccupied, the code official shall first make a reasonable effort to locate the owner or other persons having charge or control of the building or premises and request entry. If entry be refused, the code official shall have recourse to every remedy provided by law to secure entry.

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

When the code official has first obtained a proper inspection warrant or other remedy provided by law to secure entry, no owner, occupant or persons having charge, care or 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 electrical inspectors in the discharge of their duties under this code.

B02.6 Identification. The code official shall carry proper identification when inspecting structures or premises in the performance of duties under this code.

B02.7 Notices and orders. The code official shall issue all necessary notices or orders to ensure compliance with this code.

B02.8 Department records. The Planning and Development Department shall keep official records of applications received, permits and certificates issued, fees collected, reports of inspections, and notices and orders issued. Such records shall be retained in the official records for the period required for the retention of public records.

B02.9 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.

SECTION B03 - BOARD OF APPEALS

B03 Applications for appeals shall be made to the Construction and Fire Prevention Board of Appeals. (See the Building Code.) All references to the "Board" shall be deemed to refer to the Construction and Fire Prevention Board of Appeals.

Chapter C

PERMITS AND INSPECTIONS

SECTION C01 - PERMITS

C01.1 When required. Any owner, authorized agent, individual or contractor who desires to construct, enlarge, alter, repair, move, demolish or change the occupancy of a building or structure, or to erect, install, enlarge, alter, repair, remove, convert or replace any electrical system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application to the code official and obtain the required permit for the work.

A separate permit shall be obtained for each building or structure.

A Building Code Ordinance Inspection shall be required to inspect and approve power to existing mobile homes in mobile home parks where the name changes on the electric utility account except when the account is being transferred from an individual to the park's name.

C01.1.1 Unlawful Wiring. No permit shall be issued for installing, altering, extending or replacing any electrical wiring or equipment on any building, structure or premise, if any unlawful electrical wiring or equipment exists on the same premises, until a permit to correct such conditions is first obtained and all necessary corrections are made.

C01.2 Exempt work. The following work shall be exempt from the requirement for a permit:

1. Portable motors or other portable appliances energized by means of a cord or cable having an attachment plug end to be connected to an approved receptacle when that cord or cable is permitted by this code.
2. Reinstallation of attachment plug receptacles, but not the outlets thereof.
3. Repair or replacement of any overcurrent device of the required capacity in the same location.
4. Repair or replacement of electrodes or transformers of the same size and capacity for signs or gas tube systems.
5. Taping joints.

6. Removal of electrical wiring.
7. Temporary wiring for experimental purposes in suitable experimental laboratories.
8. Electrical wiring, devices, appliances, apparatus or equipment, other than signs, operating at less than 25 volts and not capable of supplying more than 50 watts of energy.
9. Low-energy power, control and signal circuits of Classes II and III as defined in this code.
10. Electrical maintenance work, as defined in this code that is performed by an individual properly authorized to do such work under Section C02.

Exemption from the permit requirements of this code shall not be deemed to grant authorization for any work to be done in violation of the provisions of this code or any other laws or ordinances of this jurisdiction.

SECTION C02 - WHOM PERMITS MAY BE ISSUED TO - WHO MAY DO THE WORK

C02.1 - Whom permits may be issued to.

C02.1 General. No permit shall be issued to any person or contractor to do or cause to be done any work regulated by this code, except to a person or contractor as listed in Sections C02.1.1, C02.1.2, C02.1.3 or C02.1.4

C02.1.1. Fort Worth Permit Master Electrician. Permits may be issued to a person holding a valid, unexpired and unrevoked Fort Worth Permitting Master Electricians License until January 1, 2016. After January 1, 2016 the City of Fort Worth will only issue permits to those meeting the requirements of Sections C02.1.2, C02.1.3 or C02.1.4.

C02.1.2 State of Texas Electrical Contractor. A State of Texas Electrical Contractor as follows:

- a. must be in possession of a current and valid State Electrical Contractor's License;
- b. must have a current and active registration with the City of Fort Worth as an Electrical Contractor;
- c. must designate a State of Texas Master Electrician to act as the Master of Record who must be in possession of a current and valid State of Texas Master Electrician License.

C02.1.3 Homestead owner. Permits may be issued to a property owner who wishes to do electrical work in a building owned and occupied by him as his homestead. This provision only permits the homeowner to work on that part of the electrical system that occurs after, but does not include, the first main breaker behind the electrical meter. The term "to do electrical work" shall be construed to mean work actually done personally by the owner.

C02.1.4 Homestead Master or Journeyman. Permits may be issued to a property owner who holds a current Master or Journeyman Electrician License who wishes to do

electrical work in a building owned and occupied by him as his homestead. This provision allows any electrical work on the homestead property that would normally be permitted by a Permit Master Electrician. The term "to do electrical work" shall be construed to mean work actually done personally by the owner.

C02.2 - Who may do the work.

C02.2 General. It shall be unlawful for any person to do or cause to be done any electrical work within the City of Fort Worth except as provided in this section. Doing work, other than what is authorized by this section, is considered a violation by the worker as well as the Master and/or Contractor.

C02.2.1. Fort Worth licensees until January 1, 2016.

C02.2.1.1 Master Electrician. A Master Electrician, also referred to as a **Permit Master**, may contract for and engage in the business of installing, repairing, or replacing electrical wiring or equipment of any nature on or in buildings or structures other than signs. The Master Electrician may employ, direct and supervise Journeyman Electricians, Residential Wireman Electricians, Maintenance Electricians, Residential Maintenance Electricians, helpers, and apprentice electricians.

Exception: The Master Electrician may install, repair, or replace the primary wiring on signs.

A Master Electrician, also referred to as a **Non Permit Master**, who does not wish to engage in the business, but only wishes to work in the trade, shall pay the license fees as required for a Master but shall adhere to the provisions of this code as for a Journeyman Electrician.

C02.2.1.2 Journey Electrician. A Journeyman Electrician shall be able to perform any type of electrical work under the supervision of a Master Electrician; or to perform any type of sign work as outlined by the ordinances of the City and under the supervision of a Master Sign Electrician, but in no case shall a Journeyman Electrician contract for or engage in the business of electrical work of any nature, nor shall he perform electrical work of any nature, except under the supervision of either a Master Electrician or a Master Sign Electrician. A Journeyman Electrician shall be able to lay out work for and to supervise helper or apprentice electricians, but shall not be able to employ same.

A Journeyman Electrician may perform electrical maintenance work, as defined in this code.

C02.2.1.3 Master Sign Electrician. A Master Sign Electrician shall be able to contract for and engage in the business of manufacturing electrical signs, luminous gas or electric discharge signs and luminous gas or electric discharge outline lighting from the secondary wiring power source or transformer in the sign and to employ and supervise Journeyman Sign Electricians and Journeyman Electricians in the performance of such work on such signs and/or outline lighting.

C02.2.1.4 Journeyman Sign Electrician. A Journeyman Sign Electrician shall be able to perform any type of sign and/or outline lighting work of a Master Sign Electrician, provided that such work must be performed under the supervision of a licensed Master Sign Electrician.

C02.2.1.5 Residential Wireman Electrician. A Residential Wireman Electrician shall be able to do electrical work under the supervision of a Master Electrician in one- and two-family dwellings only.

C02.2.1.6 Maintenance Electrician. A Maintenance Electrician shall be able to perform electrical maintenance work as defined in this code. A maintenance electrician is not allowed to do installations or alterations.

Nothing in this section shall be construed to limit:

1. The right of a Master Electrician to perform such electrical maintenance work, or to limit such work being performed by a Journeyman Electrician under the supervision, direction, or control of a Master Electrician, or to prohibit a Helper and/or Apprentice from working under the direct personal and constant supervision of a Maintenance Electrician.

This shall not prohibit a service company from doing "Electrical Maintenance" with individuals possessing a Maintenance License or Residential Maintenance License on a contract basis, provided the company has a Permit Master Electrician. All maintenance work as defined herein shall only be performed by Maintenance Electricians or Residential Maintenance Electricians, as their licenses permit, or by individuals supervised on the site by such electricians, unless a Master or Journeyman electrician is on site as required elsewhere in this code.

2. The right of a Licensed Mechanical Contractor to perform such electrical maintenance work or to limit such work being performed by an employee of the Mechanical Contractor provided that the Mechanical Contractor and the employee of the Mechanical Contractor are Licensed Maintenance Electricians.
3. The electrical maintenance of heating, ventilating, air conditioning and refrigeration equipment by a service contractor provided such service contractor holds a valid Maintenance Electrician License and performs such work only within the heating, ventilation, air conditioning, and refrigeration equipment.
4. The electrical maintenance of specialized equipment by a manufacturer of equipment provided those persons that perform such electrical maintenance work hold a valid Maintenance Electrician License.
5. The right of a homeowner from performing electrical maintenance work on his residence.

C02.2.1.7 Maintenance Electrician Trainee. A Maintenance Electrician Trainee shall be able to perform electrical maintenance work, as defined in this code, when employed by and under the supervision of a Maintenance Electrician who shall be responsible for his

work.

C02.2.1.8 Residential Maintenance Electrician. A Residential Maintenance Electrician shall be able to perform electrical maintenance work as defined in this code, and in accordance with the provisions as described for a Maintenance Electrician under section C02.2.1.6, except that the following restrictions also apply:

1. All work shall be limited to residential properties only; specifically, one- and two-family dwellings and apartment complexes. This license does not apply to motels, hotels, assisted living facilities, etc.
2. All work shall be limited to 480 volts or less.
3. All work shall be limited to the property or properties owned or operated by the direct employer of the residential maintenance electrician except as described in the definition of Electrical Maintenance Work.

C02.2.1.9 Helper or Apprentice. A Helper or Apprentice electrician may perform electrical work only when the work is laid out for him and supervised by a Master Electrician, a Master Sign Electrician, a Journeyman Electrician, a Journeyman Sign Electrician, a Residential Wireman Electrician, Maintenance Electrician, or a Residential Maintenance Electrician.

The supervising Master Electrician, Master Sign Electrician, Journeyman Electrician, Journeyman Sign Electrician, Residential Wireman Electrician, Maintenance Electrician, or Residential Maintenance Electrician shall be on the job site.

C02.2.2. State of Texas licensees. Individuals in possession of a State of Texas license may perform work as provided in this section. For work in the City of Fort Worth, the following provisions and limitations shall be applicable to State Licensees.

The following definitions provided by the State shall be applicable to these provisions concerning State Licensees. When the term appears in *italics* form in this ordinance, it shall mean the definitions listed below.

Electrical work means any labor or material used in installing, maintaining, or extending an electrical wiring system and the appurtenances, apparatus, or equipment used in connection with the use of electrical energy in, on, outside, or attached to a building, residence, structure, property, or premises. The term includes service entrance conductors as defined by the National Electrical Code.

Electrical sign work means any labor or material used in manufacturing, installing, maintaining, extending, connecting or reconnecting an electrical wiring system and its appurtenances, apparatus or equipment used in connection with signs, outline lighting, awnings, signals, light emitting diodes, and the repair of existing outdoor electric discharge lighting. This also includes the installation of an electrical service integral to an isolated sign and/or outline lighting installation.

Electrical maintenance work means the replacement, or repair of existing electrical appurtenances, apparatus, equipment, machinery, or controls used in connection with the use of electrical energy in, on, outside, or attached to a building, residence, structure, property, or premises. All replacements or repairs must be of the same rating and type as the existing installation. No improvements may be made that are necessary to comply with applicable codes. *Electrical maintenance work* does not include the replacement of any raceways, conductors, disconnecting means, or service feeder components. It also does not include the installation of any new electrical appurtenances, apparatus, equipment, machinery, or controls beyond the scope of any existing electrical installation.

1. Master Electrician may:
 - a. On behalf of a Contractor, perform all *electrical work*;
 - b. Provide on-site or general supervision of an electrician or other electrical workers;
 - c. Serve as Master of Record for registered Electrical Contractor or registered Electrical Sign Contractor.
2. Master Sign Electrician may:
 - a. On behalf of an Electrical Sign Contractor, perform *electrical sign work*. Such electrical work shall only include the electrical components of the sign up to but not including the disconnecting means. When the sign is a stand alone detached sign, with its own isolated electrical service, such work may include the installation of the electrical service.
 - b. Provide on-site or general supervision of an electrician or other electrical workers in the performance of allowable electrical sign work.
 - c. Serve as Master of Record for registered Electrical Sign Contractor.
3. Journeyman Electrician may:
 - a. Under the general supervision of a Master Electrician, on behalf of an Electrical Contractor, perform *electrical work*;
 - b. Under the general supervision of a Master Electrician or Master Sign Electrician, perform *electrical sign work*;
 - c. Provide on-site supervision of other electrical workers.
4. Journeyman Sign Electrician may:
 - a. Under the general supervision of a Master Electrician or Master Sign Electrician, on behalf of an Electrical Sign Contractor, perform *electrical sign work*;
 - b. Provide on-site supervision of other electrical sign workers.
5. Residential Wireman may:
 - a. Under the general supervision of a Master Electrician, on behalf of an Electrical Contractor, perform *electrical work* limited to single family and multifamily dwellings not exceeding four stories.

