Chapter 10

ELECTRICITY*

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ARTICLE I. IN GENERAL

Sec. 10-1. Definitions.
When used in this chapter the following terms shall mean:

Apprentice electrician/electrical trainee shall mean a person who is learning the trade of electrician, who works under the direct supervision and orders of a master electrician, journeyman electrician or restricted residential wireman, and who is registered with the city or state but who has not yet passed a journeyman electrician examination.

Board shall mean the electrical supervisory board of the city.

Chapter shall mean this chapter 10 of the City Code of San Antonio, Texas and any subsequent enactments, amendments and/or reenactment of chapter 10, Code of the city of San Antonio.

Code shall mean the National Electrical Code, NFPA 70. The most current addition adopted by the City.

Director shall mean the director of the department of development services or an employee of the department authorized by the director to act on his behalf.

Electrical construction shall mean and include all work and material used in installing, maintaining and extending a system of electrical wiring and all appurtenances, apparatus and equipment used in connection therewith, whether inside or outside of any building or structure, lot or premises.

Electrical sign trade shall mean manufacturing, installing or contracting to install, erecting, hanging, connecting, reconnecting, servicing or maintaining any electric or neon sign or electric neon tubing for any purpose, whether inside or outside of any building, or on any part of the public right-of-way subject to this Code.

Electrical system shall mean all material, fixtures, devices and appliances for the purpose of conducting or utilizing electrical current.

Electrical trade shall mean installing or contracting to install, maintaining or repairing, connecting, reconnecting, servicing or maintaining of any wiring, fixtures or equipment used for the conducting of electricity for which a permit may be required by this chapter.

Electrical wiring shall mean electrical wiring, devices or material.

Firm shall mean when used in this chapter a business entity including, without limitation, either a sole proprietorship, corporation, partnership or any other entity that is legally recognized in Texas.

General contractor shall mean a person who is actively engaged in and is completely responsible for the construction of commercial or industrial structures within the geographical areas to which this chapter applies.

Homebuilder shall mean a person who is actively engaged in and is completely responsible for the construction of family dwellings within the geographical areas to which this chapter applies.

Inspector shall mean any person duly qualified and appointed in the manner provided in this chapter for the purpose of enforcing the provisions of this chapter <u>and must have a minimum of a current journeyman electrical license when inspecting commercial and industrial structures</u>.

Journeyman electrician shall mean a person who works for or under the supervision of or by the direction of a master electrician in the electrical trade, who has passed a journeyman electrician exam approved by the board <u>or State of Texas</u> and is qualified as provided in this chapter.

Layperson shall mean one neither currently nor in the past belonging to nor affiliated by employment, affinity, or within the first degree of consanguinity to the electrical profession.

License renewal date shall mean <u>midnight of the expiration date as listed on the license</u> (See section 10-167(e))

Maintenance shall mean the act of keeping in a state of safe operating condition any piece of equipment used inside or outside, attached or connected to any building or premises electrical system by replacement of units or elements thereof, but shall not include extensions of or additions to, an existing system or branch thereof.

Maintenance electrician shall mean a person having the necessary experience at the trade, who is employed within a given property or building, by the owner of the property or building or by having possession, control and custody of the property or building, to maintain the existing electrical system, including all fixtures and appurtenances contained in such property or building in a safe manner and is qualified as provided in this chapter. A maintenance electrician shall be limited to the maintenance of public, commercial, industrial and residential property and shall be a person who has had at least eight thousand (8,000) hours experience at the trade and is qualified as provided in this chapter.

Maintenance technician shall mean a person having the necessary experience at the trade, who is registered with the city and who is employed within a given property or building, by the owner of the property or building or by having possession, control and custody of the property or building, to perform limited maintenance work on the existing electrical system as outlined in this chapter.

Maintenance trainee shall mean a person who is learning the trade of maintenance electrician and who works under the direct supervision and orders of a licensed maintenance electrician, but has not yet passed the respective maintenance electrician examination.

Master electrician shall mean any person who holds himself <u>or herself</u> out to the public to do electrical work or to contract to do any or all kinds of electrical work mentioned in this chapter; a person who himself <u>or herself</u> or by the employment of journeyman electricians, restricted residential wireman and/or apprentices/trainees performs the work of installing wires, conduits, apparatus, fixtures or other appliances for carrying or using electricity for light, heat or other purposes, whether the master electrician contracts to do the work personally or through others and is qualified as provided in this chapter.

Master sign electrician shall mean a person who holds himself or herself out to the public to contract for himself or herself or by the employment of registered sign technicians and/or registered sign trainees to perform the work of manufacturing, installing, connecting, reconnecting, or servicing of electric signs, or any cold cathode or neon gas tubing, inside or outside, of whatever description or for any purpose and is qualified as provided in this chapter. This work shall not include extensions of or additions to an existing branch circuit.

Practicing shall mean actively involved in the electrical trade.

Registered sign technician shall mean a person who works for or under the supervision of or by the direction of a master sign electrician in the installation, manufacture and/or maintenance of electric signs who has registered and is otherwise qualified as provided in this chapter.

Registered sign trainee shall mean a person who has registered as required by this chapter and is learning the trade of master sign electrician or sign technician and who works under the direct supervision and orders of a master sign electrician or registered sign technician in the manufacture, installation or maintenance of electric signs but who has not yet met the requirements of a master sign electrician or registered sign technician.

Restricted residential wireman shall mean a person who works for and under the general supervision and direction of a master electrician in compliance with this chapter, performing electrical work on newly constructed one-and two-family dwellings only, and who does not hold himself/herself out to the public as being qualified to contract for the performing of electrical work. An individual possessing a restricted residential wireman license may perform work as an apprentice/trainee as defined in and under the scope of this chapter, but a restricted residential wireman shall not direct, supervise or perform work under this license in the remodeling and/or additions or repairs to any existing electrical system for commercial or industrial buildings.

Surety bond or bond shall mean, when referring to the requirements imposed upon a master electrician or master sign electrician, a good and sufficient corporate surety bond, in form approved by the city attorney, issued by a company authorized to write the bond in the state, in the amount specified. The bond shall be made payable to the city for the use and benefit of the city and of any person injured or damaged by any act or neglect of the principal, the principal's agents or the principal's employees, or by reason of failures to pay any fees and/or other charges due the city, or for failure to remedy any defects or faulty workmanship or material without additional cost to the person for whom the work was done within the time prescribed by the city's electrical inspector for the completion of such remedial work, and guaranteeing compliance with the requirements of this code of all work installed by the principal, the principal's agents, or the principal's employees.

Sec. 10-2. Scope of chapter.

(a) All provisions of this chapter shall be effective, and shall be applied to the entire area within the city, and if and when any additions, subdivisions or any area is added or incorporated into the city limits, the buildings therein must be inspected as soon thereafter as possible, under the provisions of section 10-49.

(b) The provisions of this chapter shall apply to all installations of and work done on electrical conductors, fittings, devices, motors, controls, appliances, fixtures,

electronic devices, signs and gaseous tubing, referred to in this chapter as electrical equipment within or on public and private buildings and premises.

(c) On all installations of electrical conductors or equivalent equipment hereafter made, and all existing installations which are altered, or for which the use has changed, all work shall be done in a manner that conform with the requirements for a sufficient and safe electrical structure and system under this chapter.

(d) Repair and maintenance work shall be such that if any electrical conductor or equipment is removed and later replaced, same shall be replaced in accordance with the provisions of this chapter.

Sec. 10-3. Intent of chapter.
The spirit and intent of this chapter is to protect the city and its citizens from the installation of electrical materials and devices that may endanger life and property and to ensure the safety and welfare of all citizens. It shall be a requirement within the city limits that habitable buildings be wired for electrical service and that this wiring be installed and maintained within the scope of this chapter. A habitable building is one intended and designed to be used in any manner involving human occupancy.

Sec. 10-4. Purpose of this chapter.
The purpose of this chapter is the practical safeguarding of persons and buildings and their contents from electrical hazards arising from the improper use of electricity for light, heat, power, radio, signaling and for other purposes.

Sec. 10-5. Interpretation of regulations.
The director of development services shall refer to the board, all disputed questions pertaining to the installation of all electrical wiring devices and equipment, provided for in this chapter. These disputed questions shall be interpreted by the board in accordance with this chapter.

Sec. 10-6. Exception.
It is hereby provided that none of the requirements of this chapter shall apply to the installation of wiring and equipment by or for the city for the purpose of generating, transmitting, and delivering service to its customers. Utilities will be allowed to employ a master electrician registered or licensed by the city for the purpose of obtaining city electrical permits to install electrical wiring in or on buildings either owned or leased by the utility. Utilities will not be allowed to obtain electrical permits or perform other electrical work covered by the scope of this chapter in or on other private properties.

Sec. 10-7. Plan review charges.
A plan review shall be provided upon presentation of plans and a completed plan review request form. The minimum plan review fee shall be as set by ordinance.

Sec. 10-8. Standard tower lease agreement.
The standard tower lease agreement, including all terms and conditions of such lease, is hereby approved. A copy of the agreement, in substantially final form, is attached to Ordinance Number 83931 as Exhibit II. In relation to the execution of standard tower lease agreements only, the city hereby adopts a policy that eliminates the requirement that each individual control be approved by city council, provided there are no substantial changes to the standard tower lease agreement. It is acknowledged and accepted that the premises description and the tenant description will change in each contract and do not require council approval. However, all other substantial changes to such agreement shall require council approval. All other changes to such agreement shall be made subject to the approval of the city attorney's office.

ARTICLE II. ADMINISTRATION AND ENFORCEMENT

DIVISION 1. GENERALLY

Sec. 10-26. Enforcement of chapter.
The director of development services, the chief electrical inspector and their assistants shall be empowered to compel the suspension of any electrical sign work and/or electrical wiring being done in violation of this chapter.

Sec. 10-27. Service of notice.
(a) If the person to whom any order or notice issued pursuant to the provisions of this chapter cannot be found after reasonable search has been made for him, then such order or notices may be served by posting same in a conspicuous place upon the premises occupied by him or where the defects recited in the order or notice are alleged to exist, or on the premises which may be deemed unsafe or dangerous. Such service shall be equivalent to personal service of such order or notice. Any order to comply with the terms of this chapter or other notice shall be sent by certified mail in a sealed envelope with postage prepaid and directed to the last known address of the electrician, owner, lessee or occupant of the premises where the defects recited in the order are alleged to exist, and shall be equivalent to the personal service of such order.

(b) For any changes in this chapter, the director, at the direction of the board shall notify the electrical contractors and electrical sign contractors.

Sec. 10-28. Violations.
(a) Penalty. Any person, or persons, who installs, or causes to be installed, maintains or causes to be maintained, electric wiring, devices or equipment used in connection with the installation of and/or maintenance of electric wiring, devices, and equipment in violation of the provisions of this chapter, or who fails to do any act required hereby, shall be deemed guilty of a misdemeanor and upon conviction thereof, shall be punished as provided in section 1-5 of the City Code, general

penalties. Each and every day of continuance thereof shall constitute a distinct and separate offense.

(b) Liability of corporation, association officers and agents. Violation of any of the terms or provisions of this chapter by any corporation or association shall subject the officers and agents of such corporation or association, to the penalty provided in this section.

