COUNTY COUNCIL OF PRINCE GEORGE'S COUNTY, MARYLAND

2009 Legislative Session

Bill No. CB-46-2009

Chapter No.

Proposed and Presented by The Chairperson (by request- County Executive)

Introduced by

Co-Sponsors

Date of Introduction

BILL

AN ACT concerning

Electrical Code

For the purpose of amending the Prince George's County Electrical Code, adopting certain amendments to the 2008 Edition of the National Electrical Code and amending certain sections as it relates to building standards.

BY repealing and reenacting with amendments:

SUBTITLE 9. ELECTRICITY.
Sections 9-101, 9-102, 9-104, 9-105, 9-107.01, 9-108.01, 9-108.02, 9-109, 9-109.01, and 9-111
The Prince George's County Code
(2007 Edition, 2008 Supplement).

BY repealing: SUBTITLE 9. ELECTRICITY.
Sections 9-106 and 9-108.00.01
The Prince George's County Code
(2007 Edition, 2008 Supplement).

SECTION 1. BE IT ENACTED by the County Council of Prince George's County, Maryland, that Sections 9-101, 9-102, 9-104, 9-105, 9-107.01, 9-108.01, 9-108.02, 9-109, 9-109.01 and 9-111 of the Prince George's County Code be and the same are hereby repealed and reenacted with the following amendments:

SUBTITLE 9. ELECTRICITY.

DIVISION 1. ELECTRICAL CODE.

Subdivision 1. Adopted By Reference.

Sec. 9-101. Code; adoption by reference.

The National Electrical Code (NEC), [2002] 2008 Edition, published by the National Fire Protection Association, is hereby adopted by reference and made a part of this Subtitle with the same force and effect as though set out in full herein as the Official Electrical Code of Prince George's County, together with the changes, deletions, or modifications prescribed in this Subtitle. All electrical work performed or contracted to be performed in the County shall be included within the purview of this Subtitle.

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Sec. 9-102. Definitions.

(a) The term **"the authority having jurisdiction for enforcing this Code"** as used in the National Electrical Code shall mean the [Chief Electrical Inspector and] Electrical Code Official for Permits and the Electrical Code Official for Inspections of the Department of Environmental Resources, or other such persons as the Director shall designate. Where the name of the jurisdiction is to be indicated in any Section of the Code, the name to be substituted therein shall be "Prince George's County, Maryland."

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Subdivision 2. Amendments to the National Electrical Code.

Sec. 9-104. General.

Any provision of the National Electrical Code adopted by Section 9-101 of this Subtitle shall be subject to change[d], [modified] modification, [added] addition or [omitted] omission as set out in Subdivision 2, and such change, amendment, addition or deletion shall be deemed to supersede the text of the Electrical Code in any case where the provisions of the Subtitle are interpreted.

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Sec. 9-105. Wiring and Protection; Article 210 – Branch Circuits.

(a) The following amendments, additions, and/or deletions are made to Article 210 of the National Electrical Code:

(1) The following is added to the text of Section [210.4, "Multiwire Branch Circuits:"] 210.5(C) Undergrounded Conductors:

[(E) Underground Conductors. Undergrounded conductors of different voltages shall be of different colors or identified by other means. Conductors of multiwire branch circuits and two-wire branch circuits connected to the same system shall conform to the following color code:] Circuits connected to 240 volt [“] single-phase[“] power [undergrounded conductors] shall be identified by the use of one black; one red; 208 volt [“] three-phase [“] power [connected systems] shall be identified by the use of one ungrounded conductor with black insulation, one with red, one with blue; 480 volt [“] three-phase[“] power [connected systems] shall be identified by the use of one ungrounded conductor with yellow insulation, one with brown, one with orange; the “grounded” conductors shall comply with Section 200.6[(B)] of the National Electrical Code; the ungrounded conductors of [the] any additional [circuit may be] systems shall be permitted of colors other than those specified. All circuit conductors of the same color shall be connected to the same ungrounded feeder conductor throughout the installation; see feeder requirements in Section 215.12. [In addition to the requirements of Section 408.13 of the National Electrical Code, identification shall be permanently posted at each panelboard.]
Note: For four-wire delta systems, see National Electrical Code [408.3(E)] Section 110.15.

