

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF FRISCO, TEXAS, REPEALING ORDINANCE NO. 2022-11-54; 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 2023 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 2023 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. 2022-11-54 (Electrical Code), in its entirety, and replace it with this Ordinance, adopting the 2023 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. 2022-11-54. Ordinance No. 2022-11-54 is hereby repealed, in its entirety, and replaced by this Ordinance.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this Section shall not occur until the effective date of this Ordinance at which time Ordinance No. 2022-11-54 shall be repealed.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. 2022-11-54 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 (“2023 National Electrical Code”). The 2023 National Electrical Code, including Annex H, is made a part of this Ordinance as if fully set forth herein. Three (3) copies of the 2023 National Electrical Code are on file in the office of the City Secretary of Frisco being marked and designated as the 2023 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.

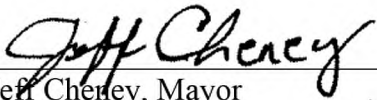
SECTION 5: Penalty Provision. Any person, firm, corporation or business entity violating this Ordinance shall be deemed guilty of a misdemeanor, and upon conviction therefore, shall be fined a sum not exceeding TWO THOUSAND AND NO/DOLLARS (\$2,000.00), and each and every day that such violation continues 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 16th day of January, 2024.


  
\_\_\_\_\_  
Jeff Cheney, Mayor

**ATTESTED AND CORRECTLY  
RECORDED:**

  
\_\_\_\_\_  
Kristi Morrow, City Secretary



**APPROVED AS TO FORM:**

  
\_\_\_\_\_  
Abernathy, Roeder, Boyd & Hullett, P.C.  
Aliceson Cotton, City Attorneys

Dates of Publication: January 21, 2024 and January 28, 2024, *Frisco Enterprise*



**Exhibit A**  
**CITY OF FRISCO DELETIONS/ADDITIONS**  
**2023 NATIONAL ELECTRICAL CODE<sup>1</sup>**

The following deletions and additions to the 2023 National Electrical Code are hereby approved and adopted (*i.e.*, deletions evidenced by ~~strikethrough~~ and additions evidenced by underline)<sup>2</sup>:

**Chapter 1 General** of the 2023 National Electrical Code is amended as follows:

**Article 100 Definitions** of the 2023 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 as referenced by TBPELS 137.59 (a) (b) as acceptable by the AHJ.

**Article 110 General Requirements for Electrical Installations** of the 2023 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, a qualified third party inspection agency or a field evaluation by a Field Evaluation Body accredited by either the International Code Council, International Accreditation Service AC354 or ANSI National Accreditation Board programs and 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.

**110.12 Mechanical Execution of Work.** Electrical equipment shall be installed in a professional and skillful manner.

...

**(B) Integrity of Electrical Equipment and Connections.** Internal parts of electrical equipment, including busbars, wiring terminals, insulators, and other surfaces, shall not be damaged or contaminated by foreign materials

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<sup>1</sup> Unless otherwise expressly provided herein, all phrases, words and/or terms used herein shall have the same meaning ascribed to the same in the 2023 National Electrical Code (regardless of whether such phrases, words and/or terms are italicized herein).

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

such as paint, plaster, cleaners, abrasives, corrosive residues or influences, fire, products of combustion, or water. There shall be no damaged parts that may adversely affect safe operation or mechanical strength of the equipment such as parts that are broken; bent; cut; or deteriorated by corrosion, chemical action, or overheating. Except where prohibited elsewhere in this Code, equipment shall be specifically evaluated by its manufacturer or a qualified testing laboratory prior to being returned to service as deemed necessary by the Building Official.

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

...

**(D) Terminal Connection Torque.** Tightening torque values for terminal connections shall be as indicated on equipment or in installation instructions provided by the manufacturer. An approved means shall be used to achieve the indicated torque value. 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 2023 National Electrical Code is amended as follows:

**Article 210 Branch Circuits** of the 2023 National Electrical Code is amended as follows:

**210.5 Identifications for Branch Circuits.**

**(1) Branch Circuits Supplied from More Than One Nominal Voltage System. [Paragraph remains unchanged.]**

**(a) Means of Identification.** The means of identification shall be permitted to be by separate color coding, marking tape, tagging, or other approved means. For branch circuits and feeders supplying systems of 277/480V, the means of identification shall be by color of brown, orange, yellow, and gray. For branch circuits and feeders supplying systems of 120/208V, the means of identification shall be by color black, red, blue, and white.

**210.8 Ground-Fault Circuit-Interrupter Protection for Personnel. [Paragraph remains unchanged.]**

**(A) Dwelling Units. [Paragraph remains unchanged.]**

Exception No. 4: Factory-installed receptacles that are not readily accessible and are mounted to ~~bathroom~~ exhaust fan assemblies shall not require GFCI protection unless required by the installation instruction or listing.

**210.52 Dwelling Unit Receptacle Outlets. [Paragraph remains unchanged.]**

...

**(3) Kitchen Receptacle Requirements. [Paragraph remains unchanged.]**

...

**(C) Countertops and Work Surfaces. [Paragraph remains unchanged.]**

...