Such work shall be limited to the residential units, their connected private accessory garages, and common corridors/breezeways serving those units. It does not include public common areas or commercial portions of the structure or building.

- b. Provide on-site supervision of other residential electrical workers.
6. Maintenance Electrician may: Under the general supervision of a Master Electrician,

- on behalf of an electrical contractor, perform *electrical maintenance work*.
7. **On-site supervision.** In the performance of *electrical work*, on-site supervision shall be provided for any electrical worker not in possession of a valid Master or Journeyman license.

In the performance of *electrical sign work*, on-site supervision shall be provided for any electrical sign worker not in possession of a valid Master Electrician, Master Sign, Journeyman Electrician or Journeyman Sign license.

On-site supervision shall mean, on the job site at all times electrical or electrical sign work, as allowed above, is in progress.

C02.2.3 Homestead owner. A homestead owner shall be able to perform work on his homestead property as provided for in sections C02.1.3 and C02.1.4.

SECTION C03 - APPLICATION FOR PERMIT

C03.1 Application. Any person legally entitled to apply for and receive a permit shall make application on forms provided for that purpose. Every such application shall:

1. Identify and describe the work to be covered by the permit for which application is made.
2. Describe the land on which the proposed work is to be done by address and by legal description, or similar description, that will readily identify and definitely locate the proposed building or work.
3. Indicate the use or occupancy for which the proposed work is intended when deemed necessary.
4. Be accompanied by plans, diagrams, computations and specifications and other data as required in Section C03.2.
5. Be signed by the applicant or an authorized agent of the applicant.

Exception: Applications made verbally by phone by registered individuals with a valid charge account.

6. Give such other data and information as may be required by the code official.

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

C03.2 Plans and specifications. Plans, specifications, engineering calculations, diagrams, soil investigation reports, special inspection and structural observation programs and other data shall constitute the submittal documents and shall be submitted in one or more sets with each application for a permit. The plans shall indicate all necessary information required, including but not limited to the following:

1. Calculated loads.
2. Main and feeder sizes.

3. Maximum short circuit current available at each point of application of each protective device used on the project.
4. Electrical panel locations and clearances.

When such plans are not prepared by an architect or engineer, the code official may require the applicant submitting such plans or other data to demonstrate that state law does not require that the plans be prepared by a licensed architect or engineer. The code official may require plans, computations and specifications to be prepared and designed by an engineer or architect licensed by the state to practice as such even if not required by state law.

Exception: The code official may waive the submission of plans, calculations, construction inspection requirements and other data if it is found that the nature of the work applied for is such that reviewing of plans is not necessary to obtain compliance with this code.

C03.3 Information on plans and specifications. Plans and specifications shall be drawn to scale and submitted electronically or upon substantial paper or cloth and 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 all relevant laws, ordinances, rules and regulations.

Plans for building of other than Group R, Division 3 and Group U Occupancies shall indicate how required structural and fire-resistive integrity will be maintained where penetrations will be made for electrical and similar systems.

C03.4 Architect or engineer of record. When it is required that documents be prepared by an architect or engineer, the code official may require the owner to engage and designate on the permit application an architect or engineer who shall act as the architect or engineer of record. If the circumstances require, the owner may designate a substitute architect or engineer of record who shall perform all of the duties required of the original architect or engineer of record. The code official shall be notified in writing by the owner if the architect or engineer of record is changed or is unable to continue to perform the duties.

The architect or engineer of record shall be responsible for reviewing and coordinating all submittal documents prepared by others, including deferred submittal items, for compatibility with the design of the building.

C03.5 Deferred submittals. For the purpose of this section, deferred submittals are defined as those portions of the design that are not submitted at the time of the application and that are to be submitted to the code official within a specified period.

Deferral of any submittal items shall have prior approval of the code official. The architect or engineer of record shall list the deferred submittals on the plans and shall submit the deferred submittal documents for review by the code official.

Submittal documents for deferred submittal items shall be submitted to the architect or engineer of record who shall review them and forward them to the code official with a notation

indicating that the deferred submittal documents have been reviewed and that they have been found to be in general conformance with the design of the building. The deferred submittal items shall not be installed until their design and submittal documents have been approved by the code official.

C03.6 Expiration of plan review. Applications for which no permit is issued within 180 days following the date of application shall expire by limitation, and plans and other data submitted for review may thereafter be returned to the applicant or destroyed by the code official.

The code official may extend the time for action by the applicant for a period not exceeding 180 days on request by the applicant showing that circumstances beyond the control of the applicant have prevented action from being taken. No application shall be extended more than once. In order to renew action on an application after expiration, the applicant shall resubmit plans and pay a new plan review fee.

SECTION C04 - PERMIT ISSUANCE

C04.1 Issuance. The application, plans, specifications, computations and other data filed by an applicant for a permit shall be reviewed by the code official. Such plans may be reviewed by other departments of this jurisdiction to verify compliance with any applicable laws under their jurisdiction. If the code official finds that the work described in an application for a permit and the plans, specifications and other data filed therewith conform to the requirements of this code and other pertinent laws and ordinances, and that the fees specified in Section C05 have been paid, the code official shall issue a permit therefor to the applicant.

Exception: When plan review is performed by a Third Party Organization as specified in Section C08, the Code Official, at his discretion, may only review what he deems necessary to insure a quality control of the review already performed.

When the code official issues the permit where plans are required, the code official shall endorse in writing or stamp the plans and specifications **APPROVED**. Such approved plans and specifications shall not be changed, modified or altered without authorization from the code official, and all work regulated by this code shall be done in accordance with the approved plans.

The code official may issue a permit for the construction of part of an electrical system before the entire plans and specifications for the whole building or structure have been submitted or approved, provided adequate information and detailed statements have been filed complying with all pertinent requirements of this code. The holder of a partial permit shall proceed without assurance that the permit for the entire building or structure will be granted.

C04.2 Withholding of permits. The code official is authorized to withhold permits to any person for the reasons set forth herein upon written notice to such person. The determination of the code official may be appealed to the Board as provided in Section B03.

The code official is authorized to withhold the issuance of electrical permits to:

1. any person until such time as the electrical for which a permit was previously issued has been completed or is being performed in an efficient manner in a reasonable length of time.
2. any person who is delinquent in the payment of fees owed the City of Fort Worth.
3. any person who has performed previous jobs which remain in violation of this code.

C04.3 Validity. The issuance of a permit or approval of construction documents shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of other ordinance of the jurisdiction. No permit presuming to give authority to violate or cancel the provisions of this code shall be valid.

The issuance of a permit based upon construction documents and other data shall not prevent the code official from thereafter requiring the correction of errors in said construction documents and other data or from preventing building operations being carried on thereunder when in violation of this code or of other ordinances of this jurisdiction.

C04.4 Expiration. Every permit issued by the code official under the provisions of this code shall expire by limitation and become null and void if the work authorized by such permit is not commenced within 180 days from the date of such permit, or if the work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days. Before such work can be recommenced, a new permit shall be first obtained and the fee therefor shall be one-half the amount required for a new permit for such work, provided no changes have been made or will be made in the original construction documents for such work, and provided further that such suspension or abandonment has not exceeded one year. In order to renew action on a permit after expiration, the permittee shall pay a new full permit fee.

C04.5 Extensions. Any permittee holding an unexpired permit shall have the right to apply for an extension of the time within which the permittee will commence work under that permit when work is unable to be commenced within the time required by this section for good and satisfactory reasons. The code official shall extend the time for action by the permittee for a period not exceeding 180 days if there is reasonable cause. No permit shall be extended more than once.

C04.6 Suspension or revocation of permit. The code official may, in writing, suspend or revoke a permit issued under the provisions of this code whenever the permit is issued in error or on the basis of incorrect information supplied, or in violation of any ordinance or regulation or any of the provisions of this code.

C04.7 Administrative hold. Any administrative discrepancy including but not limited to, delinquency in payments, returned checks, failure to pay for reinspection, investigation or registration fees, and failure to keep registration, insurance or bond up-to-date, may result in a hold being placed on issuance of permits and performance of inspections of existing permits until the administrative discrepancy is corrected. For the purpose of this section, the term "up-to-date" shall mean that whenever any of these items is required by this or any other code to obtain a permit covered by this code, it shall be maintained current and in effect until the permit is finalized.

C04.8 Retention of plans. One set of approved plans, specifications and computations shall be retained by the code official until final approval of the work covered therein. One set of approved construction documents shall be returned to the applicant, and said set shall be kept on the site of the building or work at all times during which the work authorized thereby is in progress.

C04.9 Job abandonment. If, after a permit is issued under the provisions hereof, the applicant abandons the job, becomes incapacitated or his/her services are terminated prior to final inspection and approval thereof by the code official and before the permit has expired, the applicant or his lawful/legal representative shall immediately notify the office of the code official in writing. Upon such notification, the code official shall immediately have an inspection made of the work completed to that time, and may revoke the outstanding permit and require that a new permit with the payment of fees be obtained before the work is allowed to resume.

SECTION C05 - FEES

C05.1 General. Fees shall be assessed in accordance with the provisions of this section or shall be as set forth in the fee schedule adopted by this jurisdiction.

C05.2 Permit fees. The fee for each permit shall be as set forth in Table C05.2.

Any person obtaining a permit application required by this code shall, at the time of filing, pay a permit and a non-refundable application fee as required by this section for the installation, relocation or replacement of any of the listed items.

Exceptions: 1. Where the fees for new structures and additions to structures have been collected on a building permit, the permit fee is not required but the permit application shall be filed by the person doing the work before work is commenced.

2. Where these fees are being invoiced monthly and the account is past due, a penalty and/or interest charge as prescribed by the jurisdiction shall be assessed. The above assessed fee and delinquent payment shall be paid before additional permits will be issued or additional inspections performed.

3. Buildings or structures owned and occupied by a Federal, State, or County entity on property owned by the Federal, State, or County entity shall be exempt from the permit fees. This exception does not apply to public school districts or county community colleges.

4. Work by non-City personnel on property under the control of the City of Fort Worth shall be exempt from the permit fees only if the work is for action under a contract approved by City Council with notes in the contract packages stating the fee is waived.

5. Work by City personnel on property under the control of the City of Fort Worth shall be exempt from the permit fees only if the application is accompanied by a copy of the work order for the project.

6. When the project is to be inspected by an approved third party organization as described in Section C08, the permit fee shall be reduced by multiplying the sum by 25% (0.25). The resulting amount will be calculated to the penny with no rounding for the tenth of a penny figure.

Exemption or reduction of the permit fees under this section shall not waive the requirements to pay a full investigation fee for doing work without a permit as required under Section C05.3.

**Table C05.2
Schedule of Fees**

Administrative

1. CFPBOA Application Fee					
(1st item per address)					\$200.00
(Each additional item per address)					30.00
2. Permit Application Fee					25.00
3. Record Change Fee (per record or permit)					25.00
4. Reciprocal Letters					25.00
5. Business Verification Letters.					25.00
6. Temporary Power Letters					33.00

Permit items*

LIGHT OUTLETS, FIXTURES, SWITCHES, RECEPTACLES

Up to 100	\$.41 each
All over 10034 each

FIXED APPLIANCES

Ceiling Fan	1.13
Vent Fan	1.13
Smoke Detector	1.13
Bath Heater	1.13
Disposal	1.13
Compactor	1.13
Dishwasher	1.13
Washing Machine	1.13
Water Heater	2.27
Dryer	2.27
Range	2.27
Air Conditioner - 3 to 5 ton	4.62
Air Conditioner - over 5 ton to	
7 1/2 ton	7.45
Air Conditioner - over 7 1/2 ton	14.93
Heating Unit (gas)	2.27
Heating Unit (electric)77 per KW

MOTORS

1 to 3 hp	2.27
Over 3 to 5 hp	4.62
Over 5 to 7 1/2 hp	7.45
Over 7 1/2 hp	14.93

TRANSFORMERS, GENERATORS, AND WELDERS

0 to 10 KW	4.62
Over 10 KW to 20 KW	7.45
Over 20 KW	14.93
Welders	4.62

SERVICES and SUBPANELS

60 amp to 100 amp	14.93
Over 100 amp to 150 amp	22.05
Over 150 amp	29.88

MISCELLANEOUS

Swimming pools	42.69
Construction pole	22.05
Sign connections, each	7.10
New mobile home hookups**	32.95
Submeters (buildings, leases, apts. etc.)	15.65
Electrical Fences	170.00

*When inspections are performed by third party, the permit fee shall be reduced by multiplying the sum by 25% (0.25).

The resulting amount will be calculated to the penny with no rounding for the tenth of a penny figure.

**A Building Code Ordinance Inspection shall be required to inspect and approve power to existing mobile homes in mobile home parks where the name changes on the electric utility account except when the account is being transferred from an individual to the park's name.

Other Inspections and Fees

1. Inspections outside of normal business hours (minimum of two hours)	\$75.00 per hour
2. Reinspection fee assessed under provisions of C07 (e)	\$27.50
3. Inspections for which no fee is specifically indicated (minimum charge - one-half hour)	\$38.00 per hour
4. Additional plan review required by changes, additions or revisions to plans (minimum charge - one-half hour)	\$38.00 per hour
5. Inspections outside of city limits (commercial)	\$49.50 ¹ per inspector
(residential)	\$66.00 ¹ total
6. Failing to call for final inspections	\$27.50

¹ Or \$33.00 per hour, whichever is greater.

