



## **CHAPTER 8 ELECTRICAL CODE**

### **8-8-1: ADOPTION OF ELECTRICAL CODE:**

The 2020 edition of NFPA 70, National Electrical Code, as published by the National Fire Protection Association, shall be, and the same is hereby adopted as the Electrical Code of the City of Warrenville in the State of Illinois, regulating and governing the design, construction, quality of materials, erection, installation, alteration, repair, relocation, replacement, addition to, use or maintenance of electrical systems and equipment as herein provided; and each and all of the regulations, provisions, penalties, conditions and terms of said 2020 edition of NFPA 70, National Electrical Code are hereby referred to, adopted and made a part hereof as if fully set out in this chapter, with the additions, insertions, deletions and changes, if any, prescribed in section 8-8-2 of this chapter. (Ord. O2017-38, 6-19-2017)

### **8-8-2: AMENDMENTS TO THE ELECTRICAL CODE:**

#### **A. Rules of Construction.**

The word "Add" following a provision of this Section means that such provision is thereby added to and made part of the 2020 edition of NFPA 70, National Electrical Code as though fully set forth at the referenced section.

The word "Amend" following a provision of this Section means that such provision amends the referenced section of the 2020 edition of NFPA 70, National Electrical Code to read as provided and that such provision is added to and made a part of this code as though fully set forth at the referenced number.

The word "Delete" following a provision of this Section means that such provision deletes the referenced section from the 2020 edition of NFPA 70, National Electrical Code.

The word "Passim" preceding a provision of this Section means that such provision amends any reference of such phrase found at various places throughout 2020 edition of NFPA 70, National Electrical Code.

**B. Amendments.** The following sections of the 2020 edition of NFPA 70, National Electrical Code are hereby amended and revised as follows:

**Article 110.12 (D) EMT Required.** Add a new Article 110.12 (D) as follows:

In new or remodeling residential construction with access to wall or ceiling cavities, conductors shall be installed completely in EMT.

Exception: short lengths of flexible metal conduit where approved by the Code Official.

**Article 110.12 (E) Low Voltage Wiring in Raceway.** Add a new Article 110.12 (E) as follows:



All exterior low voltage wiring for commercial HVAC equipment shall be installed in an approved raceway.

**Article 110.12 (F) Unused Wiring.** Add a new Section 110.12 (F) as follows:

All unused wiring, including low voltage, shall be removed back to the source of power or last utilized electrical device on the circuit.

**Table 210.21 (B)(3) Receptacle Ratings.** Delete "15 or 20" in Receptacle Rating column and replace with "20".

**Article 230.43 Wiring Methods.** Delete methods (1) through (20) and replace as follows:

Service entrance conductors are to be installed in rigid metal conduit, intermediate metal conduit, or PVC. PVC allowed for underground use only and must comply with article 352.10(G) as amended in 8-8-2 of the Warrenville municipal code.

**Article 230.70(A)(1) Service Equipment Disconnect.** Delete this section and replace it as follows:

The service disconnecting means shall be installed in a readily accessible location at the utility meter or at a point not more than five feet from the utility meter.

**Article 230.85:** Delete this section, and replace with Reference section 230.70 (A)(1).

**Article 250.87 Grounding conductor underground raceways.** Add a new Article 250.87 as follows:

Raceways installed in or under a slab or underground, with the exception of service entrance raceways, shall require a separate equipment grounding conductor.

**Article 300.13(C) Device Connection.** Add a new Article 300.12(C) as follows:

Conductors terminated at receptacles or switches shall be under the screw of the device per the manufacturer's directions. Use of pressure connectors (backstabbing) shall not be permitted.

**Article 310.3 (A) Minimum Conductor Size.** Add a new Article 310.3(A) as follows:

All commercial and industrial work shall use minimum #12 AWG conductors.

Exception: control wiring.

**Article 310.3 (B) Conductor Material.** Amend to read as follows:

All conductors for wiring shall be copper. Use of aluminum and copper clad conductors for wiring are prohibited.

**Article 314.23(B)(1) Mounting Boxes to Structural Framing.** Delete portion stating "or they shall pass through the interior within 6mm (1/4 in.) of the back or ends of the enclosure". And insert: All enclosures mounted to framing members shall be equipped with approved brackets for mounting to framing members.

**Article 320 Armored Cable Type AC.** Delete this article.

**Article 322 Flat Cable Assemblies Type FC.** Delete this article.



**Article 324 Flat Conductor Cable Type FCC.** Delete this article.

**Article 326 Integrated Gas Spacer Cable Type IGS.** Delete this article.

**Article 330.10(A) Type MC Uses Permitted.** Delete and replace as follows: Metal-Clad Cable Type MC cable is only to be used with lay-in type fixtures and recessed lighting fixtures in lengths not to exceed 6 feet of the total raceway.

