

CHAPTER IV. BUILDINGS AND CONSTRUCTION

ARTICLE 3. ELECTRICAL CODE

SECTIONS

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- 4-301. NATIONAL ELECTRICAL CODE ADOPTED.** There is hereby incorporated by reference that certain code known as the National Electrical Code, 2017 edition, ["NEC"] prepared and published in book form by the National Fire Protection Association (NFPA No. 70-2017), including annexes A, B, C, D, F, G and I, save and except such articles, sections, parts or portions as are hereafter omitted, deleted, modified or changed or added hereto, such incorporation being authorized by K.S.A. § 12-3009 through 12-3012, as amended. At least one copy of said Code shall be marked or stamped "Official copy as incorporated by Ordinance No. 2979" with all sections or portions thereof intended to be omitted or changed clearly marked to show any such omission or change and to which shall be attached a copy of this ordinance, and filed with the City Clerk to be open to inspection and available to the public at all reasonable hours.

(Ord. 2979; 01-21-20)
(Ord. 2594C; 12-03-12)
(Ord. 2292C; 02-04-08)
(Ord. 1931C; 01-22-02)
(Code 2000)
(Ord. 1630C; 11-04-96)

- 4-302. NATIONAL ELECTRICAL CODE, DELETED SECTIONS.** The following sections of the NEC are hereby deleted and omitted:
- (a) Section 90.1 Purpose
 - (b) Section 90.3 Code Arrangement
 - (c) Section 90.4 Enforcement
 - (d) Section 90.5 Mandatory Rules, Permissive Rules, and Explanatory Material
 - (e) Section 90.6 Formal Interpretations
 - (f) Section 90.7 Examination of Equipment for Safety
 - (g) Section 90.8 Wiring Planning
 - (h) Section 90.9 Units of Measurement

(Ord. 2979; 01-21-20)
(Ord. 2594C; 12-03-12)
(Ord. 2292C; 02-04-08)
(Ord. 1931C; 01-22-02)
(Code 2000)
(Ord. 1630C; 11-04-96)

4-303. NATIONAL ELECTRICAL CODE, SECTION 90.2. SCOPE. Section 90.2 of the NEC is amended to read as follows:

(a) Covered. This Electrical Code covers the following:

1. Installations of electric conductors and equipment within or on public and private buildings or other structures, including mobile homes, recreational vehicles, and floating buildings, and other premises such as yards, carnivals, parking, and other lots, and industrial substations.
2. Installations of conductors and equipment that connect to the supply of electricity.
3. Installations of other outside conductors and equipment on the premises.
4. Installations of optical fiber cables and raceways.
5. Installations in building used by the electric utility, such as office buildings, warehouses, garages, machine shops, and recreational buildings, that are not an integral part of a generating plant, substation, or control center.

(b) Not Covered. The NEC does not cover the following:

1. Installations in ships, watercraft other than floating buildings, railway rolling stock, aircraft, or automotive vehicles other than mobile homes and recreational vehicles.
2. Installations underground in mines and self-propelled mobile surface mining machinery and its attendant electrical trailing cable.
3. Installations of railways for generation, transformation, transmission, or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communications purposes.
4. Installations of communications equipment under the exclusive control of communications utilities located outdoors or in building spaces used exclusively for such installations.
5. Installations, including associated lighting, under the exclusive control of electric utilities for the purpose of communications, metering, generation, control, transformation, transmission, or distribution of electric energy. Such installations shall be located in buildings used exclusively by utilities for such purposes; outdoors on property owned or leased by the utility; on or along public highways, streets, roads, etc.; or outdoors on private property by established rights such as easements provided that any such installation is otherwise in accordance law with appropriate consent.

(Ord. 2979; 01-21-20)
(Ord. 2594C; 12-03-12)
(Ord. 2292C; 02-04-08)
(Ord. 1931C; 01-22-02)

4-304. NATIONAL ELECTRICAL CODE, ARTICLE 110.5. CONDUCTORS. Article 110.5 of the NEC is hereby amended to read as follows: **Conductors.** Conductors normally used to carry current shall be of copper.

EXCEPTIONS:

(a) Service lateral conductors, service entrance conductors, and feeder conductors two AWG and larger in all Group R occupancies (as defined by the most currently adopted Building Code) are allowed to be of any type as allowed by this code.

