First Reading
May 23, 2013
Item No. 5.11

Second Reading
June 13, 2013
Item No. 5.9

ORDINANCE NO. 2013-00056

AN ORDINANCE AMENDING CHAPTER 28 OF THE CODE OF ORDINANCES OF THE CITY OF LUBBOCK, TEXAS WITH REGARD TO ADOPTION OF THE 2011 NATIONAL ELECTRICAL CODE (NFPA 70) AND PROVIDING FOR CERTAIN AMENDMENTS THERETO TO MEET LOCAL CONDITIONS; PROVIDING A PENALTY; PROVIDING A SAVINGS CLAUSE; PROVIDING FOR PUBLICATION; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, it is the opinion of the City Council that the best interests of the citizens of the City of Lubbock would be served by adopting the 2011 National Electrical Code (NFPA 70), including certain amendments to meet local conditions; NOW THEREFORE:

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF LUBBOCK:

SECTION 1. THAT Section 28.12.007 of the Code of Ordinances of the City of Lubbock is hereby amended to read as follows:

Sec. 28.12.007 National Electrical Code–Adopted by reference

The publication entitled "National Electrical Code," 2011 edition (NFPA 70), published by the National Fire Protection Association, a copy of which, authenticated by the signature of the building official, shall be filed with the city secretary as a public record, is hereby adopted as a part of this code as if fully copied herein in detail, except as modified by the provisions of section 28.12.008 and division 6 of this article. In the event of a conflict with any provision of the "National Electrical Code" and the Code of Ordinances, the Code of Ordinances shall govern. References in this code to the "National Electrical Code" or the "N.E.C." shall mean and refer to the 2011 edition.

SECTION 2. THAT Section 28.12.008 of the Code of Ordinances of the City of Lubbock is hereby amended to read as follows:

Sec. 28.12.008 Same–Amendments

(a) Flash protection. Article 110.16 is hereby amended by deleting the entire article.

(b) Available fault current. Article 110.24 is hereby amended by deleting the entire article.

(c) Article 210.8 Ground-Fault Protection for Personnel. Article 210.8 is hereby amended to read as follows:

210.8 Ground-Fault Circuit-Interrupter Protection for Personnel.

(A) Dwelling Units. All 125-volt, single-phase, 15- and 20-ampere receptacles installed in the locations specified in (1) through (8) shall have ground-fault circuit-interrupter protection for personnel.

(1) (No change)

(2) Garages, and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use

Exception: 15- and 20-ampere simplex receptacles within a garage that are intended only to serve automatic garage door openers, irrigation system controllers and freezers. Where a dedicated freezer space is not indicated or apparent, the freezer exception shall not apply.

(3) - (8) (No change)

(d) Branch circuits required–Dwelling units. Article 210.11(C)(1) is hereby amended to read as follows:

(C) Dwelling Units.

(1) Small-Appliance Branch Circuits. In addition to the number of branch circuits required by other parts of this section, three or more 20-ampere small-appliance branch circuits shall be provided for all receptacle outlets specified by 210.52(B).

(e) Commercial office space receptacle outlets. Article 210 III. is hereby amended by adding Article 210.51 to read as follows:

210.51 Commercial Office Space Receptacle Outlets. Office spaces classified as Group "B"-Business by the Building Code shall be provided with a minimum of four (4) duplex convenience receptacle outlets per office, and/or shall be provided with a duplex convenience outlet for each twelve linear feet of usable wall space, with no point along such wall further than 6 feet from an outlet. Floor outlets further than two feet from a wall shall not be counted towards meeting this requirement. In no case shall more than seven (7) duplex convenience outlets be installed on one 20 amp circuit.

(f) Dwelling unit receptacle outlets-small appliances. Article 210.52 (B)(1)-(3) is hereby amended to read as follows:

(B) Small Appliances.

(1) Receptacle Outlets Served. In the kitchen, pantry, breakfast room, dining room, or similar area of a dwelling unit, the three or more 20-ampere small-appliance branch circuits required by 210.11(C)(1) shall serve all wall and floor receptacle outlets covered by 210.52(A), all countertop outlets covered by 210.52(C), and receptacle outlets for refrigeration equipment.