(c) Cause for revocation of license or certificate. Conviction under the provisions of this chapter shall be deemed just cause for the revocation of any certificate, registration or license which such person may have or hold under the provisions of this chapter and examinations for reissue of such certificate or license shall be at the discretion of the board.

(d) The director of development services, the chief electrical inspector and their assistants are empowered to cause criminal charges to be filed in a court of competent jurisdiction consistent with the enforcement of this chapter.

Secs. 10-29--10-40. Reserved.

DIVISION 2. INSPECTORS

Sec. 10-41. Appointment of chief electrical inspector.
The director of development services shall appoint a chief electrical inspector for assistance in enforcing provisions of this chapter, and the chief electrical inspector may delegate any powers consistent with this chapter to subordinates.

Sec. 10-42. Granting or refusing permits.
(a) The chief electrical inspector shall, upon application in the proper forms and payment of required fees, grant permits for the installation, extension, or alteration of electrical wiring, devices and equipment, which comply with this chapter, and which are to be installed by proper persons as provided in this chapter, and shall make inspections and reinspections as provided in this chapter.

(b) The chief electrical inspector shall have the power to refuse the granting of permits for electrical work of any kind when it is shown or when such inspector has good cause to believe the work will not be done in substantial compliance with this chapter.

Sec. 10-43. Supervision of electrical work.
It shall be the duty of the chief electrical inspector, who shall hold a master electrician's license, to supervise all electrical installations and work by city electricians, which work must pass the inspection required by the provisions of this chapter. The chief electrical inspector is the master of record for electrical work by city electricians.

Sec. 10-44. Disputed questions.
The chief electrical inspector shall refer to the board all disputed questions pertaining to the installation of all electrical wiring, devices, and equipment, provided for in this chapter.

Sec. 10-45. Engaging in business, financial interest.
It shall be unlawful for city electrical or sign inspectors to engage in the business of the sale, installation or maintenance of electrical conductors, devices, appliances, apparatus, fixtures or other electrical equipment, either directly or indirectly, and they shall have no financial interest in any concern engaged in such business at any time while in the employ of the city as an electrical or sign inspector.

Sec. 10-46. Liability.
Where action is taken by the director, the director's subordinates or the board to enforce the provisions of this chapter, such acts shall be done in the name of and on behalf of the city, and the inspectors in so acting for the city shall not render themselves personally liable for any damage which may accrue to persons or property as a result of any act committed in good faith in the discharge of their duties, and any suit brought against any inspector by reason thereof shall be defended by the city attorney, until final termination of the proceedings contained therein.

Sec. 10-47. License renewal.
Inspectors performing work within the scope of this chapter shall renew their city electrical/and or state electrical licenses according to this chapter and the license renewal fee shall be waived for the city licenses.

Sec. 10-48. Right of entry, disconnecting electrical service.
The chief electrical inspector or duly authorized inspectors shall have the right to enter any building during reasonable hours in the discharge of their official duties for the purpose of making any inspection or test of any electrical wiring, devices, and equipment therein. Where such installations are found dangerous to life or property or to work of the fire department, the chief and duly authorized inspectors are hereby empowered to disconnect such parts of the installations or to order disconnection of electrical service to any building until same has been made safe as directed. This provision shall be mandatory.

Sec. 10-49. Inspections and re-inspections.
(a) The chief electrical inspector or duly authorized inspectors shall make inspection of all new electrical installations and make re-inspections of any existing electrical installations at such time as may be necessary for the purpose of the safeguarding of life and property within the city.

(b) The chief electrical inspector shall inaugurate thorough periodic reinspection of installation of all electrical wiring, electric devices, and electric equipment now

installed, or that may hereafter be installed within the city and within the scope of this chapter and when the installation of any such wiring, devices, or equipment is found not to be in conformity with the requirements of this chapter, the chief is hereby empowered to disconnect such parts of the installation or to order disconnection of electrical service to any building after having given fifteen (15) day's notice in writing to the parties concerned or to either the tenant, the owner, or the owner's agent.

Sec. 10-51. Record of violations of this chapter.
The chief electrical inspector shall maintain a record of all violations of this chapter. The record shall contain the name and license number of the individual charged with the violation(s) as well as the name of the firm involved, a summary of the violation(s), the dispensation, and other pertinent information. The chief shall provide this record to the board whenever the individual or firm is brought before the board for a hearing as per section 10-75.

Sec. 10-52. Interference unlawful. It shall be unlawful for any person to interfere with the chief electrical inspector or the electrical inspectors in the discharge of their duties, or to prevent or in any manner attempt to prevent them from carrying out the provisions of this chapter.

DIVISION 3. ELECTRICAL <u>SUPERVISORY</u> BOARD

Sec. 10-66. Creation and composition.
(a) There is hereby created an electrical <u>supervisory</u> board which shall consist of eleven (11) appointive members, the director or his designated representative, and a representative of the city public service board, the latter two (2) being ex officio, nonvoting members. <u>The</u> appointive members shall be appointed by the city council upon recommendation of the city manager, for two (2) year terms.

(b) The appointive members shall consist of one (1) general contractor or practicing master electrician; one (1) practicing professional engineer licensed in the state; two (2) practicing master electricians; one (1) of who shall be recommended by a nationally recognized trade association representing the non-union segment; and one of whom shall be recommended by a nationally recognized trade association representing the union segment; two (2) journeyman electricians; one of whom shall represent the open shop segment of the industry and one of whom shall represent the union segment; one (1) homebuilder; one (1) master sign electrician; three (3) layperson consumers.

(c) <u>All appointed members shall reside in Bexar County.</u>

Sec. 10-67. Function.

<u>(a)</u> The board may review all decisions of the chief electrical inspector or the chief's subordinates.

(b) The board may alter, amend, or revoke any action or decision of the director, the chief electrical inspector, or subordinates regarding interpretations of the electrical code and board policies.

(c) The board may make rules consistent with this chapter.

Sec. 10-68. Reserved.

Sec. 10-69. Oath and certificate of membership.
Each member of the board shall swear or affirm to faithfully perform board duties as such board member and shall receive a certificate as a board member, but such certificate may be revoked for cause.

Sec. 10-70. Compensation of members.
The appointive members of the board shall receive twenty dollars ($20.00) per regular and called meeting attended and there shall be one (1) regular meetings per month. However, in no event are they to receive over two hundred and sixty dollars ($260.00) per year. The ex officio members shall not receive compensation for attending any meeting.

Sec. 10-71. Removal of members.
(a) Any member of the board found guilty of a violation of this chapter or who fails to perform their duties as a board member shall be recommended for removal. Recommendation for removal requires a two-thirds vote by the remaining board members in favor of removal. The city manager will be advised of the findings of the board for necessary action.

(b) Any member who fails to attend two (2) or more consecutive meetings may be removed from the board unless formally excused by action of the remaining board members.

Sec. 10-72. Member not to sit when charges preferred.
Where charges are preferred against a member of the board, such member shall not sit as a member of the board during the hearing of the case.

Sec. 10-73. Meetings.
(a) *Regular meetings.* The board may meet more than one (1) time a month if specifically called by the chairman, or five (5) other board members, and the members shall be notified at least twelve (12) hours prior to each meeting. Such meeting shall be devoted to hearing of charges, interpretations, and complaints received by the director of development services or the chief electrical inspector, and any other business as may be brought before the board.

(b) *Procedures at meetings.* The meeting of the board shall be conducted in conformity with Robert's Rules of Order, or any other rules under which all board members agree to abide, unless otherwise specified in this chapter.

(c) *Voting.* Each member of the board shall have one (1) vote, including the chair. A member of the board who is absent or fails or refuses to vote shall not be recorded as voting, either affirmatively or negatively. Proxy votes are not allowed.

(d) *Quorum.* Six (6) members shall constitute a quorum. A majority vote of those present is required to pass a motion except on charges of trials as noted hereafter in section 10-75.

Sec. 10-74. Appeals.
(a) *Notice of appeal.* The board shall require notice of appeal in writing stating grounds for appeal and other such matters. A person directly interested, affected, or aggrieved in decisions made by the director or the director's subordinates pertaining to the administration of this chapter may request an appeal of such decisions before the board. The appellant and the director or the chief electrical inspector shall be given reasonable notice of the time and place of appeal. A fee in the amount set by ordinance shall accompany each appeal before the board.

(b) *Appeals from the board's actions.* Any action of the board may be appealed by a person directly interested, affected, or aggrieved in the action by written petition filed with the board and the city clerk within twenty-one (21) days of such action for a hearing before the city council. A fee in the amount set by ordinance shall accompany such appeal.

Sec. 10-75. Suspension and revocation of <u>city</u> licenses <u>or</u> registrations.
(a) The board shall have the power to suspend, revoke <u>or put on probation</u> the registration or certificate of license of any person who is found guilty of:

(1) The practice of any fraud or deceit in obtaining such registration or license; or
(2) Taking out one or more electrical permits in the name of some person authorized by law to do electrical work, and thereafter permitting a person without a proper certificate of license to do the work; or
(3) Any gross negligence, incompetence, or misconduct in the performance of electrical work within the jurisdiction of the city, under this chapter.

(b) Hearing, notice and enforcement.

(1) In determining such charges, the board shall proceed upon the sworn information furnished by any person who is of sound mind and legal age. The board, whenever it deems the information sufficient to support further action on its part, shall cause a copy of the board's order, and of the information, to be served upon the accused by registered or certified mail or by personal delivery at least fifteen (15) days

before the date appointed in the order for the hearing. Notice shall be delivered to the license or registration holder and shall be sufficient if it is either personally delivered or deposited, postage-paid, certified or registered mail, with the United States Postal service, addressed to the last address shown on the records of the department of development services.

(2) A quorum for a hearing shall consist of two-thirds (2/3) of the appointed board members. No fewer than six board members shall be present for holding a hearing.

(3) The accused may appear in person or by counsel, or both, at the time and place named in the order, and make their defense to the same. The city attorney shall provide counsel for the board. If the accused fails or refuses to appear, the board may proceed to hear and determine the charge in their absence.

(4) If the accused pleads guilty, or if upon a hearing of the charges, the board, by a vote of two-thirds (2/3) or more of its members present, shall find them to be true, it may enter an order suspending, revoking, or revoking with a probationary period the license or registration of such electrician or contractor. Additionally, the board may enter an order restricting or suspending the ability of the license holder or registrant to obtain permits.

(5) When the license holder or registrant, in the performance of the work or action for which the charges were held to be true, acted for the firm for which such work or action was performed, the board may enter an order restricting or suspending the firm from obtaining a new master electrician of record until such time as it has provided proof to the satisfaction of the board that it corrected the situation for which the charges were filed or suspend all work performed under this chapter by that firm.

(6) The board may enter an order restricting the license holder, registrant, firm or principal. The board shall adopt written policies to administer this section.

(7) When the board has completed such hearing, it shall cause a record of its finding and decision to be filed with the chief electrical inspector and the city clerk, and shall cause a certified copy thereof to be forwarded to the accused.

(8) It shall be unlawful for any person, whose rights under a certificate of license or registration which has been suspended or revoked by the board, to engage in, or do, electrical work for which a permit is required by this chapter.