(2) Section 210.52(B)(4) Range Hood/Microwave Receptacle, at least one 20 ampere dedicated branch circuit shall be installed to serve cord connected range hoods and microwaves. The receptacle shall be accessible and located above the range hood or microwave. See additional requirements of 422.16(B)(4) for cord connected range hoods. Note: For four-wire delta systems, see National Electrical Code [408.3(E)] 110.15.

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Sec. 9-107.01. Wiring Methods and Materials; Article 310 – Conductors for General Wiring.

(a) The following amendments, additions, and/or deletions are made to Article 310 of the National Electrical Code:

(1) The following paragraph is added to Section 310.2, “Conductors:” (C) Aluminum Conductors. Aluminum conductors shall be permitted only for service and feeder use and shall not be smaller than [#]2 AWG. Aluminum grounding conductors that are an inherent part of a cable assembly shall be permitted to be sized in accordance with Table 250.122.

[(2) The following exception is added to Section 310.2, “Conductors:” Listed Cable assemblies #2 aluminum AWG and larger installed in single-family and multifamily dwellings, having

grounding conductors sized in accordance with Section 250.122, "Size of Equipment Grounding Conductors," shall be excluded from the requirements set forth in (a) (1), above.]

[(3)] (2) The following addition is made to 310.15(B)(2)(a) FPN No.1, "Adjustment Factors:" No diversity allowance is permitted when determining ampacity of three (3) or more conductors in a raceway or cable.

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Sec. 9-108.01. Same; Article 408 – Switchboards and Panelboards.

(a) The following amendments, additions, and/or deletions are made to Article 408 of the National Electrical Code:

(1) Article [480.16] 408.36, "Overcurrent Protection," Exception No. [2 under paragraph (A)] 3 is amended to read as follows:

(A) For existing installations, split-bus and FPE Stablok panelboards shall be required to be replaced by a main over-current protective device panelboard when replacement of service entrance conductors occurs.

(2) A new Section [408.22] 408.23, titled "Switchboards of One Thousand (1,000) Amperes or Larger," is added to read as follows:

(A) Switchboards having a capacity of one thousand (1,000) amperes or larger, using aluminum feeders and/or busbars, shall receive periodic cleaning and preventative maintenance as recommended by the manufacturer of such equipment to minimize the possibility of fire or catastrophic failure. Cleaning and maintenance require an electrical permit, including coordination of shutdown with the utility, and shall include the following:

(i) Vacuum entire interior of switchboard;

(ii) Clean busbars and contacts with a suitable nonconductive solvent;

(iii) Lubricate all moving mechanisms;

(iv) Check all conductors for abrasions;

(v) Busbars and busbar connections shall be subjected to thermograph testing, if corrective action is warranted, repair shall be made in accordance with recommended manufacturer specifications;

(vi) Replace worn, damaged, or deteriorating components; and

(vii) Testing of ground-fault protection device.

Sec. 9-108.02. Equipment for General Use; Article 410 – Luminaires, Lampholders, and

Lamps.

(a) The following amendments, additions, and/or deletions are made to Article 410 of the National Electrical Code:

(1) The following addition is made to paragraph (C) of Section 410.16: All "lay-in" luminaires will require independent suspension to insure that the luminaire will not drop more than normally two (2) or three (3) inches when the ceiling framing members no longer provide the support. Number 12 SWG wire firmly secured to the building structure and the luminaire is required for this purpose. Two (2) restraining wires (one (1) at each end of the luminaire) are required for luminair[i]es smaller than 2x4 and four (4) restraining wires (one (1) at each corner) are required on all luminair[i]es 2x4 and larger. Other types of lay-in luminaires and surface mounted luminaires mounted on drop ceiling shall also have a secondary support to preclude the danger of falling when the framing members fail or are removed (e.g., hi-hat, exit, luminaire).

