

Adoption of the 2011 National Electrical Code and Amendments

The 2011 National Electric Code was adopted by the Village of Glenview through Ordinance #5536 on January 3, 2012

Building codes are adopted to provide a means to enforce building standards of construction and use, and are periodically updated to reflect the latest standards of life-safety and construction technology. These amendments are established on particular physical conditions within the Village as well as to provide consistency between Village, State and County codes.

The 2011 edition of the National Electrical Code is amended as follows:

- (1) **Article 100 Definitions. (Add the following definitions)**

Alter shall mean to make different, modify, or vary.

Repair shall mean to restore to a good operating condition as in the original state, without alteration.

- (2) **Article 110.24 Identification of the electrical contractor. (Add this section). The name of the electrical contractor performing the work on all new electrical services shall be displayed on the service panel cover.**
- (3) **Article 210.50 III Required Outlet. (Amend by adding the following). Commercial or industrial office areas shall have receptacles installed within six feet of doorways and every twelve feet on wall spaces two feet or greater in length.**
- (4) **Article 210.8 Ground-Fault Circuit-Interrupter Protection for Personnel. (Amend section (A) by adding). When feed through GFCI receptacles are used, they shall feed only receptacles on the same floor.**
- (5) **Article 210.8(B). Ground-Fault Circuit-Interrupter Protection for Personnel. (Amend by adding the following). Bathroom switches and receptacles shall not be located within 30 inches measured horizontally, from the outside edge of a bathtub, whirlpool tub, shower or similar fixture. This requirement shall not apply to sink basins.**

Wall mounted lighting fixtures shall not be located within 30 inches measured horizontally, from the outside edge of a bathtub, whirlpool tub, shower or similar fixture unless provided with GFCI protection.

- (6) **Article 210.52(A) General Provisions. (Amend by adding the following).**
- (1) **Counter top and work bench areas, other than kitchen counter tops shall be served by at least one receptacle for every six feet of length or fraction thereof..**
- (7) **Article 230 Services. (Amend by adding section 230.1(A)). All services shall be installed with an outdoor disconnecting means capable of being secured to prevent tampering. Services that are 200 amps or less shall have a single main disconnect. Multiple disconnects in a common enclosure shall be permitted for services greater than 200 amps.**
- (8) **Article 230 Services. (Amend by adding section 230.1(B)). System design drawings shall be submitted for all services greater than 200 amps at the time of permit application.**
- (9) **Article 230 Services. (Amend by adding section 230.11 Service Entrance Conductors).**
- (A) **Service entrance conductors shall be installed in rigid metal conduit, intermediate metal conduit or rigid nonmetallic conduit. The use of a subpanel shall require the written approval of the Director of inspectional services or his/her designee after submission and approval of complete load calculations.**
- (B) **All service conductors shall be installed underground unless special permission is granted by the director of inspectional services.**
- (C) **In new residential construction the electrical service shall have a minimum rating of 200 amps and an electrical distribution panel sized for 40 circuits. An interior disconnecting means shall be provided in addition to the exterior disconnect. Fuse box pullouts shall not be used as a service disconnect.**
Exception: Electric service upgrades in existing residences shall have a minimum 100 ampere rating and an electrical distribution panel sized for 30 circuits. Electrical distribution panel replacement and/or riser replacement shall not constitute a service upgrade.
- (D) **In commercial construction an interior disconnecting means shall be provided in addition to the exterior disconnect. Fuse box pullouts shall not be used as a service disconnect.**
- (E) **Half-size breakers are not approved for use in new construction. In existing residential dwelling units half-size breakers are limited to**

manufacturer's specifications. Half-size breakers shall not be permitted in existing commercial or industrial units.

(F) Three-phase circuit panels supplied by three-phase, four wire Delta 120/240 volt service shall not be used to directly supply 120 volt single phase loads.

(G) Service entrances for underground services shall be governed by the requirements published by Commonwealth Edison entitled "Information and Requirements for the Supply of Electric Service."

(10) Article 230.31(B) Minimum Size. (Amend to read as follows). The conductors shall not be smaller than 8 AWG copper or smaller than 2 AWG for aluminum and copper clad aluminum conductors.

(11) Article 230.43 Wiring Methods for 600 volts, Nominal, or less. (Amend to read as follows). Service entrance conductors shall be installed in accordance with the applicable requirements of this code covering the type of wiring methods used and shall be limited to the following methods:

(1) Rigid metal conduit

(2) Intermediate metal conduit

(3) Rigid nonmetallic conduit

(12) Article 250.50 Grounding Electrode System and Grounding Electrode Conductor. (Amend by adding the following after the first paragraph).

