

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF FRISCO, TEXAS, REPEALING ORDINANCE NO. 13-10-67; AMENDING DIVISION 2 (ELECTRICAL CODE), ARTICLE IV (TECHNICAL CODES), CHAPTER 18 (BUILDINGS AND BUILDING REGULATIONS), PART II OF THE FRISCO CODE OF ORDINANCES, ORDINANCE NO. 06-03-31, AS AMENDED; ADOPTING THE 2014 EDITION OF THE NATIONAL ELECTRICAL CODE, INCLUDING ANNEX H, SAVE AND EXCEPT THE DELETIONS AND ADDITIONS SET FORTH HEREIN; REGULATING THE CONSTRUCTION, ALTERATION, REMOVAL, USE AND MAINTENANCE OF ANY ELECTRICAL WIRING, APPARATUS, DEVICE AND/OR SYSTEM WITHIN THE CITY OF FRISCO, TEXAS; PROVIDING FOR A PENALTY FOR THE VIOLATION OF THIS ORDINANCE; PROVIDING A PENALTY CLAUSE, SAVINGS/REPEALING CLAUSE, SEVERABILITY CLAUSE AND AN EFFECTIVE DATE; AND PROVIDING FOR THE PUBLICATION OF THE CAPTION HEREOF.

WHEREAS, the City Council of the City of Frisco, Texas ("City Council") has investigated and determined that it would be advantageous, beneficial and in the best interest of the citizens of the City of Frisco, Texas ("Frisco") to amend Division 2 (Electrical Code), Article IV (Technical Codes), Chapter 18 (Buildings and Building Regulations), Part II of the Frisco Code of Ordinances, Ordinance No. 06-03-31, as amended ("Code of Ordinances"), by adopting the 2014 Edition of the National Electrical Code, save and except the deletions and additions set forth below; and

WHEREAS, the City Council has investigated and determined that in order to most effectively make the deletions and additions necessary to Division 2 (Electrical Code), Article IV (Technical Codes), Chapter 18 (Buildings and Building Regulations), Part II of the Frisco Code of Ordinances, it is in the best interest of the citizens of Frisco to repeal Ordinance No. 13-10-67 (Electrical Code), in its entirety, and replace it with this Ordinance, adopting the 2014 Edition of the National Electrical Code, save and except the deletions and additions set forth below.

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

SECTION 1: Findings Incorporated. The findings set forth above are incorporated into the body of this Ordinance as if fully set forth herein.

SECTION 2: Repeal of Ordinance No. 13-10-67. Ordinance No. 13-10-67 is hereby repealed, in its entirety, and replaced by this Ordinance. The effective date of the repeal discussed in this Section shall not occur until the effective date of this Ordinance at which time Ordinance No. 13-10-67 shall be repealed. Such repeal shall not abate any pending prosecution and/or lawsuit or prevent any prosecution and/or lawsuit from being commenced for any violation of Ordinance No. 13-10-67 occurring before the effective date of this Ordinance.

SECTION 3: Amendment to Division 2 (Electrical Code), Article IV (Technical Codes), Chapter 18 (Buildings and Building Regulations), Part II of the Frisco Code of Ordinances. Division 2 (Electrical Code), Article IV (Technical Codes), Chapter 18 (Buildings and Building Regulations), Part II of the Frisco Code of Ordinances is hereby amended for the sole purpose of adopting new electrical code regulations as set forth in the National Electrical Code, including Annex H, copyrighted by the National Fire Protection Association, save and except the deletions and additions set forth in Exhibit A, attached hereto and incorporated herein for all purposes, regulating the construction, alteration, removal, use and maintenance of any electrical wiring, apparatus, device and/or system within Frisco (“2014 National Electrical Code”). The 2014 National Electrical Code, including Annex H, is made a part of this Ordinance as if fully set forth herein. Three (3) copies of the 2014 National Electrical Code are on file in the office of the City Secretary of Frisco being marked and designated as the 2014 National Electrical Code. The deletions and additions set forth in Exhibit A are located on Frisco’s website under Development Services.