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Sec. 9-109. [Special Equipment; Article 600 – Electric Signs and Outline Lighting.] Special Conditions; Article 680 Swimming pools, Fountains, and Similar Installations.

[(a) The following amendments, additions, and/or deletions are made to Article 600 of the National Electrical Code:] (a) The following amendments, additions, and/or deletions are made to Article 680 of the National Electrical Code:

[(1) Section 600.6(A), "Location," is amended to read as follows: Signs and outline lighting systems attached to or supported by the building structure shall require a disconnecting means adjacent to and in sight of the sign or outline lighting system. The disconnecting means shall disconnect the sign or outline lighting system from all ungrounded supply conductors. It shall be designed so that no pole can be operated independently, and it shall be capable of being locked in the open position.] (1) Section 680.26(B)(2) is amended by the deletion of (b) Alternate means.

Sec. 9-109.01. Special Conditions; Article 700 – Emergency Systems.

(a) The following amendments, additions, and/or deletions are made to Article 700 of the National Electrical Code:

(1) Section 700.6(A) is amended by the addition of the following sentence:

(A) Emergency systems and [T]transfer equipment shall be separated [by a minimum of two (2) hour fire rated wall(s) from normal power supply systems.] from normal power supply systems by a wall or wall(s) with a minimum fire rating of two (2) hours.

(2) The first paragraph of Section 700.12, titled "General Requirements," is amended by the addition of the following sentence: Permission to use an emergency power source must be requested and authorized in writing from the authority having jurisdiction prior to the submittal of engineering plans for approval.

[Note: Separation of transfer equipment shall incorporate the emergency system on the load side of the transfer switch.]

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Subdivision 3. Administration.

Sec. 9-111. Duties and powers of the [Chief] Electrical [Inspector] Code Official for Permits and the Electrical Code Official for Inspections.

(a) The [Chief] Electrical Code Official for Permits and for Inspections [Inspector] shall enforce all the provisions of the Electrical Code and shall prescribe the mode or manner of electrical work and the materials used in the installation, repair, or removal of electrical equipment.

(b) [The Chief Electrical Inspector shall have the following duties:

(1)] The [Chief] Electrical Code Official for Permits [Inspector] shall receive applications and issue permits for all electrical work [and shall inspect the work for which a permit was issued] and ensure that electrical plans are reviewed by authorized personnel to insure compliance with the Electrical Code; provided, however, that the [Chief] Electrical Code Official for Permits [Inspector] shall have no responsibility for the permitting and inspection of cable television installations in those municipalities where the cable television permit fees for installations within those municipalities are not remitted to the County in accordance with the fee schedule established in Section 9-121 of this Subtitle.

(c) [(2)] The [Chief] Electrical Code Official for Inspections [Inspector] shall ensure that electrical work performed for which a permit is issued is inspected by authorized personnel and shall ensure that [issue] all necessary notices or orders to remove or correct illegal or unsafe conditions are issued [and] to [insure] ensure compliance with all the Code requirements for safety, health, and general welfare of the public. Upon notice from the [Chief]

