

Chapter 10

ELECTRICITY

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NOTE: For state law as to authority of municipality to regulate the installation, alteration and use of electrical equipment, see Ill. Comp. Stat., ch. 65, § 5/11-37-2.
(Ord. 5083, Renumbered, 11/06/2009)

Section 10.101. Compliance with Chapter required.

Upon the adoption by ordinance of standards and specifications, rules and regulations and fees for the installation, alteration and use of electrical equipment, the same shall become operative, and thereafter no electrical equipment shall be installed or altered except upon a permit approved by the Director of Community Development or the electrical inspector. The Director of Community Development or the electrical inspector shall approve permits for such installation and alterations of electrical equipment in all cases where application shall have been made in accordance with the rules and regulations established. The Director of Community Development or the electrical inspector shall inspect all such electrical equipment

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installed or altered, and shall require that it conform to the standards and specifications applicable thereto which have been recommended and adopted as provided in this Chapter. These requirements specify minimum acceptable electrical equipment and wiring methods. Other equipment and methods not specified may be approved for use by the electrical inspector in writing. (Ord. No. 662, § 7; Ord. No. 2876, § 5.) (Ord. 5083, Renumbered, 11/06/2009; 4801, Amended, 08/01/2006, "code services" to "community development"; 4212, Amended, 08/15/2000)

Section 10.102. Changes in existing wiring.

It shall be unlawful for any person in any way to cut, disturb, alter or change any electrical wiring or to permit such electrical wiring to be cut, disturbed, altered or changed unless done in conformity with the provisions of this Chapter. Where a building is undergoing remodeling, any changes to be made in the electrical installation shall first have the approval of the Director of Community Development or the electrical inspector before work is commenced. (Ord. No. 662, § 17; Ord. No. 2876, § 5.) (Ord. 5083, Renumbered, 11/06/2009; 4801, Amended, 08/01/2006, "code services" to "community development"; 4212, Amended, 08/15/2000)

Section 10.103. Village not liable for electrical work.

This Chapter shall not be construed to relieve from or lessen the responsibility of any person owning, operating or installing any electrical wires, appliances, apparatus, construction or equipment for damages to any one injured by any defect therein by reason of the inspections authorized herein or the certificate of inspection issued by the Director of Community Development, electrical inspector or the Community Development Department; nor shall the Village be held liable for any damages resulting from the enforcement of the provisions of this Chapter. (Ord. No. 662, § 13; Ord. No. 2876, § 5.) (Ord. 5083, Renumbered, 11/06/2009; 4801, Amended, 08/01/2006, "code services" to "community development"; 4212, Amended, 08/15/2000)

Section 10.200.ART. Article II. CODE OFFICIAL

(Ord. 5083, Add, 11/06/2009)

Section 10.201. Electrical Inspector--Appointment;Conflicting outside interests.

The electrical inspector shall be appointed by the Village Manager. It shall be unlawful for the electrical inspector, except in the performance of his/her official duties, to engage in the business of the installation, alteration, maintenance or sale of electrical material, whether directly or indirectly, and he shall have no financial interest in any concern engaged in such business at any time while holding the office of electrical inspector.

Any violation of this section by the electrical inspector shall be sufficient cause for his/her removal from office. (Ord. No. 662, § 3.)

(Ord. 5083, Renumbered, 11/06/2009; Ord. 4852, Amended, 02/20/2007, his to his/her(s); 3816, Repealed, 12/18/1995)

Section 10.202. Right of entry of inspectors.

The electrical inspector shall have the right during reasonable hours to enter any building in the discharge of his/her official duties, or for the purpose of making any inspection or test of the installation or alteration of electrical equipment contained therein, or for the purpose of reinspecting present wiring installations to determine whether or not such wiring installations conform to the provisions of this Chapter, and shall have the authority to cause the turning off of all electrical currents and to cut or disconnect in cases

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of emergency, any wire where such electrical currents are dangerous to life or property or may interfere with the work of the fire department. The provisions for inspection of work authorized by the permits issued in accordance with this Chapter shall not be construed as prohibiting the inspection of any electrical equipment installed whenever the electrical inspector shall determine that the public safety requires it. (Ord. No. 662, § 8.)