(9) The board shall, in reciting its decision, make a disposition of the problem of reinstatement. If the board desires to revoke the party's certificate of license or registration permanently, it shall so state. If not, it shall make provision for reinstatement.

Secs. 10-76--10-90. Reserved.

ARTICLE III. STANDARDS AND SPECIFICATIONS

Sec. 10-91. Adoption of Code.

The 2005 edition of the National Electrical Code of the National Fire Protection Association, N.F.P.A. No. 70, after recommendation by the board, and approval by City Council, where not in conflict with the provisions of this chapter, is hereby adopted as minimum standards for the city. The provisions of the 2005 National Electrical Code shall be applicable to all electrical work conducted in the city as if that code were written out in full in this chapter, except to the extent of a conflict between that code and this chapter.

Sec. 10-92. Specifications.

(a) *Standards required for material and equipment.* All electrical materials, wiring devices, electrical appliances or apparatus designed or intended for use on, or attached to, any electrical system, electrical circuit or therefrom, within the city, shall conform to the standards approved by the Underwriters' Laboratories, American Engineering Standards Committee, United States Bureau of Standards, National Electrical Manufacturers' Association, Canadian Standards Association, ITSNA or American National Standards Institute, and be used in the manner and for the purpose such approval was granted.

(b) *Standards for installations.* It shall be unlawful for any person to use any electrical materials, devices, or equipment unless such materials, devices or equipment are in conformity with the provisions of this chapter, and unless they are in conformity with approved methods of construction for the safety of life and property, as provided in this chapter. All installations shall meet the requirements of the National Electrical Code unless otherwise specified in this chapter.

(c) *Approval of new materials.* The use of new materials manufactured from time to time shall be subject to approval by the board.

(d) *Approved types of wiring systems.* Approved types of wiring systems in all buildings within the city, on all new wiring and additions thereto, or alterations of old wiring, attached to all exterior walls, and inside of all buildings and structures, of whatever kind, placed within the city as the boundaries now exist or may hereafter be extended from time to time, shall conform with and be not less than the applicable standard of Underwriters' Laboratories, American Engineering Standards Committee, United States Bureau of Standards, National Electrical Manufacturers Association, American National Standards Institute, National Electrical Code and this chapter, ITSNA, Testing Laboratories or any other testing company approved by the board.

(e) *Installation to accord with specifications approved by the inspector.* All planned structures having a total connected load, at the point of delivery of more than

one hundred (100) KVA single-phase or one hundred fifty (150) KVA three-phrase, for all systems below six hundred (600) volts and all systems above six hundred (600) volts, and when required by the State Engineering Act, shall have the electrical plans and specifications prepared by a practicing electrical and/or mechanical engineer registered and licensed by the state. These plans and specifications shall be submitted in the quantity requested by the city for review and shall be approved before a permit is issued. A minimum period of three (3) days will be required for the approval or disapproval of such plans. Any changes or alterations of an engineered plan shall originate in the office of the engineer and the plans and specifications will then be resubmitted to the city for approval.
On installations not requiring an engineer's seal, the above conditions shall also apply. Electrical plans submitted for review, whether or not an engineer's seal is required, shall properly detail the scope of work to be performed. Plans may include but not be limited to load calculations, riser diagrams, power plan, lighting plan, site plan etc.

(f) *Wires interfering with fire department or fire escapes.* No wires shall be installed, operated, or maintained over any street, sidewalk, or building in the city which is likely to interfere with the work of the fire department in the use of ladders or other apparatus, which shall obstruct or render hazardous the use of fire escapes.

(g) *Joint construction of wires.* Whenever possible and expedient, signal wires shall be carried on the same pole with the telephone and telegraph wires, such joint construction to be made as recommended by the National Electrical Safety Code.

(h) *Changing location of meters.* <u>If alterations of the building, dwelling or structure or wiring require changes in the location or size of the meter/service equipment, a licensed and bonded electrical contractor shall acquire a permit for the work to be performed and coordinate the disconnecting and reconnecting of service with CPS Energy.</u>

1. <u>*Emergencies*</u>

a. <u>Where life or property may be in danger a licensed bonded electrical contractor may disconnect the service to the building dwelling or structure and shall immediately notify CPS Energy.</u>

(i) *Services.* The contractor shall secure from the electric utility company the location at which the services are to be brought to the building and the method and type of metering desired by them. The electric utility company shall be notified, before the work is begun, of the amount of power consumption estimated and the type of equipment to be used.

(j) *Standards for electrical signs.*

(1) All electrically illuminated or electrically powered outdoor and indoor signs and displays shall be made safe to persons and property and in conformity with the provisions of this chapter and any results or regulations issued by authority thereof.

(2) Conformity of all types of electrical signs with and not less than applicable standards of the Underwriters' Laboratories, Inc. and the National Electrical Code, National Electrical Safety Code, and this chapter shall be prima facie evidence that such installations are safe to persons and property.

(3) The construction, erection, foundation and/or means of support of all electrical signs shall be reviewed by the city and only when approved shall appropriate permits be issued. Sign work, whether new or rehabilitative, including the means of support, shall not proceed prior to issuance of all required permits.

(k) *Conditions for certificate of approval.* A certificate of approval shall be issued upon the completion of an electrical installation for light, power, signs, air conditioning and ventilation, or heating services for which permits are required only when such installations are in strict conformity with rules and regulations governing the same as set forth in this chapter.

(l) *Standard of electrical reference available.* The city clerk is hereby directed to properly mark and identify one (1) printed copy of this chapter as a part of this code, which copy the city clerk shall keep on file in his office, as part of the permanent records; to certify two (2) other copies of this chapter and deliver one (1) of such copies to the office of the director of the development service department and the other to the chief electrical inspector, which copies shall be kept there as permanent records, rules and regulations governing the work covered thereby.

(m) *Utility company rules.* The latest edition of the city Public service publication (2004), *Electrical Service Standards,* adopted by the board is hereby incorporated and made a part of this chapter for all electric services and meter installations. All other wiring, either public or private, shall conform to this chapter.

(n) *Conformance to plans.* The installation of electrical equipment, within or attached to buildings or structures, shall be done in accordance with specifications previously submitted to and approved by the director of the development service department or the chief electrical inspector. Complete descriptions of proposed work shall be required by the director or the chief electrical inspector. When drawings are required they shall be to a definite scale, showing the point at which service connection is required, the size of the service and subfeeders, the location of service switches and center of distribution, the arrangement of circuits and the number of outlets connected thereto.

Sec. 10-93. Installation rules.

Electrical installations within the jurisdiction of this chapter shall comply with the most current adopted edition of the National Electrical Code, N.F.P.A. 70, except as indicated below:

(1) *General exceptions (all types of construction).*

a. No conductor smaller than No. 12 AWG copper shall be used for branch circuit and feeder wiring. No. 8 AWG aluminum, or larger when properly installed, may be used for individual branch circuits and feeders.

b. Ground rods, when used, shall be a minimum of 5/8-inch by eight-foot copper weld construction.

c. No knob and tube or armored cable (type AC) wiring shall be permitted. Manufactured wiring systems as outlined in Article 604 of the 2005 edition of the NEC NFPA 70 shall be limited in the following manner:

1. Listed by approved testing laboratory as approved for the purpose for which it is being tested;
2. May be installed above accessible ceilings and below access flooring systems, however, cable and fixtures may be installed on exposed ceilings only where cable and fixtures are not subject to physical damage and by an installation height of no less than twelve (12) feet above finish floor;
3. Outer covering to be metal-clad;
4. To be used for branch circuit lighting and raised flooring system outlets only;
5. Where cable and associated electrical boxes are used beneath a metal access floor system, the access flooring system shall be grounded in accordance with the manufacturer instructions. Each access floor penetration by an electrical cable, electrical box or where in contact with a box shall be bonded to the nearest electrical cable or box as per NEC article 250.
6. Not more than one hundred and twenty five (125) feet total to be installed in one sequence of connections from permanent wiring;
7. Conductors to be copper, insulation to be rated at ninety (90) degrees centigrade minimum, color coding as adopted by the city Code to be strictly adhered to;
8. Conductors to be sized according to the city Code;
9. An equipment-grounding conductor shall be used throughout each cable assembly and shall be the same size as the current carrying conductor;
10. Only one (1) opening on each fixture or tap box to be permitted to be shipped from factory without cover plate. Cover plates to be of same quality and grade as receptacles, or equal blank covers shall be used on all unused openings;
11. Manufactured wiring systems shall not be directly connected to panelboards.

d. Electrified fences, regardless of voltage, shall not be permitted to be installed or utilized.

e. Support for disconnecting devices for equipment covered under article 424 or 440 of the Code that requires periodic replacement, shall be independent and in sight

of such equipment and not have the power circuit pass through the unit or equipment ahead of the disconnect.

f. A 125-volt, 15 or 20 ampere rated receptacle outlet shall be installed at a readily accessible location for the servicing of heating, air-conditioning, or refrigeration equipment. The receptacle shall be a GFCI outlet; it shall be independently mounted from the unit and not on the same circuit as the equipment.

g. Flexible metal conduit as listed in Article 348 of the National Electrical Code shall not be used in wet locations under any conditions.

h. Where conductors are connected, all connections must be made according to manufacturer and industry written procedures.

i. One hundred eighty-volt amperes per outlet shall be used to calculate the electrical load of one hundred twenty-volt receptacle circuits, that is, ten (10) outlets on a twenty-ampere branch circuit and eight (8) outlets on a fifteen-ampere branch circuit. Branch circuits may supply a combination of receptacle and lighting outlets. When combined, receptacle and lighting outlets shall be rated at not less than one hundred eighty volt-amperes each. Branch circuits serving only lighting outlets shall be allowed to serve any number of outlets provided that the total load does not exceed the rating of the branch circuit.

j. Fasteners shall be permitted to pass through the interior of a device box only when located within one-fourth (1/4) inch of the back of the box.

k. Branch circuit, feeder and service conductors other than the grounded (neutral) conductor and equipment-grounding conductors shall be marked by one distinct color per phase, throughout the system, as listed in this section. The grounded-(neutral) conductor and insulated equipment-grounding conductors shall be marked with a color as required in the National Electrical Code. This rule additionally modifies 310.12 of the 2005 edition of the National Electrical Code.

1. The phase color-coding shall be applied in new wiring systems installed after the effective date of this section. Other phase colors may continue to be applied in occupancies that already have an established color code system that is not in conflict with the current adopted edition of the Code.

2. The phase color coding of this section shall be applied to new wiring and modifications in existing occupancies that do not have an established color coding arrangement as per this Chapter or the Code.

3. There shall be no obligation to make corrections to the phase color coding arrangement in an existing occupancy when such existing wiring is not in the immediate scope of work being performed.

4. Conductors with three continuous white stripes shall not be used for grounded or ungrounded conductors.

5. Article 200.7 of the 2005 Code shall only apply to NM cables in residential occupancies.

l. Conductor sizes No. 10 and smaller shall be continuously colored throughout the length of the conductor, except that cable assemblies used in one-and-two family dwellings or in multifamily dwellings of three stories or less shall be permitted to be distinguishable as required or allowed by the Code.

m. Conductor sizes No. 8 and larger shall be permitted to be distinguishable as required or permitted by the Code. Such conductors, where not continuously colored throughout their length shall be permanently marked at all switchboards, cutout boxes, junction boxes and any termination points. Where phasing tape is used such marking shall be a minimum of ~~3~~ 2 inches in length.