C05.3 Investigation fees: Work without a permit.

C05.3.1 Investigation. Whenever any work for which a permit is required by this code has been commenced without first obtaining said permit, a special investigation shall be made before a permit may be issued for such work.

Exceptions: 1. This provision shall not apply to emergency work when it shall be proved to the satisfaction of the code official that such work was urgently necessary and that it was not practical to obtain a permit therefore before the commencement of the work. In all cases, a permit must be obtained as soon as it is practical to do so, and if there be an unreasonable delay in obtaining such permit, an investigation fee as herein provided shall be charged.

2. The investigation fee required shall be charged for work for which an inspection has been requested and no permit has been obtained.

C05.3.2 Fee. An investigation fee, in addition to the permit fee, shall be collected whether or not a permit is then or subsequently issued. The investigation fee shall be equal to the amount of the permit fee required by this code. The minimum investigation fee shall be the same as the application fee set forth in Table C05.2. The payment of such investigation fee shall not exempt any person from compliance with all other provisions of this code nor from any penalty prescribed by law.

Use of the third party plan review or inspection option, will not reduce or lower the investigation fee required by this section.

The applicant may appeal the amount of an investigation fee to the city council by filing a written appeal showing the reason why the fee should be lowered. The city council may, upon a finding that the investigation fee is unreasonable based upon the facts presented, reduce the investigation fee, but in no case may the fee be reduced to less than the actual investigation costs incurred by the city.

C05.4 Change of record. Any request for a record change, or any mistake made by an applicant that requires a record change, including but not limited to name or address changes, whether computer or paper record, must be requested in writing by the original applicant with a fee as specified in Table C05.2.

Exceptions: 1. For record changes that affect the permit fee, such as adding equipment, fixtures or square footage, the code official may require a separate permit for the extra items with the appropriate fees.

2. The fee will not be required for those applicants meeting exception 5 of Section C05.2.

C05.5 Fee Refunds. The Director of Planning and Development or his designee may authorize the refunding of any fee paid hereunder which was erroneously paid or collected. Where work for which a permit has been issued does not commence, and a request is made for a cancellation of such permit within a 60-day time limit, the permit fee may be returned, upon request, minus an administration charge of five dollars (\$5.00). After the 60 day time limit, no fee shall be returned.

Exceptions: 1. When the investigation fee of Section C05.3 has been collected, it shall not be refunded unless paid by another party.

2. No refund will be given for the application fee.

SECTION C06 - INSPECTIONS

C06.1 General. All electrical systems for which a permit is required by this code shall be inspected by the code official. No portion of any electrical system shall be concealed until inspected and approved. Neither the code official nor the jurisdiction shall be liable for expense entailed in the removal or replacement of material required to permit inspection. The holder of the permit shall be responsible for the scheduling of such inspections. Electrical systems

regulated by this code shall not be connected to energy supply until authorized by the code official.

Exceptions: 1. The requirements of this section shall not be considered to prohibit the operation of any equipment installed to replace existing equipment serving an occupied portion of the building in the event a request for inspection of such equipment has been filed with the Code Official not more than 72 hours after such replacement work is completed, and before any portion of such equipment is concealed by any permanent portion of the building.

2. When approved by the Code Official, the inspection process as required by this code may be performed by an approved Third Party Organization as specified in Section C08.

C06.1.1 Under ground inspection shall be made after trenches or ditches are excavated and bedded, piping installed, and before any backfill is put in place. When excavated soil contains rocks, broken concrete, frozen chunks and other rubble that would damage or break the piping or cause corrosive action, clean backfill shall be on the job site.

C06.1.2 Rough-in inspection shall be made after the roof, framing, fire blocking, fire stopping, draft stopping and bracing are in place and all ducting and other components to be concealed are complete, and prior to the installation of wall or ceiling membranes.

C06.1.3 Final inspection shall be made after the building is complete, all electrical systems are in place and properly connected, and the structure is ready for occupancy.

Approval as a result of an inspection shall not be construed to be an approval of a violation of the provisions of this code or of other ordinances of this jurisdiction. Inspections presuming to give authority to violate or cancel provisions of this code or of other ordinances of the jurisdiction shall not be valid.

C06.2 Other inspections. In addition to the called inspections specified above, the code official may make or require other inspections of any electrical work to ascertain compliance with the provisions of this code and other laws which are enforced.

C06.3 Testing. Electrical systems shall be tested when required by the code official. Tests shall be made by the permit holder and observed by the code official.

C06.3.1 New, altered, extended or repaired systems. New electrical systems and parts of existing systems, which have been altered, extended or repaired, shall be tested when required by the code official.

C06.3.2 Equipment, material and labor for tests. All equipment, material and labor required for testing an electrical system or part thereof shall be furnished by the permit holder.

C06.3.3 Reinspection and testing. Where any work or installation does not pass any initial test or inspection, the necessary corrections shall be made to comply with this code.

The work or installation shall then be resubmitted to the code official for inspection and testing.

C06.4 Inspection requests. It shall be the duty of the person doing the work authorized by a permit to notify the code official that such work is ready for inspection. The code official may require that every request for inspection be filed at least one working day before such inspection is desired. Such request may be made online, in writing or by telephone, at the option of the code official.

The person doing the work authorized by the permit shall make sure that the work will stand tests prescribed elsewhere in this code, before giving the above notification.

It shall be the duty of the person requesting inspections required by this code to provide access to and means for proper inspection of such work. When the work is within a residence where access is dependent upon the occupant being home, it shall be the duty of the person doing the work to make arrangements for inspections. Failure to make arrangements within a timely manner or the inability for the inspector to do the inspections at the arranged times will result in reinspection fees being assessed to the person doing the work.

Exception: If the reinspection fee was for a “Final Inspection” for a residence where access is dependent upon the occupant, after the fee has been paid by the person doing the work additional arrangements for the final inspection and penalties for not receiving such inspection shall fall on the occupant.

This shall not relieve the person doing the work from having to correct improper work and such accompanying penalties should the work fail reinspection.

C06.4.1 Approval Required. Work shall not be done beyond the point indicated in each successive inspection without first obtaining the approval of the building official. The building official, upon notification, shall make the requested inspections and shall either indicate that portion of the construction is satisfactory as completed, or shall notify the permit holder or an agent of the permit holder wherein the same fails to comply with this code. Any portions that do not comply shall be corrected and such portion shall not be covered or concealed until authorized by the building official. There shall be a final inspection and approval of all buildings and structures when completed and ready for occupancy and use.

C06.4.2 Covered work. Any work covered or concealed without inspection shall be considered to constitute an unsafe structure and subject to the corrective provisions of Section A04.5. Such consideration as an unsafe structure shall exist every day until the work is inspected and approved as being in compliance with this code. Inspections will not be performed until a valid active permit is obtained in accordance with this code.

C06.5 Inspection card. Work which requires an inspection card as described in the Building Code shall not be commenced until the permit holder or an agent of the permit holder shall have posted or otherwise made available an inspection record card such as to allow the code official to conveniently make the required entries thereon regarding inspection of the work. This card shall be maintained available by the permit holder until final approval has been granted by the code official.

C06.6 Reinspections. A reinspection fee may be assessed for each inspection or reinspection when such portion of work for which inspection is called is not complete or when corrections called for are not made.

This section is not to be interpreted as requiring reinspection fees the first time a job is rejected for failure to comply with the requirements of this code, but as controlling the practice of calling for inspections before the job is ready for such inspection or reinspection.

Reinspection fees may be assessed when the inspection record card is not posted or otherwise available on the work site, the approved plans are not readily available to the inspector, for failure to provide access on the date for which inspection is requested, or for deviating from plans requiring the approval of the code official.

To obtain a reinspection, the applicant shall file an application therefor in writing on a form furnished for that purpose and pay the reinspection fee in accordance with Table C05.2 or as set forth in the fee schedule adopted by the jurisdiction.

In instances where reinspection fees have been assessed, no additional inspection of the work will be performed until the required fees have been paid.

SECTION C07 - CONNECTION APPROVAL

C07.1 Energy connections. No person shall make connections from a source of energy or fuel to any electrical system or equipment regulated by this code and for which a permit is required until approved by the code official.

C07.2 Temporary connections. The code official shall have the authority to authorize the temporary connection of the building or system to the utility source for the purpose of testing electrical systems or for use under a temporary certificate of occupancy.

SECTION C08 - THIRD PARTY PLAN REVIEW AND INSPECTION

C08.1 When approved by the Code Official, Third Party Organizations may be permitted to perform the plan review and/or field inspection provisions of this code. When authorized to perform services, the Third Party Organization shall comply with the provisions of this section.

C08.2 Plan Review.

C08.2.1 Performance of plan review by a Third Party Organization shall not exempt or otherwise relieve the owner and/or other parties from the submittal for a permit with the appropriate plans as prescribed in this code.

C08.2.2 Along with the submittal of plans, documents as required by the Code Official shall also be submitted with the following information:

1. Name of the Third Party Organization and all individuals involved in the plan review.
2. Listing of the plan review results including but not limited to the construction type, occupancy group, occupant load, area calculations, story calculations, height measurements, and exiting calculations.
3. Other information as required by the Code Official.

C08.3 Field Inspections.

C08.3.1 Whenever the owner/builder wishes to use a Third Party Organization for field inspection, he shall submit the appropriate forms to the Code Official for approval before inspections commence. The Code Official shall review the application to confirm that the chosen Third Party Organization is approved and has all required insurance.

C08.3.2 The Code Official shall have a right to make periodic site visits, at his discretion, to review and inspect the work under construction. Whenever possible, the Code Official will attempt to coordinate such visits with the Third Party Organization.

C08.3.3 The Code Official shall maintain full interpretation authority of all affected codes as well as the authority to require corrections, including, but not limited to, notices, stop work orders and/or citations.

C08.3.4 The project may proceed with construction only upon approval of the Third Party Organization after performing the inspections as required by this code or as otherwise required by the Code Official. If, upon review, the Code Official believes that compliance with all applicable codes has not been achieved, the Code Official shall retain the right to require corrections. If corrections are required, the owner/builder and Third Party Organization may propose methods of correction that do not require uncovering of completed work. However, the Code Official may require uncovering of completed work after consideration of the extent of the work involved versus the level of compliance needed and then only as a last resort when the Code Official determines that the proposed methods of correction will not result in adequate compliance.

C08.3.5 The Third Party Organization shall issue to the owner/builder and the Code Official a formal inspection report for each inspection completed, verifying either that the work inspected is in compliance with this code or specifically detailing corrections necessary to bring such work into conformance with said codes and regulations.

C08.3.6 The Third Party Organization shall notify the Code Official if, at any time, the owner/builder fails to correct construction deficiencies as noted or if the owner/builder covers work prior to inspection or otherwise hinders the ability of the Third Party Organization to perform required inspections.

C08.4 Insurance. The Third Party Organization shall obtain and maintain insurance coverage as prescribed by the Code Official.

C08.5 Indemnification. The Third Party Organization, the builder and the owner shall execute an indemnification agreement in a form approved by the City Attorney.

C08.6 Conflict of Interest. The licensed architect, registered engineer, or other authorized person, entity or corporation who prepared or supervised preparation of the project plans and/or specifications, along with, the owner, builder, subcontractor, their agents, officers and employees shall not be associated in any way with the Third Party Organization.

C08.7 Qualifications. The Third Party Organization shall submit documents, as required by the Code Official, to show adequate training, knowledge and/or certification in the fields upon which service is to be rendered. The Code Official shall review the documents along with proof of required insurance and all required executed agreements. If in compliance, the Code Official shall approve the Third Party Organization.

If not approved, or if approval is revoked for just cause by the Code Official, the Third Party Organization may appeal to the Construction and Fire Prevention Board of Appeals. Just cause may include but not be limited to violation of any provision of this ordinance, loss or expiration of required insurance, violation of the conflict of interest provision or any such action that may result in the questioning of qualifications.

C08.8 Certificate of Occupancy. A Certification of Occupancy shall be issued, when necessary, by the Code Official upon completion of all requirements specified above and, upon completion of all requirements of any other affected department of the City. Such completion shall be determined upon the submittal of all inspection reports by the Third Party Organization noting that all required construction inspections have been approved and after the Code Official has performed and approved a final inspection when deemed necessary.

C08.9 Violations. A Third Party person or individual who violates, or assists in the violation of, this code shall be subject to the penalties as prescribed in Section A04.2.

SECTION C09 - SERVICE UTILITIES

C09.1 Utility connection. Connections shall not be made from an energy or power supply, nor shall power be supplied to any electrical system or equipment unless authorized by the code official.

Exception: The utility supplier may reactivate service to single-family or duplex residences where work was performed that does not require a permit, that was not ordered disconnected by the code official, nor are in a hazardous condition.