(Ord. 5083, Renumbered, 11/06/2009; Ord. 4852, Amended, 02/20/2007, his to his/her(s))

Section 10.203. Impersonation of an inspector.

No person who is not a lawful Village electrical inspector shall impersonate an electrical inspector of the Community Development Department. (Ord. No. 662, § 15; Ord. No. 2876, § 5.)

(Ord. 5083, Renumbered, 11/06/2009; 4801, Amended, 08/01/2006, "code services" to "community development"; 4212, Amended, 08/15/2000)

Section 10.300.ART. Article III. PERMITS

(Ord. 5083, Add, 11/06/2009)

Section 10.301. Permit to install electrical equipment--Required prior to commencing work; persons eligible.

(a) No person shall install, alter or repair any electrical conduits, electrical wires, equipment or apparatus in any building or structure for which a permit is required until such permit shall have been secured.

(b) Persons who may perform work authorized by a permit issued pursuant to the provisions of this Chapter are the following:

(1) Electrical contractors and technicians having the necessary qualifications, training, experience and technical knowledge to do electrical work as evidenced by: 1) a valid electrical license issued by a governmental entity located within the State of Illinois that administers tests consistent with standards of the National Electrical Code; or 2) proof of successful passage of an electrical examination consistent with the standards of the National Electrical Code; or 3) other documentation deemed acceptable by the Building Official.

(2) A qualified home owner, provided that such permit shall be only for electrical work on residential premises owned and occupied by the home owner, and further provided that he/she has sufficient knowledge and technical training to perform the installation, alteration, repair and maintenance of electrical wiring and equipment authorized by the permit as evidenced by proof of successful passage of an electrical examination consistent with the standards of the National Electrical Code. (Ord. No. 662, § 11; Ord. No. 2871, § 2.)

(Ord. 5488, Amended, 10/20/2015; Ord. 5083, Renumbered, 11/06/2009; 4801, Amended, 08/01/2006, "code services" to "community development")

Section 10.302. Suspension of permits.

The Director of Community Development or the electrical inspector may suspend any permit for work being executed contrary to the provisions of this Chapter, and may reinstate the suspended permit after the violations have been corrected or rectified. (Ord. No. 662, § 22; Ord. No. 2876, § 5.)

(Ord. 5083, Renumbered, 11/06/2009; 4801, Amended, 08/01/2006, "code services" to "community development"; 4212, Amended, 08/15/2000)

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Section 10.303. Payment of fees and issuance of permits generally.

All fees under this Chapter shall be paid to the collector of the Village, and all permits shall be issued by the Director of Community Development, by the electrical inspector or his/her duly authorized representative.

All permits shall be for a period of one (1) year from the date of issuance. All extensions of permit time shall be calculated at twenty-five percent (25%) of the original total permit fee and shall extend the life of the permit for a six (6) month period. Extensions shall be requested in writing with justifiable cause demonstrated.

No fees shall be refunded when a permit has lapsed after work is started. When a permit is revoked at the request of the applicant prior to lapsing due to time limits, and no work has been done, all but a basic fee to cover costs incurred by the building department and the plan review fee may be refunded. (Ord. No. 662, § 6; Ord. No. 2393, § 5; Ord. No. 2876, § 5.)

(Ord. 5083, Renumbered, 11/06/2009; Ord. 4852, Amended, 02/20/2007, his to his/her(s); 4801, Amended, 08/01/2006, "code services" to "community development"; 4212, Amended, 08/15/2000)

Section 10.400.ART. Article IV. STOP WORK ORDER

(Ord. 5083, Add, 11/06/2009)

Section 10.401. Work to be stopped until issuance.