Electrical Code Official for Inspections or other duly authorized personnel [Inspector] that work is being pursued contrary to the provisions of the Electrical Code, or is unsafe and dangerous, such work shall be stopped immediately. A "Stop Work" sign shall be posted and the stop-work order shall be in writing and shall be given to the owner of the property involved and/or to the owner's agent and/or to the persons doing the work and shall state in writing the condition under which the work may be resumed. The stop-work order shall contain, or be accompanied by, a written notice indicating that there is a right to a hearing before the [Chief] Electrical Code Official for Inspections [Inspector] or the designee of the [Chief] Electrical Code Official for Inspections [Inspector]. Such request for a hearing may be filed in writing or in person at the Office of the [Chief] Electrical Code Official for Inspections [Inspector]. The owner or permittee affected by such stop-work order shall be entitled to such hearing as quickly as feasible, but at least within twenty-four (24) hours of receipt of such request for hearing by the [Chief] Electrical Code Official for Inspections [Inspector]. The [Chief] Electrical Code Official for Inspections [Inspector] or a designated impartial member of the staff, who has or is delegated the authority to act, shall afford the owner or permittee a fair hearing with an opportunity to present evidence or testimony that is relevant to the stop-work order. The owner or permittee shall be afforded reasonable notice of the time and place of hearing at the time requested, if made in person, or by telephone or other appropriate means if the request is forwarded in writing. Any person who shall continue any work in or about the premises after having been served with a stop-work order, except for corrective work as directed to perform to remove a violation or unsafe condition, shall be subject to a fine of not less than One Thousand Dollars ($1,000.00) or six (6) months in jail, or both.

(d) [(3)] The [Chief] Electrical Code Official for Inspections [Inspector] shall ensure that [make] all required inspections are performed by authorized personnel as designated by the Director or may accept reports of inspection by authoritative and recognized testing agencies and/or approved third party inspection agents. All such inspection reports shall be in writing and certified by a responsible officer of such inspection agency or by the responsible individual.

(e) [(4)] The provisions of this Subtitle shall not prevent the use of any material or method of construction not prescribed by this Subtitle when the permittee can demonstrate, to the satisfaction of the [Chief] Electrical Code Official for Permits or Inspections [Inspector], that the

proposed method or material is, for the purpose intended, at least the equivalent of the material or method otherwise prescribed in quality, strength, effectiveness, fire resistance, durability, and safety.

(f) [(5)] Whenever it is determined, however, that there is documentary evidence that the use of a material or method approved herein would constitute a distinct hardship to life or property, the [Chief] Electrical Code Official for Permits or Inspections [Inspector] shall have the authority to administratively suspend approval granted herein of such material or method. The [Chief] Electrical Code Official for Permits or Inspections [Inspector] shall, within five (5) working days, request the County Council to confirm such administrative suspension by resolution of the Council. Such written request of the [Chief] Electrical Code Official for Permits or for Inspections [Inspector] shall be accompanied by sufficient technical data and record of national or local testing to substantiate that the use of an approved method or material would constitute a distinct hazard to life or property.

(g) [(6)] The [Chief] Electrical Code Official of Inspections [Inspector] or authorized representative shall have the authority to enter at any reasonable hour any building, structure, or premises for the duration of a permit which has been issued for the purposes of enforcing the Electrical Code, or where there is probable cause to believe that a violation of the Electrical Code exists. A search warrant shall be authorized in those cases where the owner or occupant refuses to allow such entrance and inspection.

(h) [(7)] In any case of hazard to life or property or in any case which comes to the knowledge of the [Chief] Electrical Code Official for Inspections [Inspector] of defective or faulty wiring or apparatus, the [Chief] Electrical Code Official for Inspections [Inspector] is authorized to order the property owner to correct the hazard or the company furnishing the electric power to discontinue service.

(i) [(c)] Any interpretation of the Electrical Code made by the [Chief] Electrical Code Official for Permits or Inspections [Inspector] shall be conclusive and binding upon the parties involved; provided, that any aggrieved party may appeal such decision to the Board of Registration for Master Electricians or Electrical Contractors within thirty (30) days after written notice of the decision by the [Chief] Electrical Code Official for Permits or Inspections [Inspector] when it is claimed that the true intent of the National Electrical Code or of this

Division has been incorrectly interpreted or applied. Decisions of the Board will be appealable to the Circuit Court pursuant to the provisions of the Maryland Rules of Procedure.