C09.2 Utility disconnect. The power company may disconnect service to a premise under the following conditions:

1. Non-payment of bill.
2. Point of attachment.
3. Meter height not correct.
4. Meter not wired correctly.

5. Termination of service conductors or lateral.

NOTE: The power company must notify the code official of their intent to disconnect power except for non-payment of bill.

The electrical supply agency shall disconnect the electrical service to mobile homes in mobile home parks or to any building or premises each time such building or premises changes ownership, is leased, or changes occupancy, and it shall not again supply electricity to such buildings or premises until authorized to do so by the code official.

Exception: Electrical service need not be disconnected to single-family and duplex residences, as well as mobile homes in mobile home parks when the service account is being transferred into the park's name.

Chapter D

Division I – Fort Worth Licensing

The provisions of Division I shall apply to existing Fort Worth Licensees that maintain a valid and active license. Effective 2-5-06, no new licenses shall be issued. Renewals of existing active licenses shall be permitted. Any Fort Worth license that is expired for more than one year, shall not be permitted to be renewed. All active Fort Worth licenses will expire January 1, 2016 and will not be renewed.

Only those individuals that possess an active Permit Master License as of December 1, 2005 may continue to take out permits provided they maintain an active license. Non Permit Masters may not become Permit Masters.

D01 – SCOPE

D01.1 General. Every person desiring to be licensed by the City of Fort Worth to engage in the electrical business or work in a capacity for which a license is required by this code shall comply with this chapter.

D01.2 Grades. There shall be seven (7) grades of licenses: Master, Master Sign, Journeyman, Journeyman Sign, Residential Wireman, Maintenance Electrician and Residential Maintenance Electricians.

D01.3 Duel Qualification, Dual Licensing. Neither this section nor this chapter shall be construed to prohibit:

1. The licensing of a Master Electrician as a Master Sign Electrician, provided such Master Electrician has duly qualified as a Master Sign Electrician;
2. The licensing of a Master Sign Electrician as a Master Electrician, provided such Master Sign Electrician has duly qualified as a Master Electrician;

3. The licensing of a Journeyman Electrician as a Journeyman Sign Electrician, provided such Journeyman Electrician has duly qualified as a Journeyman Sign Electrician;
4. The licensing of a Journeyman Sign Electrician as a Journeyman Electrician, provided such Journeyman Sign Electrician has duly qualified as a Journeyman Electrician; and
5. Any other licensing combination provided that the licensing prerequisites for the issuance of each such license are duly met.

D01.4 Company Representation. A Master Electrician who wishes to take out permits, referred to as a Permit Master, may represent only one electrical company. This electrical company must be registered with the Department of Planning and Development. Proof of assumed name must be provided.

Licensees that represent the company shall not be simultaneously employed by, or work for more than one business for the purpose of obtaining permits under this code or for the purpose of doing or supervising work that can only be done by authority of a permit obtained under the provisions of this code.

Only one licensee for each company will be recognized for the purpose of obtaining permits. The licensee shall keep the Department of Planning and Development notified of any change in his/her employment.

SECTION D02 - APPLICATION

D02.1 General. All applications for Electrical licenses shall be submitted to the code official. The applicant shall submit additional documents as required in this section.

D02.2 Issuance/Transfer. No license shall be issued under the terms of this code to any other than a natural person.

No license in effect, issued, or renewed under the terms of this code shall ever be transferred to or used by any other person other than the one to whom the same is issued. Nor shall a holder of a license allow his name or license to be used by any other person to obtain a permit or to perform work under such license.

SECTION D04 - EXPIRATION/RENEWAL

D04.1 General. Any license issued under the terms of this Code shall expire January 1 of each year unless the annual fee specified in Table D04.1 is paid. All licenses issued under the terms of this Code will permanently expire on January 1, 2016. Each license renewal shall be accompanied with a copy of a current valid picture ID. Reciprocal renewals shall also be accompanied with a copy of a current valid home base license.

(Note: Due to staffing needs the Code Official may, at his discretion, install a license renewal program in which licenses expire at various times throughout the year in lieu of having all licenses expire on January 1. In order to implement the program the Building Official may assign new expiration dates to existing licenses and

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charge a pro-rated renewal fee.)

Exception: Agencies of any Federal, State or local government shall be exempt from the payment of licensing fees in cases where the electrician performing the work is an employee of such agency and the work is to be performed on premises owned or controlled by such agency.

The holder of a Master License or Master Sign License who fails to pay the annual fee due for such license within thirty (30) days after the expiration date shall not be permitted to be renewed.

The holder of a Journeyman License, Journeyman Sign License, Residential Wireman Licenses, Maintenance License or Residential Maintenance License who fails to pay the annual fee due for such license within thirty (30) days after the expiration date shall not be permitted to be renewed.

**TABLE D04.1
Electrical License Fees**

1. <i>Annual license fee</i> ¹	
Master electrician	\$120.00
Master sign electrician	120.00
- Master late fee	60.00
Journeyman electrician	12.00
Journeyman sign electrician	12.00
Residential wireman electrician	12.00
Maintenance electrician	12.00
Residential Maintenance electrician	12.00
- Late fee	12.00
2. Permit Master change of business	\$60.00

¹ Annual fee is due in full on the first day of January each year. Fees for licenses that are set to expire after January 1, 2016 will be prorated.

(As staffing and resources allow, the Code Official may allow a renewal to be for up to two years with the payment of a pro-rated fee. Due to staffing needs the Code Official may, at his discretion, install a license renewal program in which licenses expire at various times throughout the year in lieu of having all licenses expire on January 1. In order to implement the program the Code Official may assign new expiration dates to existing licenses and charge a pro-rated renewal fee.)

SECTION D05 - LICENSE SUSPENDED, REPEALED OR REVOKED

D05.1 General. A license or permit may be suspended, repealed or revoked by the Code Official by reason of the occurrence of one or more of the following:

1. Adjudication of insanity;
2. Fraud or misrepresentation in obtaining a license or permit;
3. Violation of a provision of this ordinance, the Residential, Plumbing, Mechanical, or Building Codes or any other regulatory ordinances of the City applicable to the installation or alteration of appliances, equipment or systems as set forth in this code;
4. Conviction of defrauding a person for whom he has rendered or contracted to render

- service;
5. Failure to obtain a permit or the attempted assignment of a permit for others;
 6. Failure to pay permit fees or the voluntary or involuntary filing of bankruptcy proceedings by or against the firm, partnership, association, or corporation; and,
 7. The sending of six (6) notifications within a six (6) month period that the license is in violation of this chapter.

D05.2 Work Suspension. Upon suspension or revocation of said Master Electrician or Master Sign Electrician License, same shall be null and void and no work thereafter may be performed thereunder.

D05.3 Board Affirmation. Upon appeal to the Board, the Board may affirm, revise or modify such suspension or revocation.

SECTION D06 - INFORMATION/IDENTIFICATION

D06.1 Information. Each holder of a license issued under the provisions of this Code shall furnish the code official with a written notice of any change of information, including but not limited to address, telephone number, company name, etc.

When the change involves moving of the permit Master from one company to another, a fee as specified in Table D04.1 shall be charged.

Each holder of Master Electrician license shall furnish the code official with a written notice of the address and telephone number of his regular established place of business, and if actively engaged in the electrical contracting business, a list of Journeyman Electricians and other electrical workers employed by him.

D06.2 Identification.

1. Journeyman Electricians, Journeyman Sign Electricians, Residential Wireman Electricians, Maintenance Electrician and Residential Maintenance Electricians shall carry their license and a valid picture ID on their person at all times while performing electrical work, and they shall produce and present such license or permit immediately upon request by an Electrical Inspector.

2. Each licensed Master Electrician and Master Sign Electrician shall have his company name and his Electrician license number or approved Universal Number, permanently affixed on each front door or fender of each truck or vehicle which said electrician operates in connection with the installation, alteration or repair of electrical wiring, equipment or signs within the city, in letters and numerals of at least two and one-half (2 1/2) inches in height. Such name and number shall be the same for all vehicles so operated by any one Licensed Master Electrician or any one Licensed Master Sign Electrician. Such name and number shall not be of the magnetic type.

SECTION D07 - INSURANCE

D07.1 General. Each Master Electrician and Master Sign Electrician who intend on taking out permits shall furnish to the code official a certificate of insurance as evidence of the insurance required.

Exception: A Master Electrician or Master Sign Electrician employed by the City of Fort Worth shall be exempt from the insurance requirement.

The insurance policy shall have limits of liability in the amounts of not less than \$300,000.00 per occurrence for bodily injury, including death, and not less than \$100,000.00 per occurrence for property damage.

Such insurance policy shall provide that it cannot be canceled or amended without at least thirty (30) days notice to the City of Fort Worth.

The certificate of insurance shall clearly state the Master and/or Master Sign Electricians individual name and license number along with the name of the business and address. The holder of the certificate shall be: City of Fort Worth, Department of Development, 1000 Throckmorton Street, Fort Worth, Texas 76102.

Division II – State License/Registration

The provisions of Division II shall apply to State of Texas Licensees contracting or performing electrical work.

D08 – SCOPE

D08.1 General. Every person with a State of Texas License desiring to perform electrical work in the City of Fort Worth shall comply with this chapter.

D08.2 Registration. Every person with a State Electrical Contractor or State Electrical Sign Contractor License desiring to contract for electrical work in the City of Fort Worth shall register and pay a registration fee. All applications for registration shall be submitted to the code official. The applicant shall submit additional documents as required in this section.

D08.2.1 New applications. The applicant for a new registration shall submit in person the following:

1. Copy of State of Texas Electrical Contractor or State of Texas Electrical Sign Contractor credentials.
2. Valid picture ID. (Example: Drivers License, State ID, etc.)
3. Copy of current and active State of Texas Master Electrician license or State of Texas Master Sign Electrician license who will act as Master of Record.
4. A check for the first year registration fee as specified in Table D08.2.1. If not approved, the check will be returned. Make checks payable to **City of Fort Worth**.

Exception: Agencies of any Federal, State or local government shall be

exempt from the payment of licensing fees in cases where the electrician performing the work is an employee of such agency and the work is to be performed on premises owned or controlled by such agency.

5. Proof of assumed name or letter of incorporation.

Table D08.2.1

1. <i>Annual Contractor registration fee</i>	
Electrical Contractor	\$120.00
Electrical Sign Contractor	120.00
- Contractor late fee	60.00
2. Change of Master of Record	\$60.00

D08.2.2 Approval. Upon receipt of all the appropriate documents and payment of the appropriate fee, the code official shall review the application. If in compliance with the requirements of this code, the code official shall approve the registration for the category certified.

Upon acquiring a registration, a copy of this code shall be obtained.

If, in the opinion of the code official, all of the requirements are not met, the application shall be denied. Appeals concerning the issuance and/or denials of a registration may be made to the Board.

D08.3 Issuance/Transfer. No registration in effect, issued, or renewed under the terms of this code shall ever be transferred to or used by any other Contractor other than the one to whom the same is issued. Nor shall a holder of a registration allow his name or registration to be used by any other person to obtain a permit or to perform work under such registration.

D08.4 Contractor Representation. A State of Texas Master Electrician may only be assigned to a single Electrical Contractor or Electrical Sign Contractor, not both.

A State of Texas Master Sign Electrician may only be assigned to a single Electrical Sign Contractor.

The registered contractor shall keep the Department of Planning and Development notified of any change in his/her business information or any change in his/her Master of Record assigned to the contracting business.

SECTION D09 - EXPIRATION/RENEWAL

D09.1 General Any registration issued under the terms of this Code shall expire one year after the date of approval unless the annual fee specified in Table D08.2.1 is paid. Each registration renewal shall be accompanied with a copy of a current valid picture ID.

Exception: Agencies of any Federal, State or local government shall be exempt from the payment of registration fees in cases where the electrician performing the work is an employee of such agency and the work is to be performed on premises owned or controlled by such agency.

The holder of a registration who fails to pay the annual fee due for such registration within thirty (30) days after the expiration date shall be required to pay a late fee as specified in Table D08.2.1.

SECTION D10 - REGISTRATION SUSPENDED, REPEALED OR REVOKED

D10.1 General. A registration or permit may be suspended, repealed or revoked by the Code Official by reason of the occurrence of one or more of the following:

1. Adjudication of insanity;
2. Fraud or misrepresentation in obtaining a license or permit;
3. Violation of a provision of this ordinance, the Residential, Plumbing, Mechanical, or Building Codes or any other regulatory ordinances of the City applicable to the installation or alteration of appliances, equipment or systems as set forth in this code;
4. Conviction of defrauding a person for whom he has rendered or contracted to render service;
5. Failure to obtain a permit or the attempted assignment of a permit for others;
6. Failure to pay permit fees or the voluntary or involuntary filing of bankruptcy proceedings by or against the firm, partnership, association, or corporation; and,
7. The sending of six (6) notifications within a six (6) month period that the license is in violation of this chapter.
8. When the State Contractor license expires or is suspended for any reason.
9. When the State License of the Master of Record expires or is suspended for any reason.

D10.2 Work Suspension. Upon suspension or revocation of said registration, same shall be null and void and no work thereafter may be performed thereunder.

D10.3 Board Affirmation. Upon appeal to the Board, the Board may affirm, revise or modify such suspension or revocation.