Exception No. 1: In addition to the required receptacles specified by 210.52, switched receptacles supplied from a general-purpose branch circuit as defined in 210.70(A)(1), Exception No. 1, shall be permitted.

Exception No. 2: The receptacle outlet for refrigeration equipment shall be permitted to be supplied from an individual branch circuit rated 15 amperes or greater.

(2) No Other Outlets. The three or more small-appliance branch circuits specified in 210.52(B)(1) shall have no other outlets.

Exception No. 1: A receptacle installed solely for the electrical supply to and support of an electric clock in any of the rooms specified in 210.52(B)(1).

Exception No. 2: Receptacles installed to provide power for supplemental equipment and lighting on gas-fired ranges, ovens, or counter-mounted cooking units.

(3) Kitchen Receptacle Requirements. Receptacles installed in a kitchen to serve countertop surfaces shall be supplied by not fewer than three small-appliance branch circuits, any or all of which shall also be permitted to supply receptacle outlets in the same kitchen and in other rooms specified in 210.52(B)(1). Additional small-appliance branch circuits shall be permitted to supply receptacle outlets in the kitchen and other rooms specified in 210.52(B)(1). No small-appliance branch circuit shall serve more than one kitchen.

(g) Branch circuit load calculations. Article 220.10 is hereby amended to read as follows:

220.10 General.

Branch-circuit loads shall be calculated as shown in 220.12, 220.14, and 220.16. Additionally, in dwelling units, 20-amp lighting and receptacle loads, other than the three required small appliance circuits specified in 210.11 (C)(1), shall be equally divided on twenty (20)-amp branch circuits.

(h) Lighting load for specified occupancies. Article 220.12 is hereby amended by altering Table 220.12 to read as follows:

220.12 Lighting Load for Specified Occupancies.

A unit load of not less than that specified in Table 220.12 for occupancies specified therein shall constitute the minimum lighting load. The floor area for each floor shall be calculated from the outside dimensions of the building, dwelling unit, or other area involved. For dwelling units, the calculated floor area shall not include open porches, garages, or unused or unfinished spaces not adaptable for future use.

Informational note: The unit values herein are based on minimum load conditions and 100 percent power factor and may not provide sufficient capacity for the installation contemplated.

Table 220.12 General Lighting Loads by Occupancy

Type of Occupancy	Volt-Amperes per Square Meter	Volt-Amperes per Square Foot
Armories and auditoriums	11	1
Banks	39b	3-1/2b
Barber shops and beauty parlors	33	3
Churches	11	1
Clubs	22	2
Court rooms	22	2
Dwelling units		4
Garages – commercial (storage)	6	1/2
Hospitals	22	2

Hotels and motels, including apartment houses without provision for cooking by tenantsa	22	2
Industrial commercial (loft) buildings	22	2
Lodge rooms	17	1-1/2
Office buildings	39b	3-1/2b
Restaurants	22	2
Type of Occupancy	**Volt-Amperes per Square Meter**	**Volt-Amperes per Square Foot**
Schools	33	3
Stores	33	3
Warehouses (storage)	3	1/4

In any of the preceding occupancies except one-family dwellings and individual dwelling units of two-family and multifamily dwellings:

Assembly halls and auditoriums	11	1
Halls, corridors, closets, stairways	6	1/2
Storage spaces	3	1/4

a See 220.14(J)

b See 220.14(K)

(i) Receptacle outlets. Article 220.14(I) is hereby amended to read as follows:

(I) Receptacle Outlets. Except as covered in 220.14(J) and (K), receptacle outlets shall be calculated at not less than 180 volt-amperes for each single or for each multiple receptacle on one yoke. A single piece of equipment consisting of a multiple receptacle comprised of four or more receptacles shall be calculated at not less than 90 volt-amperes per receptacle. This provision shall not be applicable to the receptacle outlets specified in 210.11(C)(1) and (C)(2). In no case shall more than seven (7) duplex receptacles be installed on a single 20-amp circuit in commercial occupancies.

(j) Raceway seal. Article 225.27 is hereby amended by deleting the entire article.