In case any work is begun on the installation of electrical conduits, raceways of the installation, alterations or repair of electrical wires or apparatus in any building or structure without a permit authorizing the same, the work shall be stopped until the necessary permit is issued and one hundred percent (100%) of a permit fee shall be added to the permit fee in accordance with Section 1.16 of the Downers Grove Municipal Code. (Ord. No. 662, § 11.)

(Ord. 5083, Renumbered, 11/06/2009; 4212, Amended, 08/15/2000)

Section 10.500.ART. Article V. INSPECTIONS

NOTE: For state law as to inspection of electrical equipment, see Ill. Comp. Stat. ch 65, §§ 5/11-37-1 to 5/11-37-4.

(Ord. 5083, Renumbered, 11/06/2009; 4212, Amended, 08/15/2000)

Section 10.501. Certificates of inspection--Required; contents.

Upon the completion of the wiring or the electrical installation in or on any building or structure, it shall be the duty of the person doing the work to request an inspection by the Community Development Department. If such wiring or electrical installation conforms to the requirements of this Chapter, a written certificate of satisfactory inspection shall be issued. One (1) copy of the certificate shall be delivered to the person which is to furnish electrical service, and one (1) copy shall be retained in the Village files. The certificate of inspection shall contain the date of such inspection, the location or address of the wiring or electrical installation by street number or lot number, the name of the person actually completing the work, and the name of the person for whom the wiring or electrical installation work was performed.

Each job for which a permit is issued shall be entitled to one (1) rough inspection and one (1) final inspection and each business or multiple family dwelling which is licensed by the Village of Downers Grove shall be entitled to one (1) inspection and one (1) re-inspection per license period.

(Ord. 5083, Renumbered, 11/06/2009; 4801, Amended, 08/01/2006, "code services" to "community development"; 4212,

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Amended, 08/15/2000)

Section 10.502. Electrical Service Installations.

It shall be unlawful for any person to install electrical energy recording meters on any electrical equipment that has been installed or connect any electric distribution system or circuit to an electrical system prior to the issuance by the Village of a report of inspection authorizing the use of current on such installation. (Ord. No. 662, § 9.)

(Ord. 5083, Renumbered, 11/06/2009)

Section 10.503. Electrical System Activation.

Upon approval by inspection of an electrical system installation, the Community Development Department shall provide a notice of approval. No electrical system shall be energized until the notice of approval has been issued. (Ord. No. 662, § 9; Ord. No. 2876, § 5.)

(Ord. 5083, Renumbered, 11/06/2009; 4801, Amended, 08/01/2006, "code services" to "community development"; 4212, Amended, 08/15/2000)

Section 10.504. Notice of unsafe systems.

The Director of Community Development or his designee are authorized to attach to electrical cabinets and equipment a notification indicating the system is deemed unsafe and shall not be energized prior to an approval being given by the Village. It shall be unlawful for any persons to damage, remove or destroy this notification or seal without consent from the Village. (Ord. No. 662, § 16; Ord. No. 2876, § 5).

(Ord. 5083, Renumbered, 11/06/2009; 4801, Amended, 08/01/2006, "code services" to "community development"; 4212, Amended, 08/15/2000)

Section 10.505. Public utility cables; high rise buildings.

(A) A public utility company shall be allowed to install high voltage riser systems in a building provided the following requirements are met:

- (1) The utility company may install aluminum or copper cables up to and only on the primary side of each transformer. The cables must be terminated with high pressure lugs.
- (2) All cables and transformers shall be enclosed in a minimum of a two hour rated masonry enclosure with rated openings.

(B) For high rise buildings, a main shunt control panel shall be installed in the fire control room. For each floor, the panel shall provide a shut off switch for all systems, and a separate switch with indicator light for the powers supply for all HVAC systems, and a separate switch with indicator light for all other electrical systems. The glass front panel shall contain a locking mechanism and a diagram on the glass indicating the floor level and switching arrangement. All circuiting and switching arrangements will be subject to review and approval by the code official for the specific building conditions.