SECTION D11 - INFORMATION/IDENTIFICATION

D11.1 Information. Each holder of a registration issued under the provisions of this Code shall furnish the code official with a written notice of any change of information, including but not limited to address, telephone number, company name, etc.

When the change involves the installation of a new Master of Record, a fee as specified in Table D08.2.1 shall be charged.

D11.2 Identification.

1. Master Electricians, Master Sign Electricians, Journeyman Electricians, Journeyman

Sign Electricians, Residential Wireman Electricians, and Maintenance Electricians shall carry their license and a valid picture ID on their person at all times while performing electrical work, and they shall produce and present such license or permit immediately upon request by an Electrical Inspector.

2. Each registered Electrical Contractor shall have his company name and license number displayed on both sides of each vehicle owned or operated by the business and used in the conduct of *electrical work*. Lettering shall be of a contrasting color and at least two inches in height. The license number shall be preceded by the letters "TECL.". Such name and number shall be the same for all vehicles so operated by the electrical contractor. Such name and number shall not be of the magnetic type.

3. Each registered Electrical Sign Contractor shall have his company name and license number displayed on both sides of each vehicle owned or operated by the business and used in the conduct of *electrical sign work*. Lettering shall be of a contrasting color and at least two inches in height. The license number shall be preceded by the letters "TSCL.". Such name and number shall be the same for all vehicles so operated by the electrical contractor. Such name and number shall not be of the magnetic type.

CHAPTER F

REFERENCED STANDARDS

This chapter lists the standards that are referenced in various sections of this document. The standards are listed herein by the promulgating agency of the standard, the standard identification, the effective date and title, and the section or section of this document that reference the standard. The application of the referenced standards shall be as specified in Section A02.8.

Canadian Standards Association
 5060 Spectrum Way
 Mississauga, Ontario, Canada L4W 5N6

Standard reference number	Title	Referenced in code section number
ANSI CSA America FCI-03	Stationary Fuel Cell Power Systems 110.110	

ICC International Code Council
 5203 Leesburg Pike, Suite 708
 Falls Church, VA 22041

Standard reference number	Title	Referenced in code section number
IBC 2009	International Building Code®	100
IECC 2009	International Energy Conservation Code™	100, 100.123
IFGC 2009	International Fuel Gas Code®	100
IMC 2009	International Mechanical Code®	100
IFC 2009	International Fire Code®	100
IPC 2009	International Plumbing Code®	100
IRC 2009	International Residential Code™	100



National Fire Protection Association
 Batterymarch Park
 Quincy, MA 02269-9101

Standard reference number	Title	Referenced in code section number
37-06	Installation and use of Stationary Combustion Engines and Gas Turbines.	110.109
70-14	National Electrical Code.	100
110-05	Emergency and Standby Power systems.	110.105
111-05	Stored Electrical Energy Emergency and Standby Power Systems.	110.105
262-07	Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces	110.108
85307	Installation of Stationary Fuel Power Plants	110.110



Underwriters Laboratories
 333 Pfingsten Road
 Northbrook, IL 60062-2096

Standard reference number	Title	Referenced in code section number
217-06	Single and Multiple Station Smoke Alarms – with Revisions through May 2007	110.118
924-06	Standard for Safety Emergency Lighting and Power Equipment	110.119
2200-04	Stationary Engine Generator Assemblies.	110.105

(b). The remaining Articles of the 2014 NEC are hereby amended as follows:

ARTICLE 90

**Article 90, "Introduction"; Articles 90.1, 90.2, 90.4 and 90.6 are deleted.*

ARTICLE 100

**Article 100, "Scope"; changed to read as follows:*

Scope. Unless otherwise expressly stated, the following words and terms shall, for the purposes of this code, have the meanings indicated in this article. The provisions of this article shall also apply to other definitions listed elsewhere in this code.

Interchangeability. Words used in the present tense include the future; words in the masculine gender include the feminine and neuter; the singular number includes the plural and the plural, the singular.

Terms defined in other codes. Where terms are not defined in this code and are defined in other City adopted codes, such terms shall have meanings ascribed to them as in those codes.

Terms not defined. Where terms are not defined through the methods authorized by this section, such terms shall have ordinarily accepted meanings such as the context implies.

Part I of this article contains definitions intended to apply wherever the terms are used throughout this code. Part II contains definitions applicable only to the parts of articles specifically covering installations and equipment operating over ~~600~~1000 volts, nominal.

**Article 100, Part I; definitions are changed and new definitions are added to read as follows:*

APPROVED AGENCY. An established and recognized agency regularly engaged in conducting tests or furnishing inspection services, where the agency has been approved by the Code Official.

AUTHORITY HAVING JURISDICTION. The organization, office, or individual responsible for approving equipment, material, an installation, or a procedure as specified in Sections B01.1, B01.2, B01.3 and A02.10.

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 or on a site that involves a change in application of the requirements of this code.

Such a change includes, but is not limited to, a revision of the use that:

1. would place the occupancy in a different division of the same Group of occupancies (such as an A-1 theater to an A-2 restaurant); or,
2. would place the occupancy in a different Group of occupancies (such as a B office to M retail); or,
3. would change the character within the same division of the same Group of occupancies such as
 - a. a Group B office to a B restaurant with less than 50 occupants); or,
 - b. a Group S-1 warehouse to a Group S-1 motor vehicle repair; or,
 - c. by adding alcohol consumption to a restaurant that formerly was without alcohol; or,
 - d. any change in the operation that would have required a different application of code had the building been built today under the new proposed operation.

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 Official, and his regularly authorized deputies.

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 and the *ICC Electrical Code* shall be assumed to mean the Electrical Code as defined herein.

ELECTRICAL MAINTENANCE WORK. Electrical maintenance work shall mean the keeping in safe repair of any and all electrical installations, apparatus, equipment and appliances and the keeping in safe repair of electrical equipment within a building or in or on the premises where the Maintenance Electrician, or Residential Maintenance Electrician, is regularly employed on a permanent basis, except as described below for service companies, but does not include the installation of new and additional electrical work, electrical equipment, electrical apparatus or appliances.

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

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

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.)

HAZARDOUS LOCATION. (See Article 500-3). The location is not necessarily categorized in the *International Building Code* as a high-hazard use group classification.

INTERSYSTEM BONDING TERMINATION. A device that provides a means for connecting intersystem bonding conductors for communication systems and other systems such as metallic gas piping systems to the grounding electrode system. Bonding conductors for other systems shall not be required to be larger than 6 AWG.

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*, 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 the *International Plumbing Code*, as adopted, shall mean:

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

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

STRUCTURE. That which is built or constructed. The definition includes but is not limited to buildings, towers, walls, tunnels, canopies, carports, fences, pools, etc.

ARTICLE 110

**Article 110.2; change the following to read as follows:*

110.2 Approval. The conductors and equipment required or permitted by this *Code* shall be acceptable only if approved. Approval of equipment may be evident by listing and labeling of equipment by a Nationally Recognized Testing Lab (NRTL) with a certification mark of that laboratory or a qualified third party inspection agency approved by the AHJ.

Exception: Unlisted equipment that is relocated to another location within a jurisdiction or is field modified is subject to the approval by the AHJ. This approval may be by a field evaluation by a NRTL or qualified third party inspection agency approved by the AHJ.

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

Informational Note No. 2: Manufacturer's self-certification of equipment may not necessarily comply with US product safety standards as certified by a Nationally Recognized Testing Lab.

Informational Note No. 3: NFPA 790 and 791 provide an example of an approved method for qualifying a third party inspection agency.

**Articles 110.90 through 110.92 and 110.100 through 100.123; added to read as follows:*

VI. Mobile Home Park and Recreational Vehicle Park Standards

110.90. Mobile Home Park Standards

110.90.1 All electrical wiring, power distribution lines, and telephone lines in a mobile home park shall be installed underground and in compliance with this code.

110.91. Recreational Vehicle Park Standards

110.91.1 Each recreational vehicle park shall contain an electrical wiring system installed and maintained in compliance with the this code.

110.91.2 All electrical wiring, main power distribution lines, and telephone lines shall be installed underground.

110.91.3 Individual electrical connections provided at recreational vehicle spaces shall include an approved disconnecting device and overcurrent protective equipment.

110.91.4 Recreational Vehicle lots in Recreational Vehicle Parks and in Mobile Home or Manufactured Home Parks shall be master metered. Power releases shall not be permitted for individual lots.

110.92. History

Mobile Home Park regulations were first adopted in May 18, 1970 (with retroactive provisions), Ordinance 6293. Recreational Vehicle Park regulations were first adopted by Ordinance 6372, effective October 12, 1970. Under Ordinance 12264, City Code Chapter 21, Mobile Home Parks was deleted and the provisions moved to the Fire Code Appendix. Such Appendix was continued thru Ordinances 14652, 14688, 16027 and 19607.

VII. Electrical Requirements from Other Codes

110.100. Penetrations. Penetrations of walls, floors, ceilings and assemblies required to have a fire-resistive rating, shall be protected in accordance with the Building Code. Where cables, conductors and raceways penetrate fireblocking or drafstopping, such penetrations shall be protected by filling the annular space with an approved fireblocking material.

110.101. [B] Cutting, notching and boring in wood framing. When permitted by the Building Code, the cutting, notching and boring of wood framing members shall comply with the following:

[B] 2308.8.2 Joist notching. Notches on the ends of joists shall not exceed one-fourth the joist depth. Holes bored in joists shall not be within 2 inches (51 mm) of the top or bottom of the joist, and the diameter of any such hole shall not exceed one-third the depth of the joist. Notches in the top or bottom of joists shall not exceed one-sixth the depth and shall not be located in the middle third of the span.

[B] 2308.8.2.1 Engineered wood products. Cuts, notches and holes bored in trusses, laminated veneer lumber, glue-laminated members or I-joists are not permitted unless the effects of such penetrations are specifically considered in the design of the member.

[B] 2308.9.10 Stud cutting and notching. In exterior walls and bearing partitions, any wood stud is permitted to be cut or notched not to exceed 25 percent of its depth. Cutting or notching of studs not greater than 40 percent of their depth is permitted in nonbearing partitions supporting no loads other than the weight of the partition.

[B] 2308.9.11 Bored holes. A hole not greater in diameter than 40 percent of the stud depth is permitted to be bored in any wood stud. Bored holes not greater than 60 percent of the depth of the stud are permitted in nonbearing partitions or in any wall where each bored stud is doubled, provided not more than two such successive doubled studs are so bored. In no case shall the edge of the bored hole be nearer than 5/8 inch (15.9 mm) to the edge of the stud. Bored holes shall not be located at the same section of stud as a cut or notch.

110.102. [B] Cutting, notching and boring in steel framing. The cutting, notching and boring of steel framing members shall comply with the following:

[B] Cutting, notching and boring holes in structural steel framing. The cutting, notching and boring of holes in structural steel framing members shall be as prescribed by the registered design professional.

[B] Cutting, notching and boring holes in cold-formed steel framing. Flanges and lips of load-bearing cold-formed steel framing members shall not be cut or notched. Holes in webs of load-bearing cold-formed steel framing members shall be permitted along the centerline of the web of the framing member and shall not exceed the dimensional limitations, penetration spacing or minimum hole edge distance as prescribed by the registered design professional. Cutting, notching and boring holes of steel floor/roof decking shall be as prescribed by the registered design professional.

[B] Cutting, notching and boring holes in non-structural cold-formed steel wall framing. Flanges and lips of nonstructural cold-formed steel wall studs shall not be cut or notched. Holes in webs of nonstructural cold-formed steel wall studs shall be permitted along the center-line of the web of the framing member, shall not exceed 1.5 inches (38 mm) in width or 4 inches (102 mm) in length, and shall not be spaced less than 24 inches (610 mm) center to center from another hole or less than 10 inches (254 mm) from the bearing end.

110.103. [FG] 309.1 Grounding. Gas piping shall not be used as a grounding electrode.

[FG] 310.1 [G2411.1] Gas pipe bonding. Each above-ground portion of a gas piping system other than corrugated stainless steel tubing (CSST) that is likely to become energized shall be electrically continuous and bonded to an effective ground-fault current path. Gas piping shall be considered to be bonded where it is connected to gas utilization equipment that is connected to the equipment grounding conductor of the circuit supplying that equipment.

Corrugated stainless steel tubing (CSST) gas piping systems shall be bonded to the electrical service grounding electrode system at the point where the gas service enters the building. The bond jumper shall be not smaller than 6 AWG copper wire or equivalent.

110.104 [B] 2701.2 Primary Power Source. The primary power source for all buildings shall be from an electrical utility provider. Power sources, such as generator power, that supply a service panel for uses without a building, such as gas compressor sites, shall be regulated by this code.

Exceptions: 1. Alternate, non-generator power sources, including but not limited to fuel cell power plants, wind generators, solar panels, etc. are permitted when approved by the code official and installed in accordance with the provisions of this code and other city codes.

2. Temporary generator power is permitted for buildings that are connected to a normally active utility provider during periods of power outages, such as after a major storm. Any connection to the building power system shall be in compliance with this code.

3. Generator power to buildings as a primary power source shall only be permitted when approved by the code official. Such approval shall take into consideration all hazards such as fuel delivery, storage and usage, as well as, noise nuisances, and compliance with all other applicable codes and ordinances of this city.