(k) Non-residential buildings with multiple services served by underground service laterals. Article 230.2 is hereby amended by adding a new subsection (F), as follows:

(F) Non-residential buildings with multiple services served by underground service laterals. For every non-residential building where multiple services are authorized and are supplied by underground service laterals, there shall be a designated metering/service location at the rear of such building on the exterior wall. There shall be no point along this wall more than seventy-five (75) linear feet from a metering/service location. No utility service point shall be closer than one hundred fifty (150) feet from another utility service point unless otherwise approved. The arrangement and installation of the conductors and equipment shall be as provided for in Figure 230.96 and Article 230.96.

(l) Point of attachment. Article 230.26 is hereby amended to read as follows:

230.26 Point of Attachment.

(A) The point of attachment of the service-drop conductors to a building or other structure shall provide the minimum clearances as specified in 230.9 and 230.24. In no case shall this point of attachment be less than 3.0 m (10 ft) above finished grade.

(B) The point of attachment of overhead service drops on a residence or building shall be on the rear of the building (alley side), or at a point agreed upon by the inspector and the serving utility.

(m) Service masts as supports. Article 230.28 is hereby amended to read as follows:

230.28 Service Masts as Supports.

Where a service mast is used for the support of service-drop conductors, it shall be of adequate strength or be supported by braces or guys to withstand safely the strain imposed by the service drop. Where raceway-type service masts are used, masts shall consist of rigid metallic conduit (RMC) or intermediate metallic

conduit (IMC) not less than two (2)-inch trade size, and all raceway fittings shall be identified for use with service masts. Only power service-drop conductors shall be permitted to be attached to a service mast. The point of attachment of the service cable shall be twenty-four (24) inches above the roof.

(n) Non-residential buildings with multiple services served by underground service laterals. Article 230.40, Exception No. 1, is hereby amended to read as follows:

Exception No. 1: A building with more than one occupancy shall be permitted to have one set of service-entrance conductors for each service, as defined in 230.2, run to each occupancy or group of occupancies. For non-residential buildings containing multiple occupancies served by underground service laterals in accordance with Article 230.2(F), installation shall be in accordance with Figure 230.96 and Article 230.96.

(o) Service equipment–General. Article 230V is hereby amended by adding a new section 230.67 to read as follows:

230.67 Meter Installation.

(A) Each meter socket installation shall be on the outside of the building[,] residence or other structure and shall be mounted not more than six (6) feet nor less than five (5) feet above the level of the standing space measured to the center of the meter face, except when the device or area for mounting the meter base is provided by the serving utility.

(B) Multi-meter bases of two (2) or more meters at any one location shall have a permanent identification tag (brass, copper or aluminum). Such tag shall be not less than one inch long, one-half inch wide or one inch in diameter. Each tag shall properly identify the unit served by the meter base and be clearly visible. It shall be securely fastened to the meter base, but not the meter base lid. Tags shall be stamped with steel numerical and/or alphabetical figures of at least one-eighth of an inch.

Exception: If visible from the front, non-movable parts of meter base may be stamped for identification.

(p) Non-residential buildings with multiple services served by underground service laterals. Article 230 is hereby amended by adding a new article 230.96 to read as follows:

Article 230.96. Non-residential buildings with multiple services served by underground service laterals.

Non-residential buildings with multiple services served by underground service laterals shall have all services configured in accordance with 230.96 (1) through (7) and Figure 230.96 below, unless otherwise approved.

(1) Sizing of gutter, wire-way or wire trough. The contractor shall provide a gutter, wire-way or wire-trough with a minimum size of eight (8) inch by eight (8) inch by six (6) feet or the National Electrical Code requirement, whichever is greater, to contain the service conductors to supply the meter bases and service disconnects at each metering location.

(2) Service disconnecting means. Each space requiring its own meter shall have its service disconnect and disconnects located at the metering location and there shall be no more than six (6) service disconnecting means at any metering location without the written consent of the building official.