SECTION 4: Savings/Repealing. All provisions of any ordinance in conflict with this Ordinance are hereby repealed to the extent they are in conflict; but such repeal shall not abate any pending prosecution for violation of the repealed ordinance, nor shall the repeal prevent a prosecution from being commenced for any violation if occurring prior to the repeal of the ordinance. Any remaining portion of conflicting ordinances shall remain in full force and effect.

SECTION 5: Penalty Provision. Any person, firm, corporation or business entity violating this Ordinance shall be deemed guilty of a misdemeanor, and upon conviction therefore, shall be fined a sum not exceeding TWO THOUSAND AND NO/DOLLARS (\$2,000.00), and each and every day that such violation continues shall be considered a separate offense; provided, however, that such penal provision shall not preclude a suit to enjoin such violation. Frisco retains all legal rights and remedies available to it pursuant to local, state and federal law.

SECTION 6: Severability. Should any section, subsection, sentence, clause or phrase of this Ordinance be declared unconstitutional and/or invalid by a court of competent jurisdiction, it is expressly provided that any and all remaining portions of this Ordinance shall remain in full force and effect. Frisco hereby declares that it would have passed this Ordinance, and each section, subsection, clause or phrase thereof, regardless of whether any one or more sections, subsections, sentences, clauses or phrases is declared unconstitutional and/or invalid.

SECTION 7: Effective Date. This Ordinance shall become effective upon its passage and publication as required by the City Charter and by law.

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DULY PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF FRISCO, TEXAS, on this _____ day of _____, 2016.

Maher Maso, Mayor

**ATTESTED AND CORRECTLY
RECORDED:**

Jenny Page, City Secretary

APPROVED AS TO FORM:



Abernathy, Roeder, Boyd & Hullett, P.C.
Ryan D. Pittman, City Attorneys

Dates of Publication: _____, *Frisco Enterprise*

Exhibit A
CITY OF FRISCO DELETIONS/ADDITIONS
2014 NATIONAL ELECTRICAL CODE¹

The following deletions and additions to the 2014 National Electrical Code are hereby approved and adopted (*i.e.* deletions evidenced by ~~strike through~~ and additions evidenced by underline)²:

Chapter 1 General of the 2014 National Electrical Code is amended as follows:

Article 100 Definitions of the 2014 National Electrical Code is amended as follows:

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

Intersystem Bonding Termination. A device that provides a means for connecting intersystem bonding conductors for communication systems and other systems such as metallic gas piping systems to the grounding electrode system. Also refer to Section G2411 Electrical Bonding in the 2015 International Residential Code, adopted by Frisco, as it currently exists or may be amended.

Article 110 Requirements for Electrical Installations of the 2014 National Electrical Code is amended as follows:

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

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

Informational Note: See 90.7, Examination of Equipment for Safety, and 110.3, Examination, Identification, Installation, and Use of Equipment. See definitions of Approved, Identified, Labeled, and Listed.

110.14 Electrical Connections. *[Paragraph remains unchanged.]*

¹ Unless otherwise expressly provided herein, all phrases, words and/or terms used herein shall have the same meaning ascribed to the same in the 2014 National Electrical Code (regardless of whether such phrases, words and/or terms are italicized herein).

² Other italicized and bold notations are provided throughout for informational purposes only. By way of example only, “[*Paragraph remains unchanged.*]”.

(A) Terminals. Connection of conductors to terminal parts shall ensure a thoroughly good connection without damaging the conductors and shall be made by means of pressure connectors (including set-screw type), solder lugs, or splices to flexible leads and shall be tightened to manufacturer's torque specifications. Connection by means of wire-binding screws or studs and nuts that have upturned lugs or the equivalent shall be permitted for 10 AWG or smaller conductors. Terminals for more than one (1) conductor and terminals used to connect aluminum shall be so identified.