(C) A 125V-15A receptacle shall be provided at each stairway landing of a high rise building. This receptacle shall be of a NEMA type L5-20-R and shall be connected to the emergency generator system. (Ord. No. 3403, § 5.)

(Ord. 5083, Renumbered, 11/06/2009; 4420, Amended, 06/18/2002)

Section 10.600.ART. Article IX. NATIONAL ELECTRIC CODE

(Ord. 5083, Add, 11/06/2009)

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Section 10.601. 2014 National Electrical Code - Adopted.

There is hereby adopted, for the purpose of establishing rules and regulations to govern any electrical system or equipment or method of installation thereof not specifically covered by this Chapter that certain Electrical Code known as the National Electrical Code recommended by the National Fire Protection Association, being particularly the 2014 edition thereof in its entirety, save and except such portions as are hereinafter deleted, modified or amended, and the same is hereby adopted and incorporated as fully as if set out at length herein. All references to the National Electrical Code in other sections in this Chapter shall mean the edition referred to in this section. At least one copy of said Code, including such amendments to it as shall be enacted, shall be filed in the office of the Village Clerk, and additional copies shall be available in the Community Development Department of the Village. (Ord. No. 662, § 33; Ord. No. 1778, §§ 1, 3; Ord. No. 2178, § 1; Ord. No. 2876, §§ 2, 5; Ord. No. 3403, § 2.)

NOTE: For state law as to adoption of codes by reference, see Ill. Comp. Stat., ch. 65, § 5/1-3-2. (Ord. 5555, Amended, 08/19/2016; Ord. 5083, Renumbered, 11/06/2009; 4801, Amended, 08/01/2006, "code services" to "community development"; 4420, Amended, 06/18/2002; 4212, Amended, 08/15/2000; 3763, Amended, 07/24/1995)

Section 10.602. Definitions.

See Article 100 Definitions of the 2014 Electrical Code.
(Ord. 5555, Amended, 08/19/2016; Ord. 5083, Add, 11/06/2009)

Section 10.603. National Electrical Code - Amendments.

The 2014 National Electrical Code is amended as follows:

Section 110-26(e) is amended by replacing the words "less than 2.0 (6 1/2 feet) in the Exception with the following:

"is not less than five (5) feet."

Section 110.31 is amended by deleting the last two sentences of the second paragraph and by substituting in lieu thereof the following:

"A fence shall not be less than seven (7) feet in height. The distance from the fence to live parts shall not be less than given in Table 110.31."

Section 210.70(A)(3) is amended by deleting the following phrase from the end of the first sentence:

"where these spaces are used for storage or containing equipment requiring servicing".

Section 210.70(A)(3) is further amended by deleting the last sentence in its entirety.

Section 220.40 is amended by adding the following at the end of the section:

220.40 General.

(A) The minimum size service panel for a new single family residence or service upgrade shall be a 200 amp, 40 circuit panel. Exception: single family homes that were constructed prior to August 16, 2016 and are under 1,500 square feet are allowed to upgrade to a 100 amp, 20 circuit panel.

(B) The minimum size service panel for any new or remodeled building other than single-family shall be a 100 amp, 20 circuit panel.

Section 230.31(B) is amended by deleting the same in its entirety and by substituting in lieu thereof the

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following:

230.31(B) Minimum Size. The conductors shall not be smaller than #3 AWG copper and shall be of type THW or THWN insulation.

Section 230.31 (B) shall be further amended to delete the exception.

Section 230.43 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:

230.43. Wiring methods for 1,000 volts, nominal, or less: Service-entrance conductors shall be installed in accordance with the applicable requirements of this Code covering the type of wiring method used and shall be limited to the following methods:

- (1) Rigid metal conduit
- (2) Rigid nonmetallic conduit Schedule 80 outside of foundation walls

Section 230.70 is amended by adding the following:

230.70 Service equipment disconnecting means:

- (D) No live service entrance conductor shall extend over five (5) feet within a building.
- (E) Every residential unit shall be provided with a main breaker at the individual meter or the panel. Where there are multiple meters installed, a main breaker for the entire building shall be provided adjacent to the meters.