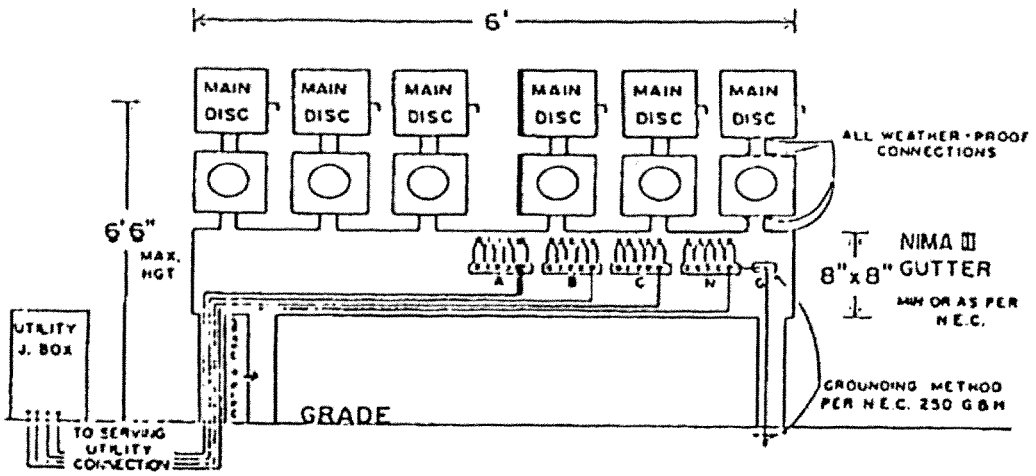
(3) Conductors and raceways. The contractor shall provide service conductors and raceways from the gutter, wire-way or wire-trough to the point of connection of the serving utility. There shall be one additional four-inch conduit provided from each wire-trough to the point of connection of the serving utility or a terminal junction box adjacent to the metering location. The contractor shall provide an acceptable means for at least six (6) meter taps from the service feed brought to each wire-trough. To insure a proper conductor termination, the service feed conductors from the point of connection of the serving utility to the wire-trough shall be copper. They shall be installed in approved conduit, shall enter the wire-trough from the bottom side toward one end, shall traverse the entire length of the wire-way and shall be terminated on an approved termination lug or block as set forth above.

(4) Sizing of service entrance conductors and equipment. If the actual load of the building is not known, an assumed load of twenty (20) volt-amperes per square foot shall be used to size the service conductors.

(5) Phase-matching and balancing of load. All service taps which connect to the building service shall match the phasing of the building service. Service taps connecting to a 3-phase 4-wire building service shall be 3-phase and 4-wire taps. Service taps shall be load balanced before a final inspection is granted and the system shall be balanced back to the building service.

(6) Method of grounding services. Multi-meter services shall be grounded at the service connection point in the wire way and all service taps shall be grounded to that point. The grounding conductor shall be sized according to the requirements of Article 250 for the service size. Refer to Figure 230.96:

FIGURE 230.96



(q) Marking. Article 250.21(C) is hereby amended by deletion of the entire article.

(r) Grounding electrode system. Article 250.50 is hereby amended to read as follows:

250.50 Grounding Electrode System.

All grounding electrodes as described in 250.52(A)(1) through (A)(7) that are present at each building or structure served shall be bonded together to form the grounding electrode system. Where none of these grounding electrodes exist, one or more of the grounding electrodes specified in 250.52 (A)(4) through (A)(8) shall be installed and used. In new construction, or in any building reconstruction or addition involving the new construction of a concrete foundation containing reinforcing steel that complies with the requirements of Article 250.52(A)(3), a concrete encased electrode shall be provided as part of the grounding electrode system. Where a concrete encased electrode or metallic water piping is used, a supplemental electrode complying with 250.52 (A)(5) shall be provided.

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

(s) Bonding for other systems. Article 250.94 shall is hereby amended by deleting the entire article.

(t) Cables and raceways parallel to framing members and furring strips. Article 300.4 (D) is hereby amended by deleting the entire subsection.

(u) Underground installations (direct buried conductors and cables). Article 300.5(A) and Table 300.5 are hereby amended to read as follows:

300.5 Underground Installations.

(A) Minimum Cover Requirements. Direct-buried cable or conduit or other raceways shall be installed to meet the minimum cover requirements of Table 300.5.