All grounding conductors shall be:

(1) Enclosed in a metal raceway or metal conduit;

(2) Connected to the first five (5) feet of the metal water pipe from the point of entrance to the building or structure on the street side of the water meter;

(3) Tagged with an approved WARNING tag; and

(4) A properly sized bonding jumper shall be installed across the water meter.

(13) Article 250.64 Grounding Electrode Conductor Material. (Amend to read as follows). The grounding electrode conductor shall be copper.

The use of aluminum or copper clad aluminum for the purpose of grounding is prohibited.

- (14) Article 310.2(B) Conductor Material. (Amend to read as follows). The use of compact aluminum and copper clad aluminum conductors shall be prohibited if smaller than 2 AWG.**
- (15) Article 314.27(C) Boxes at Ceiling-suspended Paddle Fan Outlets. (Amend to read as follows). Any outlet box which is being installed in an area that can reasonably accommodate a ceiling fan shall be identified for ceiling fan support.**
- (16) Article 320.10 Uses Permitted. (Amend to read as follows). Metal-clad and armored type cable (BX) shall be permitted for remodeling work where the installation of electric metallic tubing and/or intermediate metal conduit presents a hardship and is approved by the Director of Inspectional Services or his/her designee.**
- (17) Article 324 Flat Conductor Cable: Type FCC. (Delete this section)**
- (18) Article 330.10 Uses Permitted. (Amend to read as follows). Type MC cable shall be permitted for remodeling work where the installation of electrical metallic tubing and/or intermediate metal conduit presents a hardship and is approved for use by the Director of Inspectional Services or his/her designee.**
- (19) Article 334 Nonmetallic-sheathed Cable: Types NM, NMC, and NMS. (Delete this section)**
- (20) Article 338 Service-Entrance Cable: Types SE and USE. (Delete this section). This does not apply to USE cable.**
- (21) Article 340 UF Wiring. (Amend to read as follows). UF wiring is permitted in exterior uses when installed underground only.**
- (22) Article 352.10 Rigid Nonmetallic Conduit: Type RNC subsections (A), (C), (D), (E), and (F) Use Permitted. (Delete these sections)**
- (23) Article 348 Flexible Metal Conduit. (Amend by adding the following) Flexible metal conduit shall not exceed six feet in length except by written approval by the Director of Inspectional Services or his/her designee.**
- (24) Article 352.12 Uses Not Permitted. (Amend by adding the following section).**

(G) Where conduits are placed in concrete cast in place on earth, or in direct contact with the earth, only galvanized rigid metal conduit, intermediate conduit or rigid nonmetallic conduit shall be used. Electrical metal conduit, with fittings approved for immersion in concrete, may be placed in concrete above grade, with 2 inches of space below the conduit.

- (25) Article 362 Electrical Nonmetallic Tubing (Delete this section)**
- (26) Article 382 Nonmetallic Extensions. (Delete this section)**
- (27) Article 394 Concealed Knob-and-tube Wiring. (Delete this section)**
- (28) Article 398 Open Wiring on Insulators. (Delete this section)**
- (29) Article 410.116 Recessed Light Clearances. (Amend to read as follows).**

Recessed lighting fixtures installed in insulated ceilings are required to be I.C. type. This requirement cannot be obviated through the removal of insulation in the vicinity of the lighting luminaire.

- (30) Article 450.3 Over-Current Protection. (Amend to read as follows). All transformers rated at 150 volts and greater shall have both primary and secondary load break disconnects located within sight of the transformer.**
- (31) Article 450.27 Oil-insulated Transformers Installed Outdoors. (Amend to read as follows). Space separations shall be no less than five (5) feet horizontally from a doorway or window and twenty (20) feet from a fire escape except with written permission of the fire code official or his/her designee.**
- (32) Article 600.6(A) Sign Disconnects. (Amend to read as follows) Outdoor disconnects and raceways used in connection with illuminated signage shall be located in accordance with one of the following methods:**
 - 1. Within an enclosed building within sight of the sign(s), or**
 - 2. Behind a parapet wall within sight of the sign(s), or**
 - 3. Completely enclosed within the sign.**
- (33) Article 604 Manufactured Wiring Systems. (Amend to read as follows)**

Manufactured wiring systems shall be permitted for use with furniture systems only.

- (37) Article 680.23(A) (4) Voltage Limitation. (Amend to read as follows) Lighting fixtures installed in swimming pools, fountains, and the like, shall not operate at more than 15 volts, as measured between conductors.**
- (38) Article 720 Low Voltage Wiring. (Amend by adding the following). Low voltage wiring shall be installed in conduit in areas made inaccessible by building construction or where subject to damage.**