Use of alternate power sources, inclusive of generators, shall not be permitted when the proposed use is in violation of other codes and ordinances of this city.

When permitted, such power source and connection shall be in compliance with this code, the Building Code and Fire Code. The attachment cable to the building shall be considered to be a service entrance conductor.

110.105. [F] 604.1 Emergency and standby power. Emergency and standby power systems required by the Building Code or Fire Code shall be installed in accordance with the Building Code, the Fire Code, NFPA 110, NFPA 111 and this code. Existing installations shall be maintained in accordance with the original approval.

[F] 604.1.1 Stationary generators. Stationary emergency and standby power generators required by this code shall be listed in accordance with UL 2200.

Fuel supply. An on-premises fuel supply, sufficient for not less than 2-hour full-demand operation of the system, shall be provided.

Exception: Where the system is supplied with pipeline natural gas and is approved.

Capacity. The standby system shall have a capacity and rating that supplies equipment required to be operational at the same time. The generating capacity is not required to be sized to operate all of the connected electrical equipment simultaneously if automatic load-shedding is provided. Unless otherwise specified in this code, the system shall be equipped with suitable means for automatically starting the generator upon failure of the normal electrical supply systems. The system shall be at full power within 60 seconds of such normal service failure.

{Emergency systems. Emergency systems shall operate within 10 seconds of failure of the normal power supply and shall be capable of being transferred to the standby source.

Exception: Exit sign, exit and means of egress illumination are permitted to be powered by a standby source in buildings of Groups F and S occupancies.

[F] Where required. Emergency and standby power systems shall be provided where required by Sections 604.2.1 through 604.2.19.

[F] 604.2.1 Group A occupancies. Emergency power shall be provided for emergency voice/alarm communication systems in Group A occupancies in accordance with Section 907.2.1.1.

[F] 604.2.2 Smoke control systems. Standby power shall be provided for smoke control systems in accordance with Section 909.11.

[F] 604.2.3 Exit signs. Emergency power shall be provided for exit signs in accordance with Section 1011.5.3

[F] 604.2.4 Means of egress illumination. Emergency power shall be provided for means of egress illumination in accordance with Section 1006.3.

[F] 604.2.5 and 604.2.6 Accessible means of egress elevators or platform lifts. Standby power shall be provided for elevators or platform lifts that are part of an accessible means of egress in accordance with Section 1007.4 or 1007.5, respectively.

[F] 604.2.7 Horizontal sliding doors. Standby power shall be provided for horizontal sliding doors in accordance with Section 1008.1.4.3.

[F] 604.2.8 Semiconductor fabrication facilities. Emergency power shall be provided for semiconductor fabrication facilities in accordance with Section 1803.15.

[F] 604.2.8–9 Membrane structures. Emergency power shall be provided for exit signs in temporary tents and membrane structures in accordance with Section 2403.12.6.1. Standby power shall be provided for auxiliary inflation systems in permanent membrane structures in accordance with the *International Building Code*.

[F] 604.2.10 Hazardous materials. Emergency or standby power shall be provided in occupancies with hazardous materials in accordance with Sections 2704.7 and 2705.1.5.

[F] 604.2.11 Highly toxic and toxic materials. Emergency power shall be provided for occupancies with highly toxic or toxic materials in accordance with Section 3704.2.2.8 and 3704.3.2.6.

[F] 604.2.12 Organic peroxides. Standby power shall be provided for occupancies with organic peroxides in accordance with Section 3904.1.11.

-[F] 604.2.13 Covered mall buildings. Covered mall buildings exceeding 50,000 square feet (4645 m²) shall be provided with standby power systems which are capable of

operating the emergency voice/alarm communication.

[F] **604.2.14 High-rise buildings.** Standby power, light and emergency systems in high-rise buildings shall comply with the requirements of Sections 604.2.14.1 through 604.2.14.3.

[F] **604.2.15 Underground buildings.** Emergency and standby power systems in underground buildings covered in Chapter 4 of the International Building Code shall comply with Section 604.2.15.1 and 604.2.15.2.

[F] **604.2.16 Group I-3 occupancies.** Power-operated sliding doors or power-operated locks for swinging doors in Group I-3 occupancies shall be operable by a manual release mechanism at the door and either emergency power or a remote mechanical operating release shall be provided

Exception: Emergency power is not required in facilities where provisions for remote locking and unlocking of occupied rooms in Occupancy Condition 4 are not required as set forth in the International Building Code.

[F] **604.2.17 Airport traffic control towers.** Standby power shall be provided in airport traffic control towers more than 65 feet (19 812 mm) in height. Power shall be provided to the following equipment:

1. Pressurization equipment, mechanical equipment and lighting.
2. Elevator operating equipment.
3. Fire alarm and smoke detection systems.

[F] **604.2.18 Elevators.** In buildings and structures where standby power is required or furnished to operate an elevator, the operation shall be in accordance with Sections 604.2.18.1 through 604.2.18.4

110.106. [B] 909.11 Smoke control systems. Smoke control systems required by the Building Code or the Fire Code shall be supplied with two sources of power. Primary power shall be the normal building power systems. Secondary power shall be from an approved standby source complying with this code. The standby power source and its transfer switches shall be in a separate room from the normal power transformers and switch gear and shall be enclosed in a room constructed of not less than 1-hour fire-resistive-rated fire barriers, ventilated directly to and from the exterior. Power distribution from the two sources shall be by independent routes. Transfer to full standby power shall be automatic and within 60 seconds of failure of the primary power.

[B] **909.11.1 Power sources and power surges.** Elements of the smoke management system relying on volatile memories or the like shall be supplied with uninterruptable power sources of sufficient duration to span 15-minute primary power interruption. Elements of the smoke management system susceptible to power surges shall be suitably protected by conditioners, suppressors or other approved means.

[B] **909.12.1 Wiring.** In addition to meeting the requirements of this code, ~~all signal and control~~ wiring for smoke control systems, regardless of voltage, shall be fully enclosed within continuous raceways.

[F] **909.21 Smokeproof enclosures.** Where required by Section 1022.9, a smokeproof

enclosure shall be constructed in accordance with this section. A smokeproof enclosure shall comply with all requirements of the Building Code. Where access to the roof is required by this code, such access shall be from the smokeproof enclosure where a smokeproof enclosure is required.

[F] 909.21.2.2 Standby power. Stair pressurization systems and automatic fire detection systems shall be powered by an approved standby power system conforming to Building Code requirements.

110.107. [F] 910.1 Smoke and Heat Vents.

[F] 910.4 Mechanical smoke exhaust.

[F] 910.4.4 Wiring and control. Wiring for operation and control of smoke exhaust fans shall be connected ahead of the main disconnect and protected against exposure to temperatures in excess of 1,000°F (538°C) for a period of not less than 15 minutes. Controls shall be located so as to be immediately accessible to the fire service from the exterior of the building and protected against interior fire exposure by not less than 1-hour fire barriers constructed in accordance with Section 707 of the International Building Code or horizontal assemblies constructed in accordance with Section 712 of the International Building Code, or both.

110.108 [M] 602.2.1.1 Wiring in plenums. Combustible electrical or electronic wiring methods and materials, optical fiber cable, and optical fiber raceway exposed within a plenum regulated by Section 602 of the Mechanical Code shall have a peak optical density not greater than 0.50, an average optical density not greater than 0.15, and a flame spread not greater than 5 feet (1524 mm) when tested in accordance with NFPA 262. Only type OFNP (plenum-rated nonconductive optical fiber cable) shall be installed in plenum-rated optical fiber raceways. Wiring, cable, and raceways addressed in this section shall be listed and labeled as plenum rated and shall be installed in accordance with this code.

[M] 602.2.1.4 Combustible electrical equipment. Combustible electrical equipment exposed within plenums regulated by Section 602 of the Mechanical Code shall have a peak rate of heat release not greater than 100 kilo-watts (kW), a peak optical density not greater than 0.50, and an average optical density not greater than 0.15 when tested in accordance with UL 2043. Combustible electrical equipment shall be listed and labeled.

110.109 [M] 915.2 Engine and gas turbine-powered equipment and appliances. Permanently installed equipment and appliances powered by internal combustion engines and turbines shall be installed in accordance with the manufacturer's installation instructions, the Mechanical Code, the Fuel Gas Code and NFPA 37.

110.110 [M] 924.1 Stationary fuel cell power plants. Stationary fuel cell power plants having a power output not exceeding 1,000 kW, shall be tested in accordance with ANSI/CSA

America FC1 and shall be installed in accordance with the manufacturer's installation instructions and NFPA 853.

110.111 [M] 1006.8 Boiler control requirements. The power supply to the electrical control system for boilers shall be from a two-wire branch circuit that has a grounded conductor, or from an isolation transformer with a two-wire secondary. Where an isolation transformer is provided, one conductor of the secondary winding shall be grounded. Control voltage shall not exceed 150 volts nominal, line to line. Control and limit devices shall interrupt the ungrounded side of the circuit. A means of manually disconnecting the control circuit shall be provided and controls shall be arranged so that when deenergized, the burner shall be inoperative. Such disconnecting means shall be capable of being locked in the off position and shall be provided with ready access.

110.112 [M] 301.11 [FG] 301.9 Repair. Defective material or parts shall be replaced or repaired in such a manner so as to preserve the original approval or listing.

110.113 [M] 301.12 [FG] 301.10 Wind resistance. Electrical equipment, appliances and supports that are exposed to wind shall be designed and in-stalled to resist the wind pressures determined in accordance with the Building Code.

110.114 [M] 301.13 [FG] 301.11 [B] 1612.1 Flood hazard. For structures located in a special flood-hazard area, electrical systems shall comply with the flood-resistant construction requirements of the Building Code.

110.115 [B] 1613.1 Seismic resistance. When earthquake loads are applicable in accordance with the Building Code, electrical system supports shall be designed and installed for the seismic forces in accordance with the Building Code.

110.116 [F] 605.3.1 Equipment and door labeling. Doors into electrical control panel rooms shall be marked with a plainly visible and legible sign stating ELECTRICAL ROOM or similar approved wording. The disconnecting means for each service, feeder or branch circuit originating on a switchboard or panelboard shall be legibly and durably marked to indicate its purpose unless such purpose is clearly evident.

110.117 [F] 907.2.11 Single- and multiple-station smoke alarms. Listed single- and multiple-station smoke alarms complying with UL 217 shall be installed in accordance with Sections 907.2.11.1 through 907.2.11.4 and NFPA 72.

[F] 907.2.11.1 Group R-1. Single- or multiple-station smoke alarms shall be installed in all of the following locations in Group R-1:

1. In sleeping areas.
2. In every room in the path of the means of egress from the sleeping area to the door leading from the sleeping unit.

3. In each story within the sleeping unit, including basements. For sleeping 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.

[F] 907.2.11.2 Groups R-2, R-3, R-4 and I-1. Single-or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-3, R-4 and I-1 regardless of occupant load at all of the following locations:

1. On the ceiling or wall outside of each separate sleeping area in the immediate vicinity of bedrooms.
2. In each room used for sleeping purposes.
Exception: Single or multiple-station smoke alarms in Group I-1 shall not be required where smoke detectors are provided in the sleeping rooms as part of an automatic smoke detection system.
3. In each story within a dwelling unit, 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.

-[F] 907.2.11.3 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit or sleeping unit in Group R-2, R-3 or R-4, or within an individual sleeping unit in Group R-1, the smoke alarms shall be interconnected in such a manner that the activation 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.

[F] 907.2.11.4 Power source. In new construction, required smoke alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms with integral strobes that are not equipped with battery back-up shall be connected to an emergency electrical system. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.

Exception: Smoke alarms are not required to be equipped with battery backup in Group R-1 where they are connected to an emergency electrical system.

[F] 907.2.11.4.1 Power source for smoke detectors with integral strobes. In R-1, R-2 and R-4 occupancies, all single station or multiple station smokes detectors with an integrated visuals strobe shall be powered by an emergency backup power source that will operate the device, including the strobe, upon AC loss. The backup power sources shall provide twenty-four (24) hours of normal operating power followed by five (5) minutes of alarm operating power, or power shall be provided by an emergency generator.

F] 4603.7 Single- and multiple-station smoke alarms. Single-and multiple-station

smoke alarms shall be installed in existing Group R occupancies and in *dwelling*s not classified as Group R occupancies in accordance with 4603.7.1 through 4603.7.3.

[B] 3432.1 General. See Section 907.3 and 907.21 of the Fire Code.

Additions, alterations or repairs.

[B] 907.2.10.5 Additions, alterations or repairs to Group R. Existing Group R occupancies not already provided with single-station smoke alarms shall be provided with approved single-station smoke alarms. Installation shall be in accordance with Section 3417.2.

Where an addition, alteration or repair to an individual dwelling unit or guestroom in Group R requires a permit, smoke alarms shall be installed within that individual dwelling unit or guestroom in accordance with Section 907.2.10, except as provided in Sections 907.2.10.5.1 and 907.2.10.5.2.

Exception: Repairs to the exterior surfaces of occupancies in Group R.