Phase Colors For Electrical Systems

TABLE INSET:

120/208 Volts	120/240 Volts	277/480 Volts
three phase	three phase	three phase
A--Black	A--Black	A--Purple
B--Red	B--Orange (high leg)	B--Brown
C--Blue	C--Blue	C--Yellow
N--White	N--White	N--Gray
	single phase	
	A-Black	
	B-Red or C--Blue	
	N--White	

n. In article 312.8 of the 2005 edition of NFPA 70, the phrase "unless adequate space for this purpose is provided" shall be omitted. Cabinets and cutout boxes

associated with panel-boards, load-centers and switchgear shall contain only conductors that terminate in the enclosure. Pass-through conductors are allowed only in panel-boards, load-centers or switchgear manufactured and listed for feed-through power supplies.

o. Device boxes with less than fourteen (14) cubic inches volume or less than two and three-fourths (2 3/4) inches deep shall not be used for the installation of branch circuit wiring devices. Conductor fill for allowable device boxes shall be calculated in accordance with Section 314.16 of NFPA 70, 2005 edition.

p. Shallow octagon boxes, generally known as "pancake" boxes, shall contain no more than three No. 12 conductors (one "hot," one neutral, one grounding conductor when used with a canopy that provides the necessary cubic inch volume required). Additional No. 12 conductors shall require octagon boxes one and one-half (1 1/2) inches deep or deeper.

q. The ground-fault circuit-interrupter required for hydromassage bathtubs by Section 680.71 of the 2005 edition of NFPA 70 shall be located a minimum of five (5) feet from the inside walls of the bathtub.

r. The maximum size of the tubing in Section 362.20(B) of the 2005 edition of NFPA 70 shall be one (1) inch.

s. All feeder and branch circuit wiring methods shall include an equipment-grounding conductor sized in accordance with Table 250-122 of the 2005 Code.

t. Type MC cable as listed in Article 330 of the 2005 edition of NFPA 70 shall be permitted for feeder conductors and branch circuit conductors only when installed in accordance with article 330 and other applicable code articles and provisions of this chapter. When used as branch circuit conductors, MC cable shall be installed under the following provisions:

1. MC cable of interlocking type as listed in article 330 of the 2005 National Electrical Code NFPA 70 is permitted, other styles are not permitted.
2. Individuals installing MC cable under the provisions set forth in this chapter shall have attended a Board approved training course on the proper installation of the cable. Acknowledgment of such training shall include a pocket card to be carried by the individual when installing MC cable.
3. The exterior armor of MC cable shall be color-coded blue on its entire length by the manufacturer to distinguish it from other flexible metallic conduit systems.
4. The finish cutting of the metal outer jacket shall be performed only with an approved rotary-type-cutting tool.
5. Connectors used with MC cable shall be approved for the purpose and shall have an anti-short bushing installed on the cable.
6. MC cable shall have the proper phase color of conductors throughout the entire length of the cable, including switch legs.

u. Non-metallic sheathed cables as listed in article 334 of the 2005 edition of the NEC shall not be used in any multifamily dwellings or other structures exceeding three floors above grade.

(2) *Dwelling occupancy exceptions.*

a. One hundred twenty-volt branch circuits serving the interior of a residence shall be fed from a panelboard or loadcenter located at a readily accessible location within the interior of the residence.

b. The main disconnect switch(es) for all residential meter loops shall be installed on the exterior of the building at the meter location unless approved otherwise by the city and the serving utility.

c. Cables, where run exposed, shall be protected from mechanical injury. Where run outside, approved cable is considered to be protected when run at the junction of the eave and wall, when above eight (8) feet.

d. Adequate illumination shall be provided in all areas where electric connected equipment that requires maintenance or service is located. A switch shall be located at the entrance or access point to control the lighting in this area. Light outlets shall be arranged to prevent accidental contact by persons working on the equipment. All open lamps shall be guarded where installed less than seven (7) feet above the walkway.

e. The two (2) or more twenty-ampere small appliance branch circuits required by section 210.11(C)(1) of the 2005 National Electrical Code shall serve all receptacle outlets covered by section 210.52(C) except for the following appliances:

1. Refrigeration equipment.
2. Disposals.
3. Dishwashers.

(3) *Commercial exceptions.*

a. All wiring on commercial installations shall be installed in approved raceways.

b. Service conductors when run to service equipment located inside a building and ahead of the service overcurrent device shall be installed in rigid metal conduit, intermediate metal conduit or busduct. Service conduits that penetrate the roof shall be so arranged that any water leaking around the conduit will not enter the service equipment.

c. All underground service lateral conductors not protected by overcurrent protection at their source shall be installed in either rigid conduit, IMC, or Schedule 40 PVC encased in an envelope of three (3) inches of concrete all around. Exposed PVC will not be allowed.

d. Article 600.23(B) of the 2005 NEC shall be enforced.

Sec. 10-94. General provisions/prohibitions applicable to all installations or work.

Provisions of the most recent addition of the National Electric Code as adopted by the city notwithstanding, the following general provisions or prohibitions shall apply to all electrical installations or work within the jurisdiction of this chapter unless specifically contradicted by another provision within this chapter:

Non-metallic sheathed cables shall not be used in any multifamily dwellings or other structures exceeding three floors above grade.

Secs. 10-95--10-109. Reserved.

ARTICLE IV. PERMITS*

*__Cross references:__ Discriminatory housing practice, § 9-36 et seq.

Sec. 10-110. *Distributed Generation* (DG) shall include, but not be limited to, electrical power derived from wind, water, sunlight, mechanical equipment, batteries, or fuel cells. DG includes all sources of electrical energy that are derived from equipment and/or systems other than the serving utility systems that may include, wholly or in part, generation transmission and distribution of electrical energy.

(1) All DG systems that are intertied with the electrical grid of the serving utility shall be approved by the city and the utility prior to issuance of an electrical permit.
(2) Stand-alone DG systems that are not connected to the electrical grid of the serving utility require electrical permits when any portion, segment or component of the DG system operates at or is rated for operation above 50 volts (AC or DC) or above 1,200 watts.
(3) Shall be installed per city public service regulations.

Sec. 10-111. When required, commencement of work.
No wiring, device or equipment for the transmission, distribution or utilization thereof of electrical energy shall be installed inside or outside, attached or connected to any building or structure or in a city street, nor shall any alteration be made in such existing wiring, device or equipment without first securing a permit therefore from the director or chief electrical inspector, unless specifically exempted in this section. If electrical wiring or installation of fixtures, equipment or work authorized under a permit, is not started within one hundred eighty (180) days after the issuance of such permit, or if work is started and then discontinued and the work remains discontinued without justifiable cause for a period of one hundred eighty (180) days, the permit shall become void, and no work shall be done on the premises until a new permit is issued and all necessary fees paid. No refunds shall be done on the premises until a new permit is issued and all necessary fees paid. If work is discontinued or abandoned the permit holder shall notify the central records section of the department of development services to properly document the vacated permit.

Sec. 10-112. Starting job without permits.
The board recognizes the fact that under certain conditions a job must be started before a permit can be obtained. The following procedures must be followed in regard to starting a job without a permit:
(1) The master electrician of record or the master's designated representative must contact the electrical permit office and provide the information listed herein. In the event this office is closed, such as after normal working hours, or on a weekend or holiday, the information must be provided to the chief electrical inspector's office by

phone, fax, e-mail, or other means. The information shall include the job address, the date work started, and the scope of the work.
(2) When an emergency exists that threatens life or property, the above requirements may be postponed, but only until the emergency no longer exists.

Sec. 10-113. Work for which electrical permit not required.
(a) No permit shall be required of an electrical contractor for the making of minor repair or maintenance work, the replacement of lamps or the connection of portable electrical equipment to suitable permanently installed receptacles.
(b) An electrical permit shall not be required of a refrigeration or HVAC firm active, licensed and registered with the city of San Antonio for the replacement of a refrigeration or HVAC system motor with another motor of the same characteristics when the electrical supply to the motor is or has been properly installed by an active licensed electrical contractor. This provision also applies to the replacement of solenoid valves, pneumatic or other controls associated with the motor.
(c) No electrical permit shall be required for the installation of that portion of wiring and equipment for telephone, voice, data, cable TV, broadband and other types of communications systems that operate at fifty volts nominal or less. These systems operating under fifty volts nominal shall be grounded according to the applicable provisions of Article 250 and Chapter 8 of the Code.
(1) Electrical permits and inspections shall be required for that portion of wiring and equipment for telephone, voice, data, cable TV, broadband and other types of communications systems that operates above fifty volts nominal. Such systems shall be grounded according to the applicable provisions of Article 250 and Chapter 8 of the Code.

Sec. 10-114. Application.
Application for permits shall be made in writing upon forms provided by the department of development services for that purpose. The application shall be referred to the director of development services who shall have the authority to issue or refuse a permit. All structures having a total connected load, at the point of delivery, of more than one hundred (100) kVA single-phase or one hundred fifty (150) kVA three-phase for all systems below six hundred (600) volts, and all systems above six hundred (600) volts, and when required by the State Engineering Act shall have the electrical plans and specifications prepared by, and have the seal of a practicing mechanical and/or electrical engineer registered and licensed by the state. The plans shall be submitted for inspection and approved before a permit is issued. Prior to the issuance of a permit for any electrical system, except those requiring an engineer's seal, the contractor will submit a one line wiring diagram of the electrical service and distribution, stating thereon load calculations and total connected kVA load and signed by the master electrician responsible when requested by the chief electrical inspector.

Sec. 10-115. Issuance.

When the director of development services finds the application to be correct and the diagrams or plans, where required, are approved and all fees have been paid or payment arranged for, the director shall cause the permit to be issued. Upon receipt of such permit, the master electrician may start or cause the proposed job to commence and shall complete the installation described in his application requesting inspection by city inspectors in the proper sequence as the work progresses.

Sec. 10-116. Disapproval.
If the plans relating to electrical wiring or installation of fixtures or equipment and the application heretofore required, are found to be incorrect or faulty, they shall be disapproved, and the director of development services shall notify the applicant, listing the section of the chapter of this Code or ordinances in violation.

Sec. 10-117. Nullifying and voiding.
The director or chief inspector shall have the right to declare a permit null and void if there has been misrepresentation of the facts or any violation of the provisions of this chapter.

Sec. 10-118. Separate permits for split jobs.
When one (1) electrical contractor completes the rough work, in whole or in part, or any electrical wiring or installation of fixtures or equipment and a second electrical contractor is called upon to complete the work in whole, or in part; then in that event, a separate permit is required, for which applicable unpaid fees shall be paid for the work to be done.