(b) Conductors four AWG and larger in all commercial and industrial occupancies other than Group R are allowed to be of any type as allowed by this code.

(Ord. 2979; 01-21-20)

(Ord. 2594C; 12-03-12)

(Ord. 2560C; 08-06-12)

(Ord. 2292C; 02-04-08)

(Ord. 2166; 05-01-06)

(Ord. 1931C; 01-22-02)

(Code 2000)

(Ord. 1630C; 11-04-96)

4-305. NATIONAL ELECTRICAL CODE, ARTICLE 210.12. ARC-FAULT CIRCUIT-INTERRUPTER PROTECTION. Article 210.12 of the NEC is hereby amended to read as follows: **Arc-Fault Circuit-Interrupter Protection.** Arc-fault circuit-interrupter protection shall be provided as required in 210.12(a), (b), (c), and (d). The arc-fault circuit interrupter shall be installed in a readily accessible location.

(a) **Dwelling Units.** All 120-volt, single phase, 15- and 20- ampere branch circuits supplying outlets or devices installed in dwelling unit kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas, or similar rooms or areas shall be protected by any of the means described in 210.12(a) (1) through (6) For these purposes, a smoke alarm or carbon monoxide alarm shall not be considered an outlet and is not required to be on an arc-fault circuit.

(1) A listed combination-type arc-fault circuit interrupter installed to provide protection of the entire branch circuit.

(2) A listed branch/feeder-type AFCI installed at the origin of the branch-circuit in combination with a listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.

(3) A listed supplemental arc protection circuit breaker installed at the origin of the branch-circuit type arc-fault circuit interrupter installed at the first outlet box on the branch circuit where all of the following conditions are met:

a. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.

b. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 50 ft for a 14 AWG conductor or 70 ft for a 12 AWG conductor.

c. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.

- (4) A listed outlet branch-circuit type arc-fault circuit interrupter installed at the first outlet on the branch circuit in combination with a listed branch-circuit overcurrent protective device where all of the following conditions are met:
 - a. The branch-circuit wiring shall be continuous from the branch-circuit overcurrent device to the outlet branch-circuit arc-fault circuit interrupter.
 - b. The maximum length of the branch-circuit wiring from the branch-circuit overcurrent device to the first outlet shall not exceed 50 ft for a 14 AWG conductor or 70 ft for a 12 AWG conductor.
 - c. The first outlet box in the branch circuit shall be marked to indicate that it is the first outlet of the circuit.
 - d. The combination of the branch-circuit overcurrent device and outlet branch-circuit AFCI shall be identified as meeting the requirements for a system combination-type AFCI and shall be listed as such.
- (5) If RMC, IMC, EMT, Type MC, or steel armored Type AC cables meeting the requirements of 250.118, metal wireways, metal auxiliary gutters, and metal outlet and junction boxes are installed for the portion of the branch-circuit between the branch-circuit overcurrent device and the first outlet, it shall be permitted to install an outlet branch-circuit type AFCI at the first outlet to provide protection for the remaining portion of the branch-circuit.
- (6) Where a listed metal or nonmetallic conduit or tubing is encased in not less than 2 in. of concrete for the portion of the branch circuit between the branch-circuit overcurrent device and the first outlet, it shall be permitted to install an outlet branch-circuit type AFCI at the first outlet to provide protection for the remaining portion of the branch circuit.

EXCEPTION: Where an individual branch-circuit to a fire alarm system installed in accordance with 760.41(B) or 760.121(B) is installed in RMC, IMC, EMT, or steel-sheathed cable, Type AC or Type MC, meeting the requirements of 250.118, with metal outlet and junction boxes, AFCI protection shall be permitted to be omitted.

- (b) **Dormitory Units.** All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets and devices installed in dormitory unit bedrooms, living rooms, hallways, closets, bathrooms, and similar rooms shall be protected by any of the means described in 210.12 (a) (1) through (6).
- (c) **Guest Rooms and Guest Suites.** All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets and devices installed in guest rooms and guest suites of hotels and motels shall be protected by any of the means described in 210.12 (a) (1) through (6).
- (d) **Branch Circuit Extensions or Modifications – Dwelling Units.** In any of the areas specified in 210.12(a) or (b), where branch-circuit wiring is modified, replaced, or extended, the branch-circuit shall be protected by one of the following:
 - 1. A listed combination-type AFCI located at the origin of the branch circuit.
 - 2. A listed outlet branch-circuit type AFCI located at the first receptacle outlet of the existing branch circuit.