The AHJ shall be provided with documentation of proper tightening torque of conductors to terminals used prior to energizing of equipment.

Chapter 2 Wiring and Protection of the 2014 National Electrical Code is amended as follows:

Article 210 Branch Circuits of the 2014 National Electrical Code is amended as follows:

210.5 Identifications for Branch Circuits. [Remains unchanged.]

(a) Means of Identification. The means of identification shall be permitted to be by separate color coding, marking tape, or other approved methods. For branch circuits and feeders supplying systems of 277/480V, the means of identification shall be by conductor insulation color of brown, orange, yellow, and gray.

210.21 Outlet Devices. [Remains unchanged.]

(4) Receptacle Ratings. Where connected to a branch circuit supplying two (2) or more receptacles or outlets, receptacle ratings shall conform to the values listed in Table 210.21(B)(3), or where rated higher than 50 amperes, the receptacle rating shall not be less than the branch-circuit rating. The maximum number of receptacle outlets connected to 15 AMP general-purpose branch circuit shall be ten (10). The maximum number of receptacle outlets connected to a 20 AMP general-purpose branch circuit shall be thirteen (13).

210.52 General.

(G)(1) Garages. In each attached garage and in each detached garage with electric power. ~~The branch circuit supplying this receptacle(s) shall not supply outlets outside of the garage.~~ At least one receptacle outlet shall be installed for each car space.

Article 230 Services of the 2014 National Electrical Code is amended as follows:

230.71 Maximum Number of Disconnects.

(A) **General.** *[Paragraph remains unchanged.]*

Exception: Multi-occupant buildings. Individual service disconnecting means is limited to six for each occupant. The number of individual disconnects at one location may exceed six.

Article 250 Grounding and Bonding of the 2014 National Electrical Code is amended as follows:

250.62 Grounding Electrode Conductor Material. The grounding electrode conductor shall be of copper, ~~aluminum, copper-clad aluminum, or items as permitted in 250.68(C).~~ The material selected shall be resistant to any corrosive condition existing at the installation or shall be protected against corrosion. Conductors of the wire type shall be solid or stranded, insulated, covered, or bare.

250.118 Types of Equipment Grounding Conductors. *[Paragraph remains unchanged.]*

- (1) A copper, ~~aluminum, or copper-clad aluminum~~ conductor. This conductor shall be solid or stranded; insulated, covered, or bare; and in the form of a wire or a bus bar of any shape. Use of aluminum cable assemblies of 1/0 and larger or aluminum buss bars is allowed.
- ~~(8) Armor of Type AC cable as provided in 320.108.~~
- (15) All raceways and cable assemblies shall contain an insulated equipment grounding conductor per Table 250.66 and 250.122.

Chapter 3 Wiring Methods and Materials of the 2014 National Electrical Code is amended as follows:

Article 300 Wiring Methods of the 2014 National Electrical Code is amended as follows:

300.1 Scope.

(A) **All Wiring Installations.** This Article covers general requirements for wiring methods and materials for all wiring installations unless modified by other articles. All electrical conductors for commercial, office, or industrial installation shall be installed in approved conduits or raceways, regardless of type of construction.

300.11 Securing and Supporting.

(A) **Secure in Place.** *[Paragraph remains unchanged.]*

Exception: Ceiling grid support wires may be used for structural supports when the associated wiring is located in that area. Not more than two raceways or cables supported per wire with a maximum nominal metric designation 16 (trade size ½”).

Article 310 Conductors for General Wiring of the 2014 National Electrical Code is amended as follows:

310.106 Conductors.

(A) Minimum Size of Conductors. The minimum size of conductors shall be as shown in Table 310.106(A), except for low voltage control circuits as permitted elsewhere in this code.