Section 230-71 is amended by deleting the same in its entirety and by substituting in lieu thereof the following:

230.71 Maximum Number of Disconnects.

General. In all applications, a single main disconnecting means shall be installed.

Section 230-72(A) is amended by deleting the same in its entirety.

Section 240.80 is amended by adding Section (A) to the end of the paragraph:

240.80 Method of Operation.

- (A) No tandem, piggy back or space saver circuit breakers shall be permitted.

Section 300.2 is amended by adding Section (C) to the end of the section:

300.2(C) Raceway Types. Rigid metal conduit (RMC), intermediate metal conduit (IMC) or rigid non-metallic conduit shall be used in all concrete and underground installations.

Section 314.3 is amended by deleting the same in its entirety.

Articles 320, 322, 324, 326, 330, 332, 334, 336, 338, are amended by deleting the same in their entirety.

Section 348.10 is amended by adding the following at the end of the sentence:

"in maximum lengths of six (6) feet. "

Section 350.10 is amended by adding the following section:

350.10 Uses Permitted.

- (4) LFMC shall be permitted to be used in exposed and concealed location in maximum lengths of six (6) feet.

Section 360.10 is amended by adding the following section:

360.10 Uses Permitted.

- (5) FMT shall be permitted to be used in exposed and concealed location in maximum lengths of

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six (6) feet.

Articles 362, 382, 388, 394, 396, 398 are amended by deleting the same in their entirety.

Section 408.36 is amended by deleting the last sentence of the first paragraph, Exception No. 1, 2 & 3 and by substituting in lieu thereof the following:

"This overcurrent protective device shall be located within three (3) feet and be readily accessible within sight."

Section 408.36 is further amended by deleting the exceptions.

Section 422.10 is amended by adding the following section:

422.10. Branch Circuit Rating.

(C) Each furnace, heat pump, water heater, air conditioning unit and similar equipment shall be provided with dedicated branch circuits. A disconnecting means shall be provided on or immediately near the equipment.

Section 604.1.1 is added as follows:

604.1.1 Testing Agency Approvals. Assemblies that do not have a recognized testing agency listing and cannot be verified for approved product materials and installation methods shall not be permitted.

(Ord. No. 2178, § 2; Ord. No. 2876, §§ 2, 5; Ord. No. 3403, § 3.)
(Ord. 5555, Amended, 08/19/2016; Ord. 5083, Renumbered, 11/06/2009; 4420, Amended, 06/18/2002; 3763, Amended, 07/24/1995)

Section 10.700.ART. Article VII. FEES

(Ord. 5083, Add, 11/06/2009)

Section 10.701. Fees.

(a) Two inspections shall be made of electrical wiring in all new single-family and multi-family dwellings, or for any complete rewiring of any existing dwelling, one "roughing in" inspection and one final inspection before acceptance. If defective workmanship exists at the time of final inspection, a re-inspection fee as set forth in Administrative Regulation entitled "User-Fee, License and Fine Schedule" shall be charged for each additional inspection. The fees to be charged for the two required inspections shall be as set forth in Administrative Regulation entitled "User-Fee, License and Fine Schedule".

(b) The fees to be charged for repair or remodeling work permits shall be as set forth in Administrative Regulation entitled "User-Fee, License and Fine Schedule".

(c) Permit fees shall be non-refundable once a permit has been issued.

(Ord. No. 1778, § 2; Ord. No. 3336, § 4; Ord. No. 3378, § 3.)
(Ord. 5138, Amended, 05/18/2010; Ord. 5083, Renumbered, 11/06/2009; Ord. 5052, Amended, 04/07/2009; 4212, Amended, 08/15/2000)

Section 10.800.ART. Article VIII. APPEALS

(Ord. 5083, Add, 11/06/2009)

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Section 10.801. Building Board of Appeals.

See Chapter 7, Article IX of the Downers Grove Municipal Code.

(Ord. 5083, Add, 11/06/2009)