

CITY OF EFFINGHAM, IL

2023 NATIONAL ELECTRIC CODE AMENDMENTS

SECTION 3: Effective January 01, 2025, Division 1 of Article IV of Chapter Seven of the Municipal Code of Effingham, Illinois, is hereby repealed and replaced by the following:

"Sec. 7-46. Adoption of the NFPA 70 National Electric Code, 2023 Edition.

There is hereby adopted by reference the NFPA 70 National Electric Code, 2023 Edition, as published by the National Fire Protection Association (hereinafter referred to as the "NEC 2023"), subject to the additions, insertions, deletions, and modifications prescribed in Section 7-47 of this Article.

Sec. 7-47. Amendments to NFPA 70 National Electric Code, 2023 Edition.

The following sections and appendices of the NEC 2023 are hereby added, inserted, deleted, and/or modified as follows:

The word "Add" preceding a provision of this Section means that such provision is thereby added to and made part of the NEC 2023 as though fully set forth at the referenced section.

The word "Amend" preceding a provision of this Section means that such provision amends the reference section of the NEC 2023 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" preceding a provision of this Section means that such provision deletes the referenced section from the NEC 2023.

The word "Passim" preceding a provision of this Section means that such provision amends any reference of such phrase found at various places throughout the NEC 2023.

Throughout NEC 2023

Delete: Delete any reference to "copper-clad aluminum" throughout NEC 2023. "Copper-clad aluminum" shall be prohibited as an allowable material.

Amend: Any reference to "10-amp circuit" or "10-amp circuits" throughout NEC 2023 shall be amended to require a minimum 15 amp circuit.

Chapter 1 General

Amend: **110.5 Conductors.** Conductors used to carry current shall be of copper or aluminum unless otherwise provided in this code. If the conductor material is not specified the sizes given in this code shall apply to copper conductors. If other materials are used, the

size shall be changed accordingly. Copper-clad aluminum shall not be authorized.

Chapter 2 Wiring and Protection

Add: **210.8.1 Exceptions:** Cold Food Storage shall be exempt from the requirements of Section 210.8 regardless of location.

Amend: **210.50 General.** Receptacle outlets shall be installed as specified in 210.52 through 210.63.

(A) **Cord Pendants.** A cord connector that is supplied by a permanently connected cord pendant shall be considered a receptacle outlet.

(B) **Cord Connections.** A receptacle outlet shall be installed wherever flexible cords with attachment plugs are used. Where flexible cords are permitted to be permanently connected, receptacles shall be permitted to be omitted for such cords.

(C) **Appliance Receptacle Outlets.** Appliance receptacle outlets installed in a dwelling unit for specific appliances, such as laundry equipment, shall be installed within 1.8 m (6 ft) of the intended location of the appliance.

(D) **Ceiling Outlets.** All ceiling outlets must be installed with a four-inch box not less than one and one-half (1½) inches deep.

Add: **220.3.1 Residential service.**

(A) Residential service capacity shall be not less than one hundred (100) amperes, twenty-circuit, three-wire, one hundred twenty/two hundred forty-volt for residences less than two thousand (2,000) square feet of floor space; two hundred (200) amperes, thirty-circuit, three-wire, one hundred twenty/two hundred forty- volt for residences two thousand (2,000) square feet or more of floor space.

(B) Subject to advance approval by the electrical commission, existing residences of two thousand (2,000) square feet or more may have one hundred (100) amperes, twenty-circuit, three-wire, one hundred twenty/two hundred forty-volt service where the majority of major appliances are not electric, and the proposed connected load would justify such dispensation.

(C) All electrically heated homes shall have a minimum two hundred (200) amperes, three-wire, one hundred twenty/two hundred forty-volt service.

(D) No main entrance smaller than one hundred (100) amperes capacity shall be installed in any building, residence or commercial, unless by special permission in writing by the chief electrical inspector.

(E) A service disconnecting means shall be installed for all new residential service and all existing residential *structures* requiring new service. The service

disconnect shall have a rating not less than the load to be carried, with a minimum one-hundred (100) ampere capacity main disconnect, with an adequate number of branch circuits. The service disconnecting means shall be installed in a readily accessible location outside of a building or structure, adjacent to, or in the same enclosure as, the metering equipment.