Sec. 10-119. Fees.
Before proceeding with the installation, alteration of or the addition to any electrical wiring or equipment as covered by this Chapter within or on any building, structure or premises, publicly or privately owned within the corporate limits of the city, the master electrician in charge of such proposed work shall first file with the director of development services an application for a permit, and pay fees to the city in accordance with the fees set out in the electrical permit application form.
REPAIR WORK
(I) *Residential; minor repairs* . . . No fee
On remodeling or added work, the regular schedule of fees will apply. "Minor repairs" as used in this paragraph shall mean the replacing of fuses, light globes, or fluorescent or neon tubes, replacing of defective receptacles, switches, cords or minor parts of existing equipment already installed under a previous permit. This also applies to the taking out and replacing of damaged motors of the same horsepower.
(II) *Commercial; minor repairs* . . . No fee
On remodeling or added work the regular schedule of fees will apply. "Minor repairs" as used in this paragraph shall mean the replacing of fuses, light globes, or fluorescent or neon tubes, replacing of defective receptacles, switches, cords or minor parts of existing equipment already installed under a previous permit. This also applies to the taking out and replacing of damaged motors of same horsepower.

(III) *Industrial; minor repairs* . . . No fee
On remodeling or added work the regular schedule of fees will apply. "Minor repairs" as used in this paragraph shall mean the replacing of fuses, light globes, or fluorescent or neon tubes, replacing of defective receptacles, switches, cords or minor parts of existing equipment already installed under a previous permit. This also applies to the taking out and replacing of damaged motors of same horsepower.

Sec. 10-120. Reserved

Sec. 10-121. Temporary wiring at construction sites or carnivals, circuses, fairs and similar events.
Permits shall be required for temporary wiring covered under Articles 525 and 590 of the 2005 edition of the National Electrical Code. Temporary wiring permits shall be subject to expiration after one hundred eighty (180) days and may be renewed. Fees shall be set by ordinance.

Sec. 10-122. Commencement of work, refund of fees.
Every permit issued by the department of development services under the provisions of the electrical code or this Code shall expire by limitation and become null and void if the building or work authorized by such permit is not commenced within one hundred eighty (180) days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned for a period of one hundred eighty (180) days after work is commenced. Before such work can be recommenced, a new permit shall be first obtained to do so, and the fee therefor shall be one-half (1/2) the amount required for a new permit for such work, provided no changes have been made or will be made in the original plans and specifications for such work; and provided further that such suspension or abandonment has not exceeded one (1) year. If a building or work job for which a permit has been issued under the electrical code is not started, the permittee may apply for a refund of the permit fee to the director of finance within one hundred eighty (180) days of the date of the issuance of the permit. The director of finance will forward such application with his recommendations to the city manager for his approval. The city manager may authorize the refund of any portion of the permit fee; provided, however, that in every such case the city shall retain not less than five dollars ($5.00) of the permit fee. The application for refund provided for in this section shall never be considered on behalf of any permittee who has begun work or construction authorized by the permit for which a refund is sought.

Secs. 10-123--10-140. Reserved.

ARTICLE V. INSPECTIONS

Sec. 10-141. Concealment of wiring.
When any part of a wiring installation is to be hidden from view by the permanent placement of parts of the building, the person installing the wiring shall notify the

electrical inspector, and such parts of the wiring installation shall not be concealed until they have been inspected and approved as indicated by the posting of an appropriate tag as provided in this chapter, provided that on large installations when the concealment of parts or wiring proceeds continuously, the person installing the wiring shall give the electrical inspector due notice and inspection shall be made periodically during the progress of the work.

Sec. 10-142. Rough-in wiring or installation.
When the rough-in wiring or installation work is completed on any premises, the responsible party shall notify the inspection request line, giving proper identification of the work, address, and permit number. The electrical inspector shall then make an inspection of the installation by the end of the following workday. If the inspection is not made by the end of the following workday, the Contractor shall contact the electrical inspector's office. If such wiring or installation work has been installed in accordance with the terms and provisions of this Chapter, the electrical inspector shall issue an inspection report form, noting thereon the date of the approval of the work. More than one rough-in inspection may be made without additional charge when the progress of construction requires such inspections.

Sec. 10-143. Final inspection.
Upon completion of all electrical wiring or installation of fixtures or equipment in any building or on any premises, the electrical contractor shall notify the department of development services through its inspection request line, giving the electrical permit number and street address; and the director or the chief electrical inspector shall then cause the inspection to be made by the following work day. If the inspection is not performed in the time prescribed, the contractor shall contact the inspection office to inquire regarding the inspection status. If any faulty or defective wiring or equipment is found, the electrical contractor shall be notified of the applicable section of this chapter which has been violated, in order that such work shall conform to this chapter. When such work is found to be correctly installed, replaced or repaired, the electrical inspector shall note his approval upon the inspection certificate stating that the wiring or installation work has been installed in accordance with the provisions of this chapter. Failure to ask for a final inspection within thirty (30) calendar days of the job's completion is a violation of this chapter.

Sec. 10-144. Faulty, defective installations.
If the electric wiring or installation of fixtures or equipment is found to be faulty, incorrectly or defectively installed, the electrical inspector shall notify the responsible person who installed the work, of the applicable section of the chapter, or the ordinance which has been violated in order that such work shall conform to this chapter.

Sec. 10-145. Certificates of approval.

(a) If, upon inspection, it is found that all work covered by one (1) permit is completed and complies with the provisions of this chapter, the director of development services or the chief electrical inspector shall issue to the person installing the work a certificate of approval. If the entire installation is completed and given final approval, the certificate shall authorize connection to the electrical service and the use of the installation, and notification of such authorization shall be given to the serving electric utility furnishing the electrical service.
(b) A preliminary certificate may be issued authorizing the connection and use of certain specified portions of an incomplete installation.
(c) When a certificate of approval is issued, but for any reason authorization for connection and use of a part of the installation is withheld, the electrical inspector shall issue a notice stating such partial approval of the installation.
(d) A certificate of approval shall not be issued to any person authorizing the setting or resetting of any meter on any new or old work in any occupancy until a permit has been issued and an inspection made of the meter loop and all wiring connected thereto.

Sec. 10-146. Service connections.
(a) *Service connection of uncertificated installation unlawful.* It shall be unlawful for any person to make connections from a source of electrical energy to any electrical wiring, devices or equipment for the installation of which a permit is required, until a certificate of approval has been issued by the director of development services or chief electrical inspector authorizing such connection and the use of such wiring, devices or equipment.
(b) *Electrical service reconnections.*
(1) It shall be unlawful for any person to make connections from a source of electrical energy to any electrical wiring, device or equipment which has been disconnected by order of the director of development services or chief electrical inspector, or the use of which has been prohibited for reasons set forth in this article until a certificate of approval has been issued by the director or chief authorizing the reconnection and use of such wiring, devices or equipment.
(2) It shall be unlawful for any unauthorized person to connect or disconnect utility company wiring at the premises electrical service point or the electric utility's equipment except in cases of extreme emergency that endangers life or property.
(c) *Connections to disconnected wiring, etc.* It shall be unlawful for any person to make connections from a source of electrical energy to any electrical wiring, device or equipment which has been disconnected or ordered to be disconnected by the electrical inspector or the use of which has been ordered by such inspector to be disconnected, until a certificate of approval has been issued by the director of development services or the chief electrical inspector for the authorization for reconnection and use of such wiring, devices and equipment. The chief electrical inspector shall have supervision over the electrical inspection of all electrical work within the city.

Sec. 10-147. Correction of faulty work.
The responsible master electrician of record and electrical contracting firm shall, within seventy-two (72) hours from the time of notification of faulty work, excluding Saturdays, Sundays and legal holidays, make or start to make the changes and shall proceed with the work until the same is completed. Upon completion thereof and payment of the re-inspection fee, the inspection request line shall be contacted and a re-inspection shall be requested. When upon re-inspection such work is found to comply with this Chapter the inspector shall note the date of the approval of the work. If the director of development services or the electrical inspector shall again find the work incorrectly installed, he shall notify the responsible electrical contractor that the work remains in violation, and shall collect an additional reinspection fee. If the responsible electrician does not make the required changes within a reasonable time, the director or the chief electrical inspector shall instruct the permit office to refuse issuing the electrical contractor any additional new permits until work is corrected and approved.

Sec. 10-148. Removal of tags prohibited.
It shall be unlawful for any person, other than the electrical inspector, to remove any notification tag provided for in this chapter until after connection has been made to the electrical service and the installation complies with all provisions of this chapter.

ARTICLE VI. ELECTRICIANS

Sec. 10-164. Effect of state licensing.
(a) Upon the state's enforcement of House Bill 1487, passed by the 78th session Texas Legislature, establishing the state licensing of electricians:
(1) The sections of the City Code regarding licensing of electricians through testing administered by the city no longer will be applied; and
(2) The city will continue to renew those electrical licenses already in existence but shall not issue any new licenses.

(b) All provisions and regulations of this chapter referencing a license issued by the city also shall cover a license issued by the state except as provided in subsection (a) above.

Sec. 10-165. State licensed electrical contractors and electrical sign contractors to register with the city.
(a) Electrical contractors and electrical sign contractors licensed by the state shall register with the city before performing any work under such licenses as may be regulated or covered by this chapter.
(b) The annual fee to register with the city an electrical contractor's or electrical sign contractor's license issued by the state shall be as stated in the fee schedule of the development services department.

Sec. 10-166. License required.

(a) *Qualifications and registration of electricians.*

(1) It shall be unlawful for any person to engage in the business of installing, maintaining or repairing of any wiring, fixtures or equipment used for the conducting of electricity for which a permit is required by this chapter and it shall be unlawful for any person in any manner to undertake to execute such work or cause the undertaking of such work unless such person is a holder of a certificate of license as is required by this chapter. Every master electrician and master sign electrician must have and maintain an established place of business, as defined in section (e) and shall establish a means to receive messages during the regular business hours from the electrical inspector's section of the city, or other persons concerned. Acceptable means for receiving the communications include, but are not limited to, having a person available at the place of business, an answering machine, voice mail, pager or portable telephone.

(2) It shall be unlawful for any person to falsely represent themselves as a licensed electrician of any class set forth in this chapter or to use the words "electrical contractor," "master electrician," "master sign electrician," "electrician," or words of similar import or meaning, on signs, cards, stationery, or by any other manner whatsoever, unless such person is properly registered within the meaning of the word used as provided in this chapter.

(b) *Place of business.* Each master electrician or master sign electrician licensed by the city or the state, shall normally be present while electrical work covered under the scope of this chapter is being performed under the master's license . . . For the purpose of this requirement the master is "present" if the master is either on the job site or in a firm's business office and:

(1) The office is located within Texas

(c) *Fee for licensing and registration on a local level shall be the amount set by ordinance.* The registration fee, renewal fees and fees for issuance of replacement or duplicate license or registration on a state level shall be the amount set by Texas Department of Licensing and Regulation.

(d) *Identification of vehicles.* Each person, engaged in electrical contracting, construction, maintenance or repair shall identify all vehicles used for the transportation of materials, supplies, equipment or tools for and in the performance of such work with signs showing the name and type of business and the master electrician's license number and or state contractor's license number under which such electrical contracting, construction, maintenance or repair is being conducted. The identification and information shall be correct at all times and shall be either painted or contained on a permanently affixed decal on each

side of the vehicle in letters at least two (2) inches in height and shall be in full view and legible at all times. It shall be unlawful to use vehicles for the transportation of materials, supplies, equipment or tools in the performance of electrical contracting, construction, maintenance or repair without the required identification.