**(2) Island and Peninsular Countertops and Work Surfaces.** Receptacle outlets, if installed to serve an island or peninsular countertop or work surface, shall be installed in accordance with 210.52 (C) (3). If a receptacle outlet is not provided to serve an island or peninsular countertop or work surface, ~~provisions shall be provided at the island or peninsula for a Chapter 3 method shall be installed and supplied from a small appliance circuit to a listed outlet box in the peninsular or island cabinet in an accessible location for future addition of a receptacle outlet to serve the island or peninsular countertop or work surface.~~

**210.63 Equipment Requiring Servicing. [Paragraph remains unchanged.]**

...

**(B) Other Electrical Equipment.** In other than one- and two-family dwellings, a receptacle outlet shall be located as specified in 210.63 (B) (1) and (B) (2).

...

**(2) Indoor Equipment Requiring Dedicated Equipment Spaces.** Where equipment, other than service equipment, requires dedicated equipment space as specified in 110.26 (E), the required receptacle outlet shall be located within the same room or area as the electrical equipment, ~~and shall not be connected to the load side of the equipment's disconnecting means.~~

**Article 220 Branch-Circuit, Feeder, and Service Load Calculations** of the 2023 National Electrical Code is amended as follows:

**220.6 Load Calculations.** A load calculation shall be provided upon request when modifications to the electrical installation occurs.

**Article 230 Services** of the 2023 National Electrical Code is amended as follows:

**230.71 Maximum Number of Disconnects.**

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

Exception: In 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 2023 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 are permitted.

~~(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 2023 National Electrical Code is amended as follows:

**Article 300 General Requirements for Wiring Methods and Materials** of the 2023 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 wiring installations unless modified by other articles in Chapter 3. All electrical conductors for occupancy

classifications listed in the 2021 International Building Code of A, B, E, F, H, I, M, R-1, S, and U shall be installed in approved metallic conduits, or raceways, or other material approved by the Building Official regardless of type of construction.

### **300.11 Securing and Supporting.**

**(B) Wiring Systems Installed Above Suspended Ceilings.** *[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 2023 National Electrical Code is amended as follows:

### **310.3 Conductors.**

**(A) Minimum Size of Conductors.** The minimum size of conductors for voltage ratings up to and including 2000 volts shall be ~~14~~ 12 AWG copper ~~or 12 AWG aluminum or copper-clad aluminum~~, except for low voltage control circuits as permitted elsewhere in this code.

**(B) Conductor Material.** Conductors in this article shall be of copper, ~~aluminum, or copper-clad aluminum~~, or 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.

When permitted, ~~Aluminum~~ and copper-clad aluminum shall comply with the following:

- ~~1. Solid aluminum conductors 8, 10, and 12 AWG shall be made of an AA-8000 series electrical grade aluminum alloy conductor material.~~
2. For Multifamily and commercial use only, Sstranded 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.
- ~~3. For copper-clad aluminum conductors. The copper shall form a minimum of 10 percent of the cross-sectional area of a solid conductor for each strand of stranded conductor.~~



4. ~~Copper-clad aluminum conductor material shall be listed.~~

**Article 315 Medium Voltage Conductors, Cable, Cable Joints, and Cable Terminations** of the 2023 National Electrical Code is amended as follows:

**Table 315.12(A) Minimum Size of Conductors**

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

**Chapter 4 Equipment for General Use** of the 2023 National Electrical Code is amended as follows:

**Article 410 Luminaires, Lampholders, and Lamps** of the 2023 National Electrical code is amended as follows:

**410.118 Access to Other Boxes.** Luminaires recessed in ceilings, floors, or walls shall not be used to access outlet, pull, or junction boxes or conduit bodies, unless the box or conduit body is an integral part of the listed luminaire.

Exception: removable luminaires with a minimum measurement of 22 in. x 22 in. shall be permitted to be used as access to outlet, pull, junction boxes or conduit bodies.

**Article 422 Appliances** of the 2023 National Electrical code is amended as follows:

**422.31 Disconnection of Permanently Connected Appliances.** For appliances that do not have a disconnecting means in accordance with 422.33 or 422.34, a disconnecting means shall be provided in accordance with 422.31(A), (B), or (C).

...

**(B) Appliances Rated over 300 Volt-Amperes.** For permanently connected appliances rated over 300 volt-amperes, the branch circuit switch or circuit breaker shall be permitted to serve as the disconnecting means where the switch or circuit breaker is within sight from the appliance or be capable of being locked in the open position in compliance with 110.25 and is readily accessible to the appliance it serves.

The following means of access constitute readily accessible for the purpose of this Article.

1. A permanent stair;
2. A pull-down stair with a minimum 300 lb. (136 kg) capacity; or
3. An access door from an upper floor level.

**Chapter 5 Special Occupancies** of the 2023 National Electrical Code is amended as follows:

**Article 500 Hazardous (Classified) Locations, Classes I, II, and III, Divisions 1 and 2** of the 2023 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 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 2023 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 7 Special Conditions** of the 2023 National Electrical Code is amended as follows:

**Article 700 Emergency Systems** of the 2023 National Electrical Code is amended as follows:

**700.10 Wiring Systems.**

...

**(D) Fire Protection.**

**(1) Occupancies.** Emergency systems shall meet the additional requirements in 700.10 (D) (2) through (D) (4) in the following occupancies.

...

(2) Buildings above ~~23~~ 17 m (~~75~~ 55 ft.) in height.

**Annex H Administration and Enforcement** of the 2023 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 established in Frisco's Comprehensive Master Fees Ordinance, as amended.

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