Table 300.5 Minimum Cover Requirements, 0 to 600 Volts, Nominal, burial in Millimeters (Inches)										
Type of Wiring Method or Circuit										
	Column 1 Direct Burial Cables or Conductors 6		Column 2 Rigid Metal Conduit or Intermediate Metal Conduit		Column 3 Nonmetallic Raceways Listed for Direct Burial Without Concrete Encasement or Other Approved Raceways		Column 4 Residential Branch Circuits Rated 120 Volts or Less with GFCI Protection and Maximum Overcurrent Protection of 20 Amperes		Column 5 Circuits for Control of Irrigation and Landscape Lighting Limited to Not More Than 30 Volts and Installed with Type UF or in Other Identified Cable or Raceway	
Location of Wiring Method or Circuit	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.
All locations not specified below	600	24	150	6	450	18	300	12	150	6
In trench below 50-mm (2-in.) thick concrete or equivalent	450	18	150	6	300	12	150	6	150	6
Under a building	0	0	0	0	0	0	0	0	0	0
	(in raceway only)						(in raceway only)		(in raceway only)	
	Column 1 Direct Burial Cables or Conductors 6		Column 2 Rigid Metal Conduit or Intermediate Metal Conduit		Column 3 Nonmetallic Raceways Listed for Direct Burial Without Concrete Encasement or Other Approved Raceways		Column 4 Residential Branch Circuits Rated 120 Volts or Less with GFCI Protection and Maximum Overcurrent Protection of 20 Amperes		Column 5 Circuits for Control of Irrigation and Landscape Lighting Limited to Not More Than 30 Volts and Installed with Type UF or in Other Identified Cable or Raceway	
Under minimum of 102-mm (4-in.) thick concrete exterior slab with no vehicular traffic and the slab extending not less than 152 mm (6 in.) beyond the underground installation	450	18	100	4	100	4	150	6	150	6
							(direct burial)		(direct burial)	
							100	4	100	4

							(in raceway only)		(in raceway only)	
Under streets, highways, roads, alleys, driveways, and parking lots	600	24	600	24	600	24	600	24	600	24
One- and two-family dwelling driveways and outdoor parking areas, and used only for dwelling-related purposes	450	18	450	18	450	18	300	12	450	18
In or under airport runways, including adjacent areas where trespassing prohibited	450	18	450	18	450	18	450	18	450	18

Notes:

1. Cover is defined as the shortest distance in millimeters (inches) measured between a point on the top surface of any direct-buried conductor, cable, conduit, or other raceway and the top surface of finished grade, concrete, or similar cover.

2. Raceways approved for burial only where concrete encased shall require concrete envelope not less than 50 mm (2 in.) thick.

3. Lesser depths shall be permitted where cables and conductors rise for terminations or splices or where access is otherwise required.

4. Where one of the wiring method types listed in Columns 1–3 is used for one of the circuit types in Columns 4 and 5, the shallowest depth of burial shall be permitted.

5. Where solid rock prevents compliance with the cover depths specified in this table, the wiring shall be installed in metal or nonmetallic raceway permitted for direct burial. The raceway shall be covered by a minimum of 50 mm (2 in.) of concrete extending down to rock.

6. Service and feeder conductors shall be installed in approved raceways protected in accordance with Column 2 or 3, as applicable.

(v) Minimum size of conductors. Article 310.106(A) is hereby amended to read as follows:

310.106(A) Minimum Size of Conductors.

The minimum size of conductors shall be as shown in Table 310.106(A), except that no conductor smaller than No. 12 American wire gauge size (12 AWG) shall be used in work governed by this code.

Exceptions:

(1) Pendant and portable cords;

(2) Fixture wire;

(3) No. 14 AWG may be used for individual fixture leads at an outlet box;

(4) No. 14 AWG may be used for control circuits operating contactors or relays of a size approved by the manufacturer and the building inspection department;

(5) Wiring for systems covered under Article 700 (Emergency Systems);

(6) Wiring for systems covered under Article 600 (Electrical Signs);

(7) No. 14 AWG may be used for the wiring of switch legs in residential occupancies. where provided with appropriate over current device.

(8) Notwithstanding exceptions (1)-(7) above, where permitted elsewhere in this code.

(w) Conductor material. Article 310.106(B) is hereby amended to read as follows:

(B) Conductor Material. Conductors in this article shall be of aluminum, copper-clad aluminum, or copper unless otherwise specified.

Exceptions:

(1) Conductors made of aluminum or of an AA-8000 Series aluminum alloy complying with Article 310.4 may be installed on services and feeders only. Aluminum conductors must be terminated properly using approved compression-type crimp lugs installed with a proper tool and with an approved oxide inhibitor. Such conductors may also be used as branch circuit wiring in commercial and industrial applications in No. 4 AWG or larger wire sizes, subject to the further conditions outlined herein.