(e) *Documentation.* The board shall adopt rules regarding the form of documentation that will be accepted as proof of compliance with any experience, verification of license status, or other fact.

Sec. 10-167. Licenses/registrations.

(a) *Classification.* There shall be eleven (11) classes of electrical licenses/registrations, which shall be known as follows:

(1) Master electrician.
(2) Master sign electrician.
(3) Electrician apprentice/trainee.
(4) Maintenance electrician.
(5) Maintenance technician.
(6) Maintenance trainee.
(7) Journeyman electrician.
(8) Registered sign trainee.
(9) Registered sign technician.
(10) Restricted residential wireman.
(11) State contractors license (electrical and/or electrical sign).

(b) *Record of issuance.* The director of development services shall keep a record available for the general public and the board of all licenses and registrations issued pursuant to this chapter.

(c) *License registration card.*

(1) A registration card shall be issued to each person receiving a city license under this chapter. Such card shall bear the signature of the chair of the board and of the director of development services or the chief electrical inspector and shall provide that the applicant has paid to the city the required renewal fee for the appropriate classification as set forth elsewhere in this chapter.

(2) Each such registration card shall expire at midnight of the renewal date and a new card shall be issued, upon receipt of the applicable renewal fee as set by ordinance for the class of registration granted; provided further, that the license holder has complied with all rules and regulations of this chapter pertaining to renewals.

(3) Each registration certificate or card when issued to the master electrician of record for a firm and/or a master sign electrician of record for a firm shall be issued to an individual person, and registered in the name of the firm by which the person is employed. The firm shall be known as the holder of such registration certificate or card. The holder shall notify the department of development services

if the licensee leaves its employment. No further permit will be issued to a firm in the holder's name based upon the employment of the master that was formerly employed by the firm.

(4) Upon presentation to the director or the chief electrical inspector of a registration card, the chief electrical inspector shall register the name of the applicant in the records kept for that purpose, and shall issue to the applicant a certificate of registration or card.

(5) Registration certificates or cards, lost or destroyed during the year for which they are issued, shall be reissued by the director, provided satisfactory evidence has been presented by the registrant of such loss or destruction, and provided the registrant pays the applicable fee set by ordinance.

(6) It shall be unlawful for any person to lend, rent, or transfer a registration certificate or card, and for any person to make use of any such rights for which the person is not licensed.

(7) It shall be unlawful for any person other than the director of the department of development services, the chief electrical inspector or the chairman of the board, to alter or amend in any manner any instrument of registration, as set forth in this chapter.

(8) Every master electrician of record or a master sign electrician of record shall fittingly display the certificate in a conspicuous place in the master's principal place of business. Every holder of a registration card shall carry the registration card on his person at all times while doing electrical work covered under the scope of this chapter and shall produce and exhibit it when requested by any electrical inspector of the city in the performance of the inspector's duties.

(d) *License expiration, renewal, and continuing education.* A license may be renewed upon application of the holder, payment of the required fee as set by ordinance and by filing the required bond where such is required, at any time within thirty (30) days before the expiration date, unless such license has been revoked or canceled for cause by the board.

Effective January 1, 2005, all those who purport to renew a license issued by the city under this Chapter shall show proof of having satisfactorily completed a four-hour minimum code study course for each year of renewal within the twenty four - month period immediately preceding such renewal. The code study course shall be from an accredited institution approved by the board.

(e) *Two-year license terms.*

(1) All electrical and sign licenses shall expire at Midnight on the anniversary date of their issuance.

(2) All electrical and sign licenses shall be subject to renewal for a two year period.

(f) *Licenses are not transferable.* No license shall be transferred and no holder of any electrical license shall allow his or her name or license to be used by any

other person, either for the purpose of doing work or obtaining a permit under the penalty of forfeiting his or her license. The license holder shall be subject to a fine as provided in City Code section 1-5, general penalties; continuing violations, of this Code. The director and the chief electrical inspector are hereby authorized to refuse to issue permits to the holder of any license violating this provision.

(g) *Revocation of licenses.* Any license or registration granted under this chapter may be canceled, revoked or suspended by the board if the holder of such license or registration violates any provision of this Code or any ordinance of the city, relating to installation, maintenance or repair of electrical wiring, devices or equipment. When a license or registration is suspended, a new license or registration shall not be granted to the same person in violation of the terms of the suspension. The board shall conduct a public hearing on the alleged violation upon giving at least fifteen (15) days written notice to the licensed person, apprentice/trainee, or person holding a registration and affording an opportunity to the person to be heard at an open hearing. If the person holding such license or certificate shall be found guilty by the board of violating the provisions of this chapter, or if such person does not contest the allegations, the license of such person may be suspended for a definite time, canceled or revoked. The board may probate all or any part of such revocation or suspension. Notice shall be delivered to the license or registration holder and shall be sufficient if it is either personally delivered or deposited, postage-paid, certified or registered mail, with the United States Postal service, addressed to the last address shown on the records of the department of development services.

(h) *License prerequisite to issuance of permit.*

(1) No permit for the installation or alteration of any electric wiring devices or equipment shall be issued to any person unless such person is the holder of a license to perform the class of work described in such permit as provided in this chapter.
(2) No permit for the installation, erection or alteration of any electric or neon sign or neon tubing, for whatever purpose used, shall be issued to any person unless such person is the holder of a license to perform the class of work described in such permit, as provided in this chapter.
(3) No annual maintenance permit required by this Code shall be issued unless the owner of the property provides evidence that the work for which the permit is sought will be performed by a licensed maintenance electrician or maintenance technician as outlined in this chapter.
(4) No application will be accepted for consideration from any person or firm, until after such person or entity shall have registered with the city, and obtained authority to do business in the city.

(i) *Change of name.* Upon payment of the fee set by ordinance, posting of any necessary bonds and compliance with any other requirement of this chapter, the holder of a valid license may apply for a change of name on the license. The appropriate official shall make the requested change after board approval.

Sec. 10-168. Bonds and insurance requirements.

(a) *Conditions of bonds.* The bonds provided for in this chapter shall be conditioned upon compliance by the licensee holder with this chapter.

(b) *Actions on bond for recoveries.* It shall be the duty of the board to report each and every violation of the provisions of this chapter to the city attorney, who shall immediately make demand upon the principal and sureties on such bond for the amount of such liability for each offense, and, in the event of default in the payment of such sum, it shall be the duty of the city attorney to immediately file suit upon the principal and sureties on the bond for the recovery of any amount due the city by reason of the penalty incurred.

(c) *General liability and completed operation insurance.*

(1) In addition to all other insurance requirements, the master electrician of record, the master sign electrician of record and the firm for whom the master is holding the master's license or the holder of a maintenance permit must continuously maintain on file with the board, or chief electrical inspector evidence in a form of a certificate addressed to the city showing that the holder of the master's license carries the following types and amounts of insurance:

a. License-holders shall have bodily injury liability insurance of at least three hundred thousand dollars ($300,000.00) and property damage liability insurance of at least three hundred thousand dollars ($300,000.00) for both general liability and completed operations insurance. This amount shall equal same amount as the state, should requirements be changed by the state.

(2) Master electricians and master sign electricians that are not actively engaged in the trade or who are not the master for a firm shall not be required to file proof of insurance.

(3) If the person holding a master's license severs the connection with a firm that is jointly covered by the same insurance, a new certificate showing proper coverage will be required of both parties.

(4) The holder of any master's license is responsible for providing evidence of a new or renewal policy of any required insurance coverage upon termination or renewal of any policy.

(5) Any bond or insurance required by this chapter must be written through a company licensed to issue the bond or insurance in the state and the bond or insurance must be approved by the city attorney.

(d) Each applicant for the issuance or renewal of a master electrician's license or a master sign electrician's license shall give good and sufficient surety bond in the sum of one thousand dollars ($1000.00), executed by a recognized surety company licensed by the state to issue such bonds, to be approved by the city attorney, payable to the city, conditioned that such applicant will in good faith comply with all of the terms of this chapter.

(e) When a master electrician or master sign electrician supplies the license for a firm doing business under this chapter and severs connections with such firm and desires to use the license in connection with another firm, such other firm must furnish a surety bond and comply with all insurance requirements under this chapter.

(f) Bonds and insurance policy terms may be concurrent with the two-year license terms, and may be prorated when the term is not exactly two (2) years.

Sec. 10-169. On locally issued licenses only, continuation of the business upon the death, disability or termination of the firm's master.
Upon the death, disability or termination of the master electrician or master sign electrician of a firm, such firm will be allowed to complete existing work for which permits had been obtained prior to the severance of such master, provided an interim bond and insurance is posted, and sufficient evidence is submitted to, and approved by the board, as to the ability of the firm to complete the work in the manner required by this chapter. Monthly approval to operate may be granted by the board for a period not to exceed six (6) months. On or before the expiration of such period the firm must associate a new master of the appropriate classification or cease operations.

Sec. 10-170. Disposition of money recovered.
All sums of money collected for the city shall be immediately paid to the finance department, division of treasury of the city, as provided by ordinance in like manner as taxes, licenses and other funds are deposited on behalf of the city.

Sec. 10-171. Master electrician's license.

(a) *License required.* Every person, before engaging in the business or profession as described in section 10-166(a) of this chapter must procure a master electrician's license for the conduct of such work.

(b) *Limitation on multiple business affiliations.* Any master electrician affiliated with a firm as herein provided shall not engage in the operation of a second electrical firm, under this chapter, unless it is under the same name and bond of the first company. Any permit issued to a master electrician or the affiliated firm under the master's license or bond must be for work being done by the master and the affiliated firm. Any master electrician obtaining permits for any person, firm or company other than firm with which he or she is affiliated will be notified to appear before the board for consideration of a complaint. All master's licenses shall show the master's name and name of the affiliated firm as listed on the insurance and bond and permits shall be issued to the master and firm as listed on the bond.

(c) *Apprentices/trainees.* The master of the firm employing apprentices or trainees shall be responsible for the city or state registration of all apprentices/trainees working under the master's supervision. It shall be the master's responsibility to keep the

appropriate work record card up to date. Immediately upon the termination of an apprentice's/trainee's employment, the master shall update and surrender the work record card to the apprentice trainee.

(d) *Responsibility.* The master electrician of record shall be liable and responsible for the layout and technical supervision of any work that requires the securing of a permit under the master's license.

Sec. 10-172. Master sign electrician's license.

(a) *License required.* Every person before installing or contracting to install, erect, hang, connect, re-connect, service or maintain any electric or neon sign or electric neon tubing for any purpose, whether inside or outside of any building, or on any part of the public right-of-way subject to this Code, must procure a master electrician's license or a master sign electrician's license for the conduct of such business. A holder of a master electrician's license shall not be permitted to manufactured any sign regulated under this chapter or chapter 28. Work performed in the manufacture of electric signs in the shop shall be under the supervision of the master sign electrician of record for that firm and may be performed by registered sign technicians or sign trainees.

(b) *Limitation on multiple business affiliations.* Any master sign electrician operating a business or in the employment of a sign company, shall not engage in the operation of a second electrical sign business unless it is under the same name and bond of the first company.