(B) Conductor Material. Conductors in this Article shall be of aluminum, copper clad aluminum, or copper unless otherwise specified. Use of aluminum 1/0 and larger is allowed for multifamily and commercial use only. All grounding and bonding conductors shall be of copper and be sized per 250.66, 250.102 (C)(1) and 250.122. Refer to amendments in Article 250 for cable assemblies.

~~Solid aluminum conductors 8, 10, and 12 AWG shall be made of an AA-8000 series electrical grade aluminum alloy conductor material. For multifamily and commercial use only, stranded aluminum conductors 8 AWG 1/0 through 1000 kcmil marked as Type RHH, RHW, XHHW, THW, THHW, THWN, THHN, service-entrance Type SE Style U and SE Style R shall be made of an AA-8000 series electrical grade aluminum alloy conductor material.~~

Table 310.106(A) Minimum Size of Conductors

Conductor Voltage Rating (Volts)	Minimum Conductors Size (AWG)		
	Copper	Aluminum or Copper-Clad <u>feeders allowed</u>	Aluminum <u>(only)</u>
0 - 2000	14 12		12 1/0
2001- 5000	8		8 1/0
5001 – 8000	6		6 1/0
8001 - 15000	2		2 1/0
15,001 - 28,000	1		1 1/0
28,001 - 35,000	1/0		1/0

Article 334 Nonmetallic-Sheathed Cable: Types NM, NMC, and NMS of the 2014 National Electrical Code is amended as follows:

334.12 Uses Not Permitted.

(A) Types NM, NMC, and NMS. *[Paragraph remains unchanged.]*

- (11) In building where it would be required to pass through factory or field punched, cut, or drilled slots or holes in metal or non-combustible framing members.
- (12) In any assembly, business, educational, factory, institutional, mercantile or storage uses other than areas related to the operational functions of and R-2 uses.

Chapter 5 Special Occupancies of the 2014 National Electrical Code is amended as follows:

Article 500 Hazardous (Classified) Locations, Classes I, II, and III, Divisions 1 and 2 of the 2014 National Electrical Code is amended as follows:

500.8 Equipment. *[Paragraph remains unchanged.]*

- (A) **Suitability.** Suitability of identified equipment shall be determined by one of the following:
 - (3) Evidence acceptable to the authority having Evidence acceptable to the authority having jurisdiction such as a manufacturer's self-evaluation or ~~an owner's engineering judgment.~~ an engineering judgment signed and sealed by a qualified licensed Professional Engineer in the State of Texas.

Article 505 Zone 0, 1, and 2 Locations of the 2014 National Electrical Code is amended as follows:

505.7 Special Precaution. *[Paragraph remains unchanged.]*

- (A) **Implementation of Zone Classification System.** Classification of areas, engineering and design, selection of equipment and wiring methods, installation, and inspection shall be performed by a qualified ~~persons~~ Licensed Professional Engineer in the State of Texas.

Chapter 6 Special Equipment of the 2014 National Electrical Code is amended as follows:

Article 680 Swimming Pools, Fountains, and Similar Installations of the 2014 National Electrical Code is amended as follows:

680.25 Feeders. *[Paragraph remains unchanged.]*

- (A) **Wiring Methods.**
 - (1) **Feeders.** *[Paragraph remains unchanged.]*
 - (7) Nonmetallic-sheathed cable
 - (8) Type SE cable

Annex H Administration and Enforcement of the 2014 National Electrical Code is amended as follows:

80.15 Electrical Board. *[Entire subsection deleted.]*

80.19 Permits and Approvals. *[Paragraph remains unchanged.]*

(E) Fees. *[Paragraph remains unchanged.]* The fees for electrical work shall be as in Frisco's Master Fees Ordinance, as amended.

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**(The Index is provided for informational purposes only to note the location
of the deletions/additions in the 2014 National Electrical Code as set forth in this Ordinance)**

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END OF EXHIBIT A