EXCEPTION: AFCI protection shall not be required where the extension of the existing conductors is not more than 6 ft and does not include any additional outlets or devices.

(Ord. 2979; 01-21-20)
(Ord. 2594C; 12-03-12)
(Ord. 2292C; 02-04-08)
(Ord. 1931C; 01-22-02)

4-306. NATIONAL ELECTRICAL CODE, ARTICLE 111. PERMITS. A new Article 111 of the NEC is hereby added to read as follows: **PERMITS.**

111.1 Work Exempt from Permit. Work shall be exempt from permit requirements as provided in Article 2 of this Chapter.

111.2 Expiration. Permits shall expire as provided in Article 2 of this Chapter.

111.3 Extensions. The code official is authorized to grant extensions as provided in Article 2 of this Chapter.

111.4 Work commencing before permit issuance. Any person who commences work on an installation before obtaining the necessary permits shall be subject to an additional fee established by the City of Leawood Fee Schedule that shall be in addition to the required permit fees.

111.5 Fee Schedule. The fees for electrical work shall be as indicated in the City of Leawood Fee Schedule.

111.6 Fee Refunds. Unless specifically set forth herein, all fees paid are non-refundable. The code official may authorize refunding of any fee paid hereunder, which was erroneously paid or collected. The code official shall upon request authorize refunding of not more than eighty (80) percent of the permit fee paid when no work has been done under a permit issued in accordance with this code. The code official shall upon request authorize refunding of not more than eighty (80) percent of the plan review fee paid when an application for a permit for which a plan review fee has been paid is withdrawn or canceled before any plan reviewing is done. The code official shall not authorize refunding of any fee paid except on written application filed by the original permit holder not later than one hundred eighty (180) days after the date of fee payment.

111.7 Placement of Permit. All permits shall be posted to be visible from the street and kept on the site of the work until the completion of the project.

(Ord. 2979; 01-21-20)
(Ord. 2594C; 12-03-12)
(Ord. 2292C; 02-04-08)

4-307. NATIONAL ELECTRICAL CODE, APPLICATION FOR PERMIT. *Repealed.*

(Ord. 2979; 01-21-20)
(Ord. 2594C; 12-03-12)
(Ord. 2292C; 02-04-08)

4-308. NATIONAL ELECTRICAL CODE, EXPIRATION. *Repealed.*

(Ord. 2979; 01-21-20)
(Ord. 2594C; 12-03-12)

(Ord. 2292C; 02-04-08)

4-309. NATIONAL ELECTRICAL CODE, EXTENSIONS. *Repealed.*

(Ord. 2979; 01-21-20)

(Ord. 2594C; 12-03-12)

(Ord. 2292C; 02-04-08)

4-310. NATIONAL ELECTRICAL CODE, WORK COMMENCING BEFORE PERMIT ISSUANCE. *Repealed.*

(Ord. 2979; 01-21-20)

(Ord. 2594C; 12-03-12)

(Ord. 2292C; 02-04-08)

4-311. NATIONAL ELECTRICAL CODE, FEE SCHEDULE. *Repealed.*

(Ord. 2979; 01-21-20)

(Ord. 2594C; 12-03-12)

(Ord. 2292C; 02-04-08)

4-312. NATIONAL ELECTRICAL CODE, FEE REFUNDS. *Repealed.*

(Ord. 2979; 01-21-20)

(Ord. 2594C; 12-03-12)

(Ord. 2292C; 02-04-08)

4-313. NATIONAL ELECTRICAL CODE, PLACEMENT OF PERMIT. *Repealed.*

(Ord. 2979; 01-21-20)

(Ord. 2594C; 12-03-12)

(Ord. 2292C; 02-04-08)

4-314. NATIONAL ELECTRICAL CODE, PENALTIES. Any person who violates a provision of this Article or fails to comply with any of the requirements thereof is guilty of a public offense, punishable by a fine of not more than five hundred dollars (\$500) or by imprisonment not exceeding thirty (30) days or both such fine and imprisonment. Each day that the violation continues shall be deemed a separate offense.

(Ord. 2979; 01-21-20)

(Ord. 2594C; 12-03-12)

(Ord. 2292C; 02-04-08)