**Article 334 Nonmetallic Sheathed Cable Types NM, NMC.** Delete this article.

**Article 338 Service Entrance Cable Types SE and USE.** Delete this article.

**Article 348.12 Flexible Metal Conduit, Uses Not Permitted.** Add: (8) Outdoors

**Article 352.10(G) PVC Underground Installations.** Delete sentence "See 300.5 and 300.50" and replace as follows: PVC shall not be permitted to emerge from concrete, earth, or other solid surface. Any portion of the raceway emerging from concrete or earth shall be installed in ridged metal conduit to a point not less than 18 inches above and below the emergence.

**Article 356 Liquid Tight Flexible Nonmetallic Conduit.** Delete this article.

**Article 358.10(B) Type EMT.** Delete in its entirety.

**Article 358.12 Uses Not Permitted.** Amend as follows:

- (1) Where, during installation or afterward, it will be subject to severe physical damage.
- (2) Where protected from corrosion solely by enamel.
- (3) In cinder concrete or cinder fill where subject to permanent moisture unless protected on all sides by a layer of noncinder concrete at least 50 mm (2 in.) thick or unless the tubing is at least 450 mm (18 in.) under the fill.
- (4) In any hazardous (classified) location except as permitted by other articles in this *Code*.
- (5) For the support of luminaires or other equipment except conduit bodies no larger than the largest trade size of the tubing.
- (6) Where practicable, dissimilar metals in contact anywhere in the system shall be avoided to eliminate the possibility of galvanic action.
- (7) Type EMT. In concrete or in direct contact with earth or exterior installations.

**Article 362 Electrical Nonmetallic Tubing Type ENT.** Deleted, use of electrical nonmetallic tubing is not permitted.

**Article 382 Nonmetallic Extensions.** Delete this article.

**Article 388 Surface Nonmetallic Raceways.** Delete this article.

**Article 394 Concealed Knob and Tubing Wiring.** Delete this article.

**Article 396 Messenger Supported Wiring.** Delete this article.

**Article 398 Open Wiring on Insulators.** Delete this article.

**Article 408.54.1 Use of Tandem type overcurrent devices.** Add a new Article 408.54.1 as follows:



Where tandem, duplex, or similar overcurrent devices are use in a service panel, proof shall be provided to the Code Official that circuits are properly balanced. Proof shall be provided in a written form using a panel schedule, by a registered or licensed electrician.

**Article 604.10 Manufactured Wiring Systems.** Delete exceptions, manufactured wiring shall not be allowed in any concealed location as defined in Article 100 or outdoor locations.

**Article 604.100(3) Flexible Cord.** Delete entire section

**Article 605.6 Lighting Accessories.** Add following subsection after (C); (D) Task Lighting. Task lighting for office furnishing shall be individually fused.

(Ord. O2017-38, 6-19-2017)

### **8-8-3: ELECTRICAL CONTRACTOR - LICENSE REQUIRED:**

A. Definition: The term "electrical contractor" as used in this section means any person, firm or corporation engaged in the business of installing or altering by contract or otherwise, electrical equipment for the utilization of electricity supplied for light, heat or power, not including radio apparatus or equipment for wireless reception of sounds and signals, and not including apparatus, conductors and other equipment installed for or by public utilities, including common carrier, which are under the jurisdiction of the Illinois Commerce Commission for use in their operation as public utilities; but the term "electrical contractor" does not include employees by such contractor to do or supervise such work.

B. License Required: All contracted electrical work must be performed by a licensed electrical contractor. Within the corporate limits of the City, it shall be unlawful for any person to engage in the business of "electrical contractor" as defined in this section without first being licensed as an electrical contractor. Electrical contractors performing work within the City must have a valid license obtained by passing a written electrical examination offered by an approved municipality or national contractor/trades journeyman or higher electrician certification by the International Code Council.

C. False Statements Prohibited: It shall be unlawful for any person to provide false statements or documentation as part of a building permit application regarding the electrical contractor license. In addition to any other penalties set forth in this section, if, after examination by the Chief Code Official, information or documents provided as part of a building permit application are found to be untrue, the application for building permit shall immediately become null and void.

D. Penalty: Any person violating any provisions of this section will be subject to the fine provided in Section 1-4-1 of this code for each offense. Each day of violation constitutes a separate and distinct offense. (Ord. O2017-38, 6-19-2017; amd. Ord. O2018-10, 3-19-2018; Ord. O2021-42, 11-15-2021)

### **8-8-4: RESERVED.**

As adopted by Ordinance 2023-01