[B] 907.2.10.5.1 Interconnection. Where more than one smoke alarm is required to be installed within an individual dwelling unit in Group R-2, R-3 or R-4 or within an individual sleeping unit in Group R-1, the smoke alarms shall be interconnected in such a manner that the activation 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.

Exceptions: 1. Interconnection is not required in buildings that are not undergoing alterations, repairs or construction of any kind.

2. Smoke alarms in existing areas are not required to be interconnected where alterations or repairs do not result in the removal of interior wall or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes.

[B] 907.2.10.5.2 Power source. In Group R occupancies, single-station smoke alarms shall receive their primary power from the building wiring provided that such wiring is served from a commercial source and shall be equipped with a battery backup. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for overcurrent protection.

Exception: Smoke alarms are permitted to be solely battery operated: in existing buildings where no construction is taking place; in buildings that are not served from a commercial power source; and in existing areas of buildings undergoing alteration or repairs that do not result in the removal of interior walls or ceiling finishes exposing the structure, unless there is an attic, crawl space or basement available which could provide access for interconnection without the removal of interior finishes.

110.118 [B] 1011 Exit signs.

[B] 1011.1 Where required. Exits and exit access doors shall be marked by an approved exit sign readily visible from any direction of egress travel. Access to exits shall be marked by readily visible exit signs in cases where the exit or the path of egress travel is not immediately visible to the occupants. Exit sign placement shall be such that no point in an exit access corridor is more than 100 feet (30 480 mm) or the listed viewing distance for the sign, whichever is less, from the nearest visible exit sign.

Exceptions:

1. Exit signs are not required in rooms or areas which require only one exit or exit access.
2. Main exterior exit doors or gates which obviously and clearly are identifiable as exits need not have exit signs where approved by the building official.
3. Exit signs are not required in occupancies in Group U and individual sleeping units or dwelling units in Group R-1, R-2 or R-3.
4. Exit signs are not required in sleeping areas in occupancies in Group I-3.
5. In occupancies in Groups A-4 and A-5, exit signs are not required on the seating side of vomitories or openings into seating areas where exit signs are provided in the concourse that are readily apparent from the vomitories. Egress lighting is provided to identify each vomitory or opening within the seating area in an emergency.

[B] 1011.4 Internally illuminated exit signs. Electrically powered and self-luminous exit signs shall be listed and labeled in accordance with UL 924 and shall be installed in accordance with the manufacturer's instructions. Sections 1011.5.1, 1011.5.3 and Chapter 27. Exit signs shall be illuminated at all times. If photoluminescent exit signs are approved by Board variance, a charging light shall be installed nearby in accordance with UL 924 that cannot be manually turned off except with the overcurrent protection device.

[B] 1011.5 Externally illuminated exit signs.

[B] 1011.5.2 Exit sign illumination. The face of an exit sign illuminated from an external source shall have an intensity of not less than 5 foot-candles (54 lux).

[B] 1011.5.3 Power source. Exit signs shall be illuminated at all times. To ensure continued illumination for a duration of not less than 90 minutes in case of primary power loss, the illumination means shall be connected to an emergency power system provided from storage batteries, unit equipment or an on-site generator. The installation of the emergency power system shall be in accordance with Section 2702.

Exception: Approved exit sign illumination means that provide continuous illumination independent of external power sources for a duration of not less than 90 minutes, in case of primary power loss, are not required to be connected to an emergency electrical system.

110.119 [M] 804.3.8 Mechanical draft systems for manually fired appliances and

fireplaces. A mechanical draft system shall be permitted to be used with manually fired appliances and fireplaces where such system complies with all of the following requirements:

1. The mechanical draft device shall be listed and installed in accordance with the manufacturer's installation instructions.
2. A device shall be installed that produces visible and audible warning upon failure of the mechanical draft device or loss of electrical power, at any time that the mechanical draft device is turned on. This device shall be equipped with a battery backup if it receives power from the building wiring.
3. A smoke detector shall be installed in the room with the appliance or fireplace. This device shall be equipped with a battery backup if it receives power from the building wiring.

110.120 Energy Code. The electrical provision of the Energy Code shall also apply.

ARTICLE 210.52

**Article 210.52(G) (1) Garages: delete the following*

(1) Garages. In each attached garage and in each detached garage with electric power at least one receptacle outlet shall be installed for each car space.

ARTICLE 220.88

**Article 220.88; add an interpretation to read as follows:*

[This specification may apply to restaurants regarding new occupancy, new buildings, change of occupancy in existing buildings, or upgrading existing buildings to new electrical load requirements.]

ARTICLE 230.2

**Article 230.2(A); add a "Special Condition" 7 to read as follows:*

(7) In supplying electrical service to multifamily dwellings or multiple tenant commercial buildings, two or more laterals or overhead service drops shall be permitted to a building when either of the following conditions are met:

- a. The building has more than six individual gang meters and all meters are grouped at the same location. (For the purpose of this provision, "grouped at the same location" shall mean not more than 30 feet separation on the same wall); or,
- b. The utility provider cannot meet building loads with a single transformer.

**Article 230.2(B); changed to read as follows:*

(B) Special Occupancies. By special permission, additional services shall be permitted for either of the following:

- (1) Multiple-occupancy buildings where there is no available space for service equipment accessible to all occupants.
- (2) Buildings two-hundred-fifty (250) feet or more in length could have additional service locations with not less than one-hundred-seventy-five (175) feet of separation between utility points of delivery or service point.

**Article 230.2(C); changed to read as follows:*

(C) Capacity Requirements. Additional services shall be permitted under any of the following:

- (1) Where the capacity requirements are in excess of 2000 amperes at a supply voltage of 1000 volts or less.
- (2) The building loads cannot be met by a single transformer.
- (3) By special permission.

ARTICLE 230.42

**Article 230.42(A); add two new paragraphs after item (2) to read as follows:*

Service entrance conductors after the utility provider point of delivery or service point shall be subject to the requirements of this code and shall be sized based upon the overcurrent protection provided.

When the utility provider service conductors connect directly to the service equipment disconnecting means, the utility provider's service cables shall be subject to the requirements of this code and shall be sized based upon the service equipment overcurrent device.

ARTICLE 230.70

**Article 230.70 (A): add a "Special Condition" 4 to read as follows*

(4) Where more than one electrical service is installed on a multi-occupant building all disconnecting means shall be installed in one location either inside or outside of the building.

ARTICLE 230.71

**Article 230.71(A); add a sentence at the end of the first paragraph, followed by an exception to read as follows:*

Multifamily dwelling units or multiple tenant commercial buildings with meter banks exceeding six meters with disconnects supplied from one lateral shall have a main disconnecting means with over current protection.

***Exception:** For 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. More than one lateral and tap can may be installed at a service location, but each tap can will be limited to six individual disconnecting means in compliance with 230.40, exceptions 1 & 2.*

ARTICLE 240.91

**Article 240.91; changed to delete the article.*

ARTICLE 250.50

**Article 250.50; changed to read as follows:*

250.50 Grounded Electrode System. All grounding electrodes as described in 250.52(A)(1) through (A)(7) that are present at each building or structure served shall be bonded together to form the grounding electrode system.

Where a metal underground water pipe, as described in item 250.52(A)(1), is not present, a method of grounding as specified in 250.52(A)(2) through (4) below shall be used.

Exception: Concrete-encased electrodes of existing buildings or structures shall not be required to be part of the grounding electrode system where the steel reinforcing bars or rods are not accessible for use without disturbing the concrete.

ARTICLE 250.52

**Article 250.52 (A)(4); changed to add an exception to read as follows:*

(4) Ground Ring. A ground ring encircling the building or structure, in direct contact with the earth, consisting of at least 6.0 m (20 ft.) of bare copper conductor not smaller than 2 AWG.

Exception: In lieu of encircling the building, two ground rod or pipe electrodes, complying with item 250.52(A)(5), may be used when separated by at least 20 feet and connected with a minimum of 2 AWG bare copper conductor at least 30 inches deep.

**Article 250.52(A)(5); changed to read as follows:*

(5) Rod and Pipe Electrodes. Rod and pipe electrodes meeting the requirements listed in this section may be installed for electrical services on the following structures:

- (a) Temporary services 200 amps or less.
- (b) Separate structures, temporary in nature, temporary being 12 months or less, when supplied from another building or temporary service pole, with an electrical service 200 amps or less, and a metal underground water pipe is not present.
- (c) Separate structures installed for permanent use, being 12 month or longer, and supplied from another building or permanent service pole, with an electrical service 200 amps or less, and a metal underground water pipe is not present.
- (d) Mobile home pedestals, 200 amps or less.
- (e) For supplemental electrode see 250.53(D)2.

Such rod and pipe electrodes shall not be less than 2.44 m (8 ft) in length and, shall consist of the following materials.

(remainder of article unchanged)

ARTICLE 300.11

**Article 300.11(A)(1); changed to read and the exception deleted as follows:*

(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 unless tested as part of a fire-rated assembly. An independent means of secure support . . . *{text unchanged}* . . . are part of the fire-rated design.

**Article 300.11(A)(2) and exception; changed to read as follows:*

(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 unless authorized by, and installed in accordance with, the ceiling system manufacturer's instructions. An independent means of secure support shall be provided ~~and shall be permitted to be attached to the assembly.~~

Exception: From the last point of independent support or base for connections within an accessible ceiling to luminaire(s) (lighting fixture(s)) or equipment, branch circuit or fixture whip wiring shall be allowed to be supported by the ceiling support wires.

ARTICLE 310.10

**Article 310.10; add a sentence to read as follows:*

Where NM, NMC, NMS and other cables, conductors and wiring methods listed in Chapter 3 are installed in an attic that is exposed to outside temperatures, the ambient temperature shall

be considered to exceed 140°F.

ARTICLE 310.15

**Article 310.15(B)(7), "120/240-Volt, 3-Wire, Single-Phase Dwelling Services and Feeders"; add a sentence to read as follows:*

This Section shall not be used in conjunction with Section 220.82.

ARTICLE 334.10

**Article 334.10; changed 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 of Types III, IV, and V construction when of wood stud wall framing, except as prohibited in 334.12. When exceeding three (3) stories, as determined by the Building Code, an approved automatic sprinkler system (Fire Code Section 903.3.1.1 or 903.3.1.2) is required throughout.

Exceptions: 1. Usage is permitted for multifamily dwellings of any construction type, with any wall framing material, in buildings not exceeding four (4) stories, as determined by the Building Code, when provided with an approved automatic sprinkler system (Fire Code Section 903.3.1.1 or 903.3.1.2) throughout.

2. Usage is permitted for multifamily dwellings of any construction type, with any wall framing material in buildings not exceeding five (5) stories, as determined by the Building Code, after the switchboard or panelboard of all individual dwelling units, when provided with an approved automatic sprinkler system (Fire Code Section 903.3.1.1) throughout.

- (3) Other structures of Types III, IV, and V construction when of wood stud wall framing, except as prohibited in 334.12. When exceeding three (3) stories, as determined by the Building Code, an approved automatic sprinkler system (Fire Code Section 903.3.1.1 or 903.3.1.2) is required throughout.

Exceptions: 1. Usage is permitted for hotel/motel uses of any construction type, with any wall framing material, in buildings not exceeding four(4) stories, when provided with an approved automatic sprinkler system (Fire Code Section 903.3.1.1 or 903.3.1.2) throughout.

2. Usage is permitted in detached one (1) story commercial buildings not exceeding 5,000 square feet of any construction type with any wall framing material.

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.

- (4) Cable trays where the cables are identified for the use.

ARTICLE 440.6

**Article 440.6; add a sentence to read as follows:*

Branch circuits to AC condensing units 2 tons or larger shall be a minimum of 10 AWG copper conductors. See also attic temperatures in Articles 310.10.

ARTICLE 500.8

**Article 500.8(A); changed to read as follows:*

(A) Suitability. Suitability of identified equipment shall be determined by any 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.

ARTICLE 505.7

**Article 505.7(A); changed to read as follows:*

(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 in the State of Texas.

ARTICLE 517.30

**Amend Article 517.30 (G) to read as follows and by adding Articles 517.30 (H):*

(G) Coordination. Overcurrent protective devices serving the equipment branch of the essential electrical system shall be coordinated for the period of time that a fault's duration extends beyond 0.1 second.

Exception No. 1: Between transformer primary and secondary overcurrent protective devices, where only one overcurrent protective device or set of overcurrent protective devices exists on the transformer secondary.

Exception No. 2: Between overcurrent protective devices of the same size (ampere rating) in series.

Informational Note: The terms coordination and coordinated as used in this section do not cover the full range of overcurrent conditions.

(H) Selective Coordination. Overcurrent protective devices serving the life safety, and critical branches of the essential electrical system shall be selectively coordinated with all supply-side overcurrent protective devices.

Exception No. 1: Between transformer primary and secondary overcurrent protective devices, where only one overcurrent protective device or set of overcurrent protective devices exists on the transformer secondary.

Exception No. 2: Between overcurrent protective devices of the same size (ampere rating) in series.

Informational Note: The terms coordination and coordinated as used in this section do not cover the full range of overcurrent conditions.