(2) No aluminum conductors shall be installed on any branch circuits or grounding systems.

(x) Uses not permitted (types NM and NMS). Article 334.12(B) shall be amended to read as follows:

(B) Types NM and NMS. Types NM and NMS cables shall not be used under the following conditions or in the following locations:

(1) Where exposed to corrosive fumes or vapors

(2) Where embedded in masonry, concrete, adobe, fill, or plaster

(3) In a shallow chase in masonry, concrete, or adobe and covered with plaster, adobe, or similar finish

(4) Where exposed or subject to excessive moisture or dampness.

(y) Nonmetallic sheathed cable (Romex)–Uses not permitted. Article 334.12 shall be amended by adding a new subsection (C) to read as follows:

(C) Nonmetallic sheathed cable shall not be used in any type of commercial building nor shall it be used in residential buildings used as or converted into any commercial use nor in any building used as, or converted into, convalescent homes, nurseries or day-care facilities requiring a license from the State of Texas. For purposes of this Article, a "commercial building" shall include all buildings not classified as Group "R"- Residential by the Building Code.

(z) Ampacity. Article 334.80 shall be amended by deleting the second and third paragraphs.

(aa) Wet locations (receptacles in). Article 406.9(B)(1) shall be amended to read as follows:

15- and 20-ampere, 125- and 250-volt receptacles in a Wet location. 15- and 20-ampere, 125- and 250-volt receptacles installed outdoors in a wet location shall have an enclosure that is weatherproof whether or not the attachment plug cap is inserted. All 15- and 20- ampere, 125- and 250 volt non-locking receptacles shall be listed weather-resistant type.

Exception: 15- and 20-ampere, 125- through 250-volt receptacles installed in the following wet locations shall be permitted to have an enclosure that is weatherproof only when the attachment plug is removed:

a. Those subject to routine high pressure spray washing;

b. Those customarily designed and located for intermittent, short-term use during periods where rainfall or other detrimental moisture is not present.

(bb) Ungrounded systems. Article 408.3(F)(2) is hereby amended by deletion of the entire article.

(cc) Field identification required. Article 408.4(B) is hereby amended by deletion of the entire article.

(dd) Panel board over current device capacity. Article 408 III. is hereby amended by adding article 408.35 to read as follows:

408.35. Panel board Spare Circuit Capacity.

Panel boards serving dwelling units shall be provided with capacity for two additional 120-volt branch circuits, and shall be provided with a spare conduit of not less than 3/4" trade size installed from the panel to an accessible crawl space in the attic, under the floor, or to the outside of the house where there is no accessible attic or crawl space.

(ee) Luminaries in specific locations. Article 410.10 is hereby amended by adding a new sub article (F), to read as follows:

(F) Flood Lights and other Luminaries on or near the Ground. Open flood lights or other fixtures containing luminaries installed on the ground or within eight (8) feet of finished grade shall be equipped with a guard or protective device to prevent personal injury from burns or electric shock.

SECTION 3. THAT violation of any provision of this Ordinance shall be deemed a misdemeanor punishable as provided by Section 1.01.004 of the Code of Ordinances of the City of Lubbock, Texas.

SECTION 4. THAT should any paragraph, sentence, clause, phrase or word of this Ordinance be declared unconstitutional or invalid for any reason, the remainder of this Ordinance shall not be affected thereby.

SECTION 5. THAT pursuant to Section 214.218 of the Texas Local Government Code, this Ordinance shall not be implemented or enforced until after the 30th day after the date of final adoption.

SECTION 6. THAT the City Secretary is hereby authorized to cause publication of the descriptive caption of this Ordinance as an alternative method provided by law.

AND IT IS SO ORDERED.

Passed by the City Council on first reading this 23rd day of May, 2013.

Passed by the City Council on second reading this 13th day of June, 2013.

GLEN C. ROBERTSON, MAYOR

ATTEST:

Rebecca Garza, City Secretary

APPROVED AS TO CONTENT:

Steve O'Neal, Chief Building Official

APPROVED AS TO FORM:

Amy Sims, Assistant City Attorney

as/2011 NEC ord.2.22.13