(c) *Permits issued only for work done by that master.* Any permit issued to a master sign electrician or the master's firm under the master's license and bond must be for work being done by the master and the company associated with the master's license. Any master sign electrician obtaining permits for any person, firm or company other than the firm with which he or she is affiliated will be notified to appear before the board for consideration of a complaint. All master sign electrician licenses shall show the master's name and name of the business they are operating under (company listed on the insurance and bond) and permits shall be issued in the names listed on the bond.

(d) *Registered sign trainees/registered sign technicians.* The master sign electrician of the firm employing registered sign trainees/registered sign technicians shall be responsible for coordinating the registration of all trainees/technicians working under the master's supervision. It shall be the master's responsibility to keep the registration work record card up-to-date. Immediately upon the termination of a registered sign trainee or registered sign technician's employment, the master shall update and surrender the work record card to the affected employee.

(e) *Responsibility.* The master sign electrician of record shall be liable and responsible for the layout and technical supervision of any work that requires the securing of a permit under the master's license.

Sec. 10-173. Journeyman electrician's license.

A journeyman electrician's license shall continue in full force from the date of issuance to the next regular license renewal date, and may be renewed thereafter by the board without examination, unless revoked or canceled by the board, and such license shall not be transferable.

Sec. 10-174. Maintenance electrician's license/maintenance technician registration.

(a) The license fee, renewal fees and fees for issuance of replacement or duplicate licensees shall be in the amount set by ordinance. The holder of a current journeyman electrician's license issued by the city or state shall be deemed to have met the licensing requirement when registered as provided for in this section.

(b) Such license shall continue in full force and effect from the date of issuance until the next regular renewal date as defined in this chapter and it may be renewed thereafter by the board without examination, unless it is revoked or canceled by the board. Such license shall not be transferable. The renewal of a maintenance electrician license shall be for the same term and on the same conditions as other electrical licenses. The license fee, renewal fees and fees for issuance of replacement or duplicate licenses shall be in the amount set by ordinance.

(c) A maintenance electrician license shall apply only to the keeping, safe repair and maintenance of existing electrical equipment within a building or property, performed by permanent employees for electrical maintenance work. It shall not include extensions of, or additions to, an existing system or branch thereto.

(d) The electrical maintenance permit issued by the city to allow a property owner, property lessee or management company to employ persons qualified by this chapter to maintain and make minor repairs to existing electrical system(s) on a property that is registered with the city development services department. An electrical maintenance permit is not required when the property owner, property lessee or management company is or employs an active licensed and bonded master electrician of record who oversees and is responsible for the electrical maintenance.

(e) The person or entity who is the property owner, property lessee or management company managing the plant or property where maintenance work is being performed. At the time of application, the applicant shall name one or more maintenance personnel certified to perform the electrical maintenance work.

(f) Upon payment to the city treasurer of the fee as set by ordinance, the applicant shall be issued an annual maintenance electrical permit.

(g) Maintenance, repair and installation work contemplated under this section shall not include extensions of, or additions to, an existing system or branch thereto. Work that may be performed under this permit by a registered maintenance technician shall be limited to the maintenance of, repair or replacement of devices or lighting fixtures in or on existing outlets, and shall include, but not be limited to, the following:
(1) One hundred twenty (120) volt receptacles or switches;
(2) Two hundred forty (240) volt dryer and range receptacles;
(3) Overcurrent devices including:
a. Breakers not to exceed sixty (60) amps at two hundred forty (240) volts or less;
b. Disconnects not to exceed sixty (60) amps at two hundred forty (240) volts or less; and
c. Fuses not to exceed sixty (60) amps at two hundred forty (240) volts or less;
(4) Photo cells and time clocks;
(5) Range hoods and dishwasher motors;
(6) Interior and exterior lighting not exceeding 277 volts nominal;
(7) Ceiling fans;
(8) Pool lights with ground fault circuit interrupter breakers;
(9) Doorbell transformers;
(10) Bathroom fan replacement; and
(11) Electric gate repair.

(h) A regular, bona fide employee of the property owner, property lessee or management company managing the property where the maintenance work is being performed may perform certain electrical work pursuant to the annual maintenance electrical permit, subject to the limitations below.
(1) A licensed maintenance electrician may perform all of the work permitted by section 10-174 (g) above.
(2) A person registered as a maintenance technician according to section 10-174(i) may perform the work permitted by section 10-174(g) except that such person shall not perform work involving voltages or amperages that exceed the limits described in section 10-174(g)(1) through (6).

(i) Registration of persons qualified to perform work.

(1) *Experience.* All electrical work performed under the permit must be performed by a licensed maintenance electrician or by personnel registered with the city as an electrical maintenance technician whose competence has been certified in one of the following:
a. Completion of a training course approved by the board; or
b. Submission of an affidavit demonstrating more than six (6) months of electrical maintenance work.

(2) *Registration.* All persons performing electrical work under this section shall be licensed or registered as required by the city or state. Registered persons must submit proof of their qualifications as described in section 10-174(i)(1) and pay a fee as set by ordinance to obtain a registration card.

(j) Record keeping. The applicant for a maintenance permit must:

(1) Maintain a copy of the permit at either the site where the work is being conducted or the place of business of the applicant. If the applicant's place of business is not located in the city, the permit must be located at the location where the work is being performed;
(2) Maintain a copy of the registration card for the certified personnel either at the location where the work is being performed or the place of business of the applicant. If the applicant's place of business is not located in the city, the identification cards of all persons authorized to perform work must be located at the location where the work is being performed; and
(3) Maintain a record of all work performed by registered personnel.

Sec. 10-175. Restricted residential wireman.

(a) Such license shall continue in full force from the date of issuance until the next regular license renewal date as defined in this chapter and it may be renewed thereafter by the board without examination, unless it is revoked or canceled by the board. Such license shall not be transferable. The renewal of a restricted residential wireman license shall be for the same term and on the same conditions as other electrical licenses. The license fee, renewal fees and fees for issuance of replacement or duplicate licensees shall be in the amount set by ordinance.

Sec. 10-176. Registered sign technician.
(a) Any person desiring to make application for registration as a registered sign technician shall be able to read and write and have at least two years/four thousand (4,000) hours experience in the construction, repair and/or maintenance of the electrical components of electric signs, verified by master sign electrician(s) under whom the person acquired the experience as a registered sign trainee or otherwise, as required in this chapter. The applicant shall submit to the board an original Work Progress card signed by the master sign electrician(s) under whom the applicant has gained qualifying experience, setting forth the applicant's experience and shall include proof of such experience.

(b) If such applicant shall have met the requirements of subsection (a) above, the director of development services or the chief electrical inspector, upon payment by such person of the fee(s) established by ordinance for the registration, shall deliver such fee together with a certificate of the board to the finance department, division of treasury and a registration card shall be issued to the applicant verifying the applicant's status as a registered sign technician. The application fee, renewal fees and

fees for issuance of replacement or duplicate registration shall be in the amount set by ordinance.

(c) Such registration shall continue in full force from the date of issuance until expiration of the registration as identified in section 10-177 (e) of this chapter and it may be renewed thereafter by the board, unless it is revoked or canceled by the board. Such registration shall not be transferable.

Sec. 10-177. Electrician apprentice/trainee, registered sign technician, and registered sign trainees.

(a) *Electrician apprentice/trainees and registered sign trainees:* Any master electrician may employ electrician apprentice/trainees to assist the master electrician, journeyman electricians, and/or restricted residential wireman and any master sign electrician may employ registered sign trainees to assist the master sign electrician and/or registered sign technicians in any of the work performed in the master's respective trade. Such electrician apprentice/trainee and registered sign trainees shall not be required to take an examination, but shall be required to register with the director of development services for the city and/or Texas Department of Licensing and Regulation, and shall carry on their person a registration card.

(b) *Procedure for electrician apprentice/trainees:*

(1) The work progress card of an electrician apprentice/trainee shall be kept by the master electrician employing the electrician apprentice/trainee or the training director of an approved program in which the electrician apprentice/trainee is enrolled. The master electrician or training director shall be responsible for keeping all entries on a work progress card current.

(2) Upon dismissal or transfer of the electrician apprentice/trainee, the master electrician or training director shall perform a final update of the work progress card to reflect all experience received up to the date of dismissal or transfer, and shall return the work progress card to the electrician apprentice/trainee. The electrician apprentice/trainee shall deliver the work progress card to the master electrician upon subsequent employment or to the training director upon enrollment in an approved training program.

(3) All work performed by an electrician apprentice/trainee involving installing; maintaining; altering or repairing any electrical devices, wiring or equipment for which a permit is required by this chapter shall be performed in the presence of and under the direct supervision of a qualified journeyman or master electrician. A journeyman or master electrician shall direct and supervise any of such work performed by an electrician apprentice/trainee as required by this chapter.

(4) On any jobsite, the ratio of registered electrician apprentices~~/trainees~~ to journeyman or master electrician shall not exceed:

a. Twelve (12) to one (1) effective as of January 1, 2006.

(5) A restricted residential wireman may direct and supervise the work of an electrician apprentice/trainee under the provisions and limitations of section 10-175 of

this chapter, provided that when working under the supervision of a restricted residential wireman a ratio of two electrician apprentices/trainees to one supervising restricted residential wireman cannot be exceeded.

(c) *Procedure for registered sign trainees:*

(1) The work progress card of a registered sign trainee shall be kept by the master sign electrician employing the registered sign trainee. The master sign electrician employing the registered sign trainee shall be responsible for keeping all entries reflecting the qualifying experience received by the registered sign trainee on the registered sign trainee's work progress card current and up to date.

(2) Upon dismissal or transfer of a registered sign trainee, the master sign electrician shall perform a final update of the work progress card to reflect all qualifying experience received by the registered sign trainee up to the date of dismissal or transfer, and shall return the work progress card to the registered sign trainee. The registered sign trainee shall deliver the work progress card to the master sign electrician upon subsequent employment.

(3) All work performed by a registered sign trainee involving installing, maintaining, altering or repairing the electrical components and/or devices and/or wiring or electrical equipment contained within or directly associated with electric signs shall be performed in the presence of and under the direct supervision of a registered sign technicians or master sign electrician. The master sign electrician employing a registered sign trainee shall be liable and responsible for the layout and technical supervision of any work involving the repair, maintenance, alteration or installation of electrical components within electrical signs done under the authority of the master sign electrician's license.

(d) *Failure of master to provide supervision:* In the event a master electrician fails to properly provide for the supervision and control of the work being done by the electrician apprentice/trainees under the master electricians employment, or in the event a master sign electrician fails to properly provide for the supervision and control of the work being done by the registered sign trainee, the chief electrical inspector for the city, or an assistant inspector may order the work being done without proper supervision to be discontinued and the person to whom the permit has been issued shall discontinue further work until proper supervision has been employed or supplied by the respective master electrician or master sign electrician. The above not withstanding, nothing in this chapter shall be construed as prohibiting the employment of electrician apprentice/trainees or registered sign trainees by a person duly licensed, registered, and/or qualified under the provisions of this chapter.