ARTICLE 550.1

**Amend Article 550.1 by adding Articles 550.1.1, 550.1.2, 550.1.3 and 550.1.4 to read as follows:*

Site requirements.

550.1.1 Applicability The provisions of this Article apply to the construction and maintenance of all mobile home and manufactured home parks.

550.1.2 All electrical wiring, power distribution lines, and telephone lines in a mobile home or manufactured home park shall be installed underground and in compliance with this code.

550.1.3 Street lights. Each internal street shall be provided with street lighting. Light standards shall have a height and spacing to ensure an average illumination level of not less than 0.2 foot candles.

550.1.4 History Mobile Home Park regulations were first adopted in May 18, 1970 (with retroactive provisions), Ordinance 6293. Recreational Vehicle Park regulations were first adopted by Ordinance 6372, effective October 12, 1970. Under Ordinance 12264, City Code Chapter 21, Mobile Home Parks was deleted and the provisions moved to the Fire Code Appendix. Such Appendix was continued thru Ordinances 14652, 14688 and 16027.

ARTICLE 551.1

Amend Article 551.1 by adding Articles 551.1.1, 551.1.2, 551.1.3, 551.1.4, 551.1.5, 551.1.6 and 551.1.7 to read as follows:

Site requirements.

The following provisions shall apply to Recreational Vehicle Parks and Recreational Vehicle lots that occur in Mobile Home and Manufactured Home Parks.

551.1.1 Applicability. The provisions of this Article apply to the construction and maintenance of all recreational vehicle parks.

551.1.2 All electrical wiring, main power distribution lines, and telephone lines shall be installed underground.

551.1.3 Individual electrical connections provided at recreational vehicle spaces shall include an approved disconnecting device and over current protective equipment.

551.1.4 Recreational Vehicle lots in Recreational Vehicle Parks and in Mobile Home or Manufactured Home Parks shall be master metered. Power releases shall not be permitted for individual lots.

551.1.5 Street lights. Each internal street shall be provided with street lighting. Light standards shall have a height and spacing to ensure an average illumination level of not less than 0.2 foot candles.

551.1.6 Service and Auxiliary Buildings. This section shall apply to all service buildings, recreation buildings, management offices, repair shops, storage areas, sanitary facilities, laundry facilities, indoor recreation areas, commercial buildings supplying essential goods or services for park tenants, and other similar buildings in recreational vehicle parks.

Illumination levels shall be maintained, as a minimum, as follows:

- a. General seeing tasks: Five (5) foot candles.
- b. Laundry room work area: Forty (40) foot candles.
- c. Toilet room, in front of mirrors: Forty (40) foot candles.

551.1.7 History. Mobile Home Park regulations were first adopted in May 18, 1970 (with retroactive provisions), Ordinance 6293. Recreational Vehicle Park regulations were first adopted by Ordinance 6372, effective October 12, 1970. Under Ordinance 12264, City Code Chapter 21, Mobile Home Parks was deleted and the provisions moved to the Fire Code Appendix. Such Appendix was continued thru Ordinances 14652, 14688 and 16027.

ARTICLE 600.6

**Article 600.6(A)(1) changed to read as follows:*

- (1) **At Point of Entry to a Sign Enclosure.** The disconnect shall be located at the point the feeder circuit or branch circuit(s) supplying a sign or outline lighting system enters a sign enclosure or a pole in accordance with 600.5(C)(3) and shall disconnect all ungrounded conductors where it enters the enclosure of the sign or pole.

ARTICLE 600.10

**Article 600.10; changed and expanded to 600.10.1 and 600.10.2 to read as follows:*

600.10. Portable or Mobile Signs.

Interior - Shall be those signs that are small in nature, usually hung from hooks in the wall or ceiling with an electrical cord for plug in or direct connection to an electrical source. These signs shall not be permitted to be installed in an outside location.

Exterior - Shall be those signs that are set on the exterior, usually but not always in the parking lot, limited in size as described in the Zoning and Sign Code, some of which may have wheels installed to permit the towing behind a vehicle.

600.10.1. Interior.

- (A) **Support.** Portable or mobile signs shall be adequately supported and readily movable without the use of tools.
- (B) **Attachment Plug.** An attachment plug shall be provided for each portable or mobile sign.
- (C) **Wet or Damp Location.** Portable or mobile signs in wet or damp locations shall comply with 600.10.1(C)(1) and (C)(2).
 - (1) **Cords.** All cords shall be junior hard service or hard service types as designated in Table 400.4, and have an equipment grounding conductor.
 - (2) **Ground-Fault Circuit Interrupter.** Portable or mobile signs shall be provided with factory-installed ground-fault circuit-interrupter protection for personnel. The ground-fault circuit interrupter shall be an integral part of the attachment plug or shall be located in the power-supply cord within 12 in. (300 mm) of the attachment plug.
- (D) **Dry Location.** Portable or mobile signs in dry locations shall meet the following.
 - (1) Cords shall be SP-2, SPE-2, SPT-2, or heavier, as designated in Table 400.4.
 - (2) The cord shall not exceed 15 ft (4.5 m) in length.

600.10.2. Exterior.

- (A) Exterior portable or mobile signs shall **not** be illuminated by any electrical source. Those

signs equipped with an electrical cord shall have it removed.
(B) Signs shall be adequately secured to prevent overturning by wind.

ARTICLE 600.21

**Article 600.21(E); changed to read as follows:*

(E) Attic and Soffit Locations. Ballasts, transformers, and electronic power supplies shall be permitted to be located in attics and soffits, provided there is an access door at least 900mm by 562.5mm (36 in. by 22 ½ in.) and a passageway of at least 900mm (3 ft) high by 600mm (2 ft) wide with a suitable permanent walkway at least 600mm (2 ft) wide extending from the point of entry to each component. At least one lighting outlet containing a switch or controlled by a wall switch shall be installed in such spaces. At least one point of control shall be at the usual point of entry to these spaces. The lighting outlet shall be provided at or near the equipment requiring servicing.

ARTICLE 680.25

**Article 680.25(a); changed to read as follows:*

(A) Wiring Methods. Feeders shall be installed in rigid metal conduit, intermediate metal conduit, liquidtight 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, or nonmetallic-sheathed cable and SE cable shall be permitted where installed within or on the building served, and electrical nonmetallic tubing shall be permitted where installed within a building. Aluminum conduits shall not be permitted in the pool area where subject to corrosion.

ARTICLE 696 – ELECTRIFIED FENCES

696.1 Scope

This article applies to the installation and maintenance of *electrified fences* containing more than two energized strands and having a minimum height of more than twenty four (24) inches measured from grade to the highest strand.

696.2 Definitions

Protective Barrier. Permanent fence or wall that restricts direct access to the energized portions of an electrified fence. Permanent shall mean not being able to be removed, lifted or relocated without the use of a tool or equipment.

Electrified Fence. A fence energized with an electrical current.

Secure Area. The area bounded by the *electrified fence*.

696.3 Permits Required. An electrical permit is required for the installation, repair, and alteration of electrified fences. A separate permit is required for the installation of a *protective barrier*.

Exceptions:

1. The repair and replacement of *electrified fence* conductive strands, and posts or poles for electrified fence systems.
2. *Electrified fences* installed on agriculturally zoned property as defined in the Fort Worth Zoning Code.

696.3.1 Plan Submittal. Electrical permit applications for *electrified fences* shall include two complete sets of the following:

1. Site plan showing the location of the *protective barrier* and the *electrified fence* on the property in relationship to property lines, walkways and exiting buildings.
2. Fence details showing both the *electrified fence* and *protective barrier*, including all gates.
3. Electrical details showing the equipment, wiring diagrams, grounding, and other information to insure compliance with the Fort Worth Electrical Code.
4. Energizer Output Certification Form as prescribed in section 696.8.

696.4 Fee. At the time of permit application, an electrical permit fee of one hundred seventy dollars (\$170.00) shall be paid.

696.5. Location Restrictions. *Electrified fences* shall not be installed at the following locations:

- a. Within five (5) feet of a building exit.
- b. Within thirty (30) feet of a hazardous material storage or handling areas.
- c. On roof tops or within buildings.
- d. All residential uses

696.6 Electrified Fence Height. *Electrified fences* shall be restricted to a maximum height of two (2) feet above the height of the *protective barrier*.

696.7 Electrical Equipment Standards. Electrical equipment, wiring, and grounding shall comply with the provisions of this Code and the following standards:

1. The energizer output shall comply with section 22.108 of the International Electrotechnical Commission (IEC) 60335-2-76 Standard.
2. Energizers shall provide pulsed power.
3. AC current shall not be used to energize any electrified fence.
4. The energizer shall be powered by a DC battery not to exceed 12 volts. A trickle charger and solar panels may be used to recharge the battery but shall not directly energize the fence.
5. All ground system cables shall be properly insulated.

6. The electrified fence grounding system shall not be connected to any plumbing systems.
7. Each energizer shall be connected to its own ground system and shall not be connected to any other grounding system.

696.8 Energizer Output Certification. The applicant shall sign a form provided by the City of Fort Worth certifying that the electrified fence energizer output characteristics comply with section 22.108 of the IEC 6335-2-76 International Standard.

696.9 Protective Barrier. The perimeter of the *secure area* shall be protected by an additional non-electrified fence meeting the following standards:

1. The *protective barrier* shall be a permanent fence or wall at least six (6) feet in height above the adjacent grade, subject to the limitations of the City of Fort Worth Zoning Ordinance
2. Openings in the *protective barrier* shall not allow for the passage of a two (2) inch sphere. The maximum vertical clearance between grade and the bottom of the *protective barrier* shall be two (2) inch.

Exception: At rolling gates, the maximum vertical clearance between grade and the bottom of the *protective barrier* shall be four (4) inches.

3. The *protective barrier* shall be separated from the *electrified fence* by a minimum of six (6) inches and a maximum of twelve (12) inches.

Exception: Conductive stands installed at gates installed in *protective barriers* shall be separated from the gate by a maximum of twelve (12) inches.

696.10 Warning Signs. *Electrified fences* shall be clearly marked with warning signs. The warning signs shall be placed on the *protective barrier* at each entrance to the *secure area* and at intervals not to exceed thirty (30) feet along the entire perimeter of the fence line. Warning signs shall be located not less than five (5) feet above the adjacent walking surface.

696.10.1 Graphics. Warning signs shall be printed on both sides in both English and Spanish with the following text: "WARNING ELECTRIC FENCE" and contain the international symbol for electrical shock hazard. Signs shall be reflective with a minimum 2 inch letter height, minimum stroke of ½ inch and have a contrasting background.

696.11 Key Switch. A Fort Worth Fire Department permitted and approved key switch shall be installed to provide secure access to the electrical power disconnect switch by public safety personnel. The key switch shall be located at the main entry point to the property in a location approved by the Fire Official.

696.12 Commercial Business Hours of Activation. An *electrified fence* shall not be energized during the hours of normal business operation. However, where businesses are operating continuously on a twenty four (24) hour basis the conductors of an *electrified fence* shall not be

energized unless all authorized persons within or entering the *secure area* have been informed of the electrified fence location.

696.13 Registration. *Electrified fences* permitted and installed after the effective date of this ordinance must be registered through the City of Fort Worth Planning and Development Department. The registration must be renewed annually from the date of permit issuance. The following information must be provided at the time of registration application:

1. Business Name
2. Address of Property
3. Contact Person / Representative
4. Address and phone number of contact person

Furthermore, an applicant for renewal must provide a notarized statement from a registered electrician or fence contractor specializing in the installation of electrified fences, certifying that the electrified fence and equipment is currently operating in conformance with the provisions of this Code.

696.13.1 Registration Renewal Fee. An annual registration renewal fee of \$120 shall be charged for the registration of *electrified fences*.

696.13.2 Barrier Fence Inspection. As part of the registration renewal process, a Building Ordinance Inspection shall be scheduled and approved verifying the integrity of the *Protective Barrier*.

SECTION 3.

That Section 11-3 of the Code of the City of Fort Worth (1986), as amended, is hereby amended to read as follows:

Sec. 11-3 Effect of Conflict with Other Ordinances.

This chapter shall be cumulative of all provisions of ordinances of the Code of the City of Fort Worth, Texas (1986), affecting Electrical 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.

That Section 11-4 of the Code of the City of Fort Worth (1986), as amended, is hereby added to read as follows:

Sec. 11-4 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 (1986), affecting Electrical 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 Electrical Code, 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 2014 National Electrical 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.

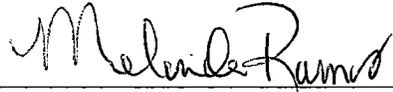
SECTION 11.

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.

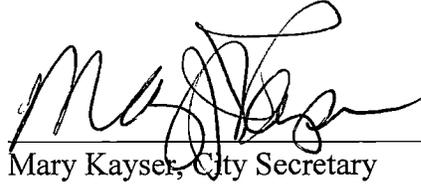
SECTION 12.

This ordinance shall take effect upon January 1, 2015.

APPROVED AS TO FORM AND LEGALITY:



Melinda Ramos, Assistant City Attorney



Mary Kayser, City Secretary

ADOPTED: December 9, 2014

EFFECTIVE: January 1, 2015