Amend: **250.4 General Requirements for Grounding and Bonding.** The following general requirements identify what grounding and bonding of electrical systems are required to accomplish. The prescriptive methods contained in Article 250 shall be followed to comply with the performance requirements of this section.

It shall be unlawful for any person to use water pipes for electrical grounding in the City. Grounding shall be by an approved five-eighths by eight-inch or three-quarters by eight-inch copper clad ground rod as a minimum placed at least twenty-four (24) inches from the building. Locations that are to be covered by concrete shall have a ground field of not less than three (3) three-quarters by eight-inch approved rods, placed at least ten (10) feet apart and connected by an equivalent grounding wire as needed for the type of service installed. Where ground conduit enters a concrete slab an expansion joint shall be used to keep the conduit from adhering to the concrete.

Chapter 3 Wiring Methods and Materials

Add: **320.1.1 Raceways Required.** In the fire zone, in factories, public buildings, commercial establishments, and new apartment buildings, with three (3) floors above grade, electrical wiring shall be Class A. Class A wiring shall be installed in acceptable raceways in all cases except that by "special permission" in rewiring of existing apartments and residences of multiple occupancy, branch circuit conductors may be installed with non-metallic sheathed cable with a grounding connector as an integral part of the cable assemblage. All metallic raceways shall be electrically bonded and connected to all non-metallic cable grounding conductor throughout the system and grounded at a common point at the main service entrance.

Add: **320.1.2 Residential wiring.** Residential branch circuit conductors at a minimum shall be installed in non-metallic sheathed cable with a grounding conductor, Class B wiring. In basements the cable shall be installed no less than two (2) inches above the bottom of joists. Below the bottom of joists all wiring shall be installed in acceptable raceways. All metallic raceways shall be electrically bonded and connected to all non-metallic cable grounding conductor throughout the system and grounded at a common point at the main service entrance.

Chapter 6 Special Equipment

Amend: **600.1 Scope.** This article covers the installation of conductors and equipment for electric signs and outline lighting. All installations and equipment using neon tubing, such as signs, decorative elements, skeleton tubing, or art forms, are covered by this article.

All outdoor signs shall be controlled by an externally operated switch, capable of being locked in the open position. Transformers used outdoors shall be of the weather-proof type and shall be enclosed in the sign body, or in a separate metal box. The external wires on all permanently installed outdoor signs and billboards must be enclosed in conduit.

Amend: **625.44 Equipment Connections.** EVSE and WPTE shall be connected to the premises wiring system in accordance with one of the methods in 625.44 (A) through (C).

(A) **Portable Equipment.** Portable Equipment shall be connected to the premises wiring system by one or more of the following methods:

- (1) A nonlocking, 2-pole, 3-wire or 3-pole, 4-wire grounding-type receptacle outlet rated at 250 volts, single phase, 50 amperes, or 125/250 volts, single phase 50 or 60 amperes

(B) **Fastened-in-Place Equipment.** Equipment that is fastened-in-place shall be connected to the premises wiring system by one of the following methods:

- (1) A nonlocking, 2-pole, 3-wire grounding-type receptacle outlet rated at 125 volts or 250 volts, single phase, up to 50 amperes
- (2) A nonlocking, 3-pole, 4-wire grounding-type receptacle outlet rated at 250 volts, three phase, up to 50 amperes
- (3) A nonlocking, 3-pole, 4-wire grounding-type receptacle outlet rated at 125/250 volts, single phase, up to 50 or 60 amperes

(C) Notwithstanding anything contained in this section, 50amperes shall be the smallest circuit allowed for EV chargers.

Sec. 7-48. Same—conformance with required. All electrical work must be done in a neat and workmanlike manner and all electrical construction, materials, and appliances used in connection with electrical work and the operation of electrical appliances, shall be in conformity with the NFPA 70 National Electric Code, 2023 Edition, as published by the National Fire Protection Association as adopted by Section 7-46 of this Chapter, as amended by Section 7-47 of this Chapter, and such rules and regulations as are now or may hereafter be prescribed by the City Council.”