(e) *Registration fees and duration:*

(1) The registration fee for registration as a registered sign trainee, and fees for issuance of replacement or duplicate registration cards shall be in the amount set by ordinance.

(2) A registration under this chapter shall be valid from the date of issuance of the registration card for the following periods:
a. Registered sign trainee, years . . . Nine (9)
b. Registered sign technician, years . . . Seven (7)
(3) A master sign electrician shall provide, upon request by an employee registering with the city, information to the city accurately reflecting the employee's qualifying experience gained while under the employment of the master sign electrician.

Secs. 10-178 -10-190. Reserved.

ARTICLE VII. POLES AND WIRES*

DIVISION 1. GENERALLY

Sec. 10-191. Compliance.
All poles, piers, abutments, wires or other necessary fixtures, appurtenances or appliances that may be in use for telegraph, telephone, signaling or electric service purposes shall conform to the provisions of this article, and no person shall erect, construct or maintain any pole, pier, abutment, wire or other necessary fixture, appurtenance or appliance which does not conform to such provisions.

Sec. 10-192. Penalty for violation.
In case of willful and continued violation of this chapter by any person, the city shall have the power in addition to other penalties provided by law to revoke and repeal any ordinance under which such person may be acting, and to revoke and repeal all permits, privileges and franchises granted to such person by the city.

Sec. 10-193. Improperly constructed equipment.
Whenever any pole, wire, guard wire, guy wire or any other wire used in any way in the transmission of electricity is being or has been poorly or improperly constructed, it shall be the duty of the director of development services to notify the owner of such wire, or the manager of the company having charge of such wires, to have the condition remedied, and it shall be the duty of such owner or such manager to put such pole or wires in a safe and proper condition within twenty-four (24) hours of such notice.

Sec. 10-194. Defective equipment.
(a) If any of the crossarms, pins or insulators shall become broken, cracked, rotten, split, loose or otherwise defective, the person owning or in control thereof shall place such equipment in a standard and a safe condition within forty-eight (48) hours after the receipt of a written notice from the director of development services requiring him to do so.

(b) Whenever the guard wire, guy wire, pole, guy stub, wire or metal wrappings used in any way in supporting, anchoring or maintaining the wires, tubes and cables

of an electric light, power, telegraph, telephone or signaling system shall become detached from their regular supports, loose, rotten, without standard insulation or insulators, bent or warped through undue weight or excessive strains or broken off or partly broken, the person owning or in control thereof shall place such equipment in a standard or safe condition within forty-eight (48) hours after receipt of a written notice from the director of development services requiring him to do so.

Sec. 10-195. Removal of poles and equipment when not in use.
(a) service wires must be removed from poles and buildings when they have not been in actual service for a period of three (3) months. All dead and unused wires must be removed from poles and exterior of buildings within forty-eight (48) hours after the receipt of a written notice from the director of development services, requiring them to be so removed. All poles, guy stubs, anchors or similar apparatus must be removed when not in actual service by the person owning or controlling such equipment and the sidewalk, ground or street left in a perfect condition after such removal.

(b) All crossarms, brackets and insulators must be removed when not in actual service, by the person owning or controlling the same, within forty-eight (48) hours after receipt of a written notice from the director of development services requiring such removal.

Sec. 10-196. Lowering, removing or relocating facilities after notice.
(a) The owner, whether public or private, of any public utility line, pole, pipes or other facility or equipment in, upon, over or under the public right-of-way of any street, alley or other public way shall, at his expense, within a reasonable time after notice from an authorized representative of the city, lower, remove or relocate such facility or equipment in the manner required by the city.

(b) The director of development services may, if such facilities and equipment are not removed within a reasonable period of time after notice, cause same to be relocated or removed, and take such action as may be necessary to recover the cost of such relocation or removal.

Sec. 10-197. Cutting off current.
Any company transmitting electric current shall make suitable provisions, so that switchboard operators on duty at the plants may intelligently interpret and execute any orders given by the fire department to cut off current at any desired point in the city on account of fire; and lines so cut off shall remain dead until the fire department orders the current turned on.

Sec. 10-198. Agreement to permit use by city of poles, cables or ducts.
Any person erecting any poles, overhead cables or underground ducts under the provisions of this chapter shall, before obtaining a permit therefore from the city, file an agreement in the office of the city clerk, permitting the city to occupy and use the

top crossarm of any pole, or a sufficient number of pairs in any overhead or underground cable, or sufficient space in any underground duct, for the use of the city for fire and police alarm purposes, free of cost to the city.

Sec. 10-199. Consent required for parallel wires or joint use.
No two (2) lines of such poles shall be maintained or erected on the same side of any street or plaza, except by permission from the city council. If such permission is obtained, and if such wires as are supported by such pole lines are over or under power or high potential wires, they shall have an approved weatherproof insulation of a thickness of not less than one-thirty-second of an inch, for telegraph, telephone and signal systems. No telephone, telegraph or signal wires shall run parallel to or cross over or under any power or low or high potential wires at a distance of less than three (3) feet, and all wires owned or controlled by any person shall be run and strung on his own fixtures, unless the consent of the city council is first had to the contrary.

Sec. 10-200. Right to prescribe other modes of conducting wires.
Nothing contained in this chapter shall be construed as to in any manner impair or affect the right of the city in the future, to prescribe any other mode of conducting such wires over or under its thoroughfares.

Sec. 10-201. Underground wires.
All telegraph, telephone and electric wires within the following limits in the city are required to be placed underground, in properly insulated conduits:
Beginning where the north boundary line of Travis street intersects the west boundary line of St. Mary's street; thence east along the north boundary line of Travis street to the eastern boundary of Avenue D; thence south along the eastern boundary line of Avenue D to the north boundary line of East Houston street; thence east along the north boundary line of East Houston street and the north boundary line of Alamo Plaza to the east boundary line of Bonham street; thence south along the east boundary line of Bonham street to the north boundary line of East Commerce street; thence east along the north boundary line of East Commerce street to the east boundary line of Walnut street; thence south along the east boundary line of Walnut street to the south boundary line of Gonzales street; thence west along the south boundary line of Gonzales street to the west boundary line of Sycamore street; thence north along the west boundary line of Sycamore street to the south boundary line of East Commerce street; thence west along the south boundary line of East Commerce street to the east boundary line of South Alamo street; thence south along the east boundary line of South Alamo street to the south boundary line of Market street; thence west along the south boundary line of Market street to the east boundary line of Main Plaza; thence south along the east boundary line of Main Plaza and the east boundary line of Dwyer Avenue to the south boundary line of West Nueva street; thence west to the west boundary line of Dwyer Avenue; thence north along the west boundary line of Dwyer Avenue to the south boundary line of Main Plaza; and the south boundary line of Dolorosa street to the west boundary line of South Santa Rosa Avenue; thence north along the west boundary line of South Santa Rosa Avenue to

the south boundary line of Paschal Square; thence west along the south boundary line of Paschal Square to the west boundary line of South Pecos street; thence north along the west boundary line of South Pecos street to the south boundary line of West Commerce street to the west boundary line of Medina street; thence north along the west boundary line of Medina street to the north boundary line of West Houston street; thence east along the north boundary line of West Houston and East Houston streets-to the west boundary line of St. Mary's street; thence north along the west boundary line of St. Mary's street to the place of beginning.

Sec. 10-202. Interference with wires, etc., belonging to city.
It shall be unlawful for any person to cut, move or attach to any wire, switch or other appliance belonging to or controlled by the city, or cause the same to be done, unless such person is in the employ of the city.

Sec. 10-203--10-220. Reserved.

DIVISION 2. STANDARDS AND SPECIFICATIONS

Sec. 10-221. Erection of poles.
All poles shall be erected and maintained in a perpendicular position, shall be straight and free from bark and shall be placed immediately within the curbing on a line with its outer surface where the sidewalks are less than eight (8) feet in width; provided, where the curbing is not laid, the outer line of the same shall be taken, and eight (8) inches within the outer line, if the sidewalks are eight (8) feet or more in width.

Sec. 10-222. Spacing.
No pole, pier or abutment to be used for telegraph, telephone, electric light or power purposes shall be erected within seventy-five (75) feet of any similar pole, pier or abutment on the same side of any street or plaza in the city.

Sec. 10-223. Setting in ground; diameter; soundness.
Poles shall be set not less than five (5) feet in the ground. No pole shall be set or reset with a diameter less than twelve (12) inches at the ground level. All poles must be sound and free from rot. No poles shall be less than five and one-half (5 1/2) inches in diameter at the top.

Sec. 10-224. Reserved

Sec. 10-225. Crossarms; branding.
The crossarms of all telephones, telegraph and signaling systems and electric light and power companies must be of uniform length and strengthened by braces, and the crossarms of each and every company must be well seasoned and kept sound. The poles of all companies used in supporting wires must be branded or stamped with the name or initials of the company owning same, and the name or initials shall be kept clear and distinct and at such distance from the ground as not to be erased.

Sec. 10-226. Guy wires.
All guy wires attached to poles shall have at least one (1) approved strain insulator inserted between the lowest wire, and the pole, stub or anchor to which the guy wire is attached. Guy wires shall be protected for a distance of eight (8) feet from the ground by a suitable boxing entirely enclosing guy wire or anchor rod, and such boxing shall be painted white.

Sec. 10-227. Number required; splicing; when steps required.
No overhead wires shall be run over one hundred thirty (130) feet without pole support, except where distribution is made from distributing poles, and in such cases the distance may be extended to one hundred fifty (150) feet. No pole shall be spliced or braced. No more than four (4) so-called pole brackets shall be used on any pole for any purpose. Wires shall be run on crossarms only. All poles carrying transformers and line cutouts shall be stepped with iron steps, beginning eight (8) feet from the ground.

Sec. 10-228. When cable required.
Whenever fifty (50) or more wires are owned and used for the same character of service by the same person on any pole line, the wires shall be run in either aerial or underground cable.

Sec. 10-229. Service, drop, and distribution wires.
(a) The service or drop wires of all telephone, telegraph, cable television, signal systems, electric light or power service wires shall be sufficiently free from slack to prevent crosses and not less than twelve (12) inches apart at any point for electric light and power service, and six (6) inches apart for telephone, telegraph, cable television or signaling system wires. All service or drop wires attached to or entering any building shall be in compliance with the current National Electrical Code.

(b) The service or drop wires of telephone, telegraph, cable television, and signaling systems that extend from pole, pole line and main pole line to a building or structure must have an approved insulation.

(c) All construction must conform to the requirements of the current edition of the National Electrical Safety Code, as published by the National Bureau of Standards, Handbook 30, as revised.

(d) Attachment to utility poles of cable television or other communication lines and facilities shall not be deemed to constitute a new installation, reconstruction or extension within the meaning of Part 2, Section 20-202B of the National Electrical Safety Code, which requires compliance with clearance standards different than those of the 1973 edition of such code applicable prior to such attachment. This determination shall constitute a modification or waiver, as authorized by the code and Article 1436a, in the event of any contrary interpretation of the code made by the

American National Standards Committee, but shall not constitute waiver or modification of any other provision of the code.

(e) The light and power company's neutral can be raised so long as the minimum neutral to primary vertical clearance standard established by the current edition of the National Electrical Safety Code is maintained.