(j) [(d)] The [Chief] Electrical Code Official for Permits or Inspections [Inspector] may, so long as the public safety is assured, grant administrative relief in the form of variances and/or waivers to the National Electrical Code (NEC), provided that said applicant clearly demonstrates substantial practical difficulties and/or circumstances of undue hardship involved in the implementation and enforcement of the provisions of the NEC, or Subtitle 9, Prince George's County Code. The particulars of such variances, when granted or allowed, shall be furnished in writing to the applicant and made part of the permanent file established by the Department of Environmental Resources [Chief Electrical Inspector].

Note: Variances and waivers shall not become a substitute for the proper use and implementation or enforcement of the NEC or Subtitle 9, Prince George's County Code.

SECTION 2. BE IT FURTHER ENACTED by the County Council of Prince George's County, Maryland, that Sections 9-106 and 9-108.00.01 of the Prince George's County Code be and the same are hereby repealed.

SUBTITLE 9. ELECTRICITY.

DIVISION 1. ELECTRICAL CODE.

Subdivision 2. Amendments to the National Electrical Code.

[Sec. 9-106. Same; Article 250 – Grounding.]

[(a) The following amendments, additions, and/or deletions are made to Article 250 of the National Electrical Code:]

[(1) Section 250.52(A)(3), "Concrete - Encased Electrode," is amended to read as follows: All new structures, both residential and commercial, require a concrete encased electrode to be used as the principal grounding element. A concrete encased electrode is an electrode encased by at least 2 inches (50.8 mm) of concrete, located within and near the bottom of a concrete foundation or footing that is in direct contact with the earth, consisting of at least 20 feet (6.1 m) of one or more steel reinforcing bars or rods of not less than 1/2 inch (12.7 mm) diameter, or consisting of at least 20 feet of (6.1 m) bare solid copper conductor not smaller than No. 4 AWG. Steel reinforcing rods and/or copper conductor shall be supported in the trench to insure 2 inches (50.8 mm) separation from earth. If a rod with galvanized finish is used, a bronze or brass clamp listed for the purpose may be used to attach the grounding electrode

conductor which requires a minimum of 2 foot (0.61 m) of accessible length after installation. If a nongalvanized rod is used, an exothermic weld or irreversible clamp is required to attach the grounding electrode conductor. Rods having a nonconductor coating shall not be used for the required grounding electrode.]

[(2) Section 250.56, "Resistance of Rod, Pipe, and Plate Electrodes." Add the following: Unless data is provided to the authority having jurisdiction showing that the actual resistance to ground measurement is twenty-five (25) ohms or less when a metal underground water pipe in direct contact with the earth for ten (10) feet or more is not available at the premises, an additional ground rod shall be installed to serve as the supplementary ground.]

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[Sec. 9-108.00.01. Same; Article 338 – Service-Entrance Cable: Types SE and USE.]

[(a) The following amendments, additions, and/or deletions are made to Article 338 of the National Electrical Code:

(1) The following Exception is added to Section 338.10: Type SE service-entrance cable and type SER cable where conductors are fully insulated shall be limited to construction types III, IV and V, except under the provisions of Article 527.]

SECTION 3. BE IT FURTHER ENACTED that the provisions of this Act are hereby declared to be severable; and, in the event that any section, subsection, paragraph, subparagraph, sentence, clause, phrase, or word of this Act is declared invalid or unconstitutional by a court of competent jurisdiction, such invalidity or unconstitutionality shall not affect the remaining words, phrases, clauses, sentences, subparagraphs, paragraphs, subsections, or sections of this Act, since the same would have been enacted without the incorporation in this Act of any such invalid or unconstitutional word, phrase, clause, sentence, subparagraph, subsection, or section.

SECTION 4. BE IT FURTHER ENACTED that this Act shall take effect forty-five (45) calendar days after it becomes law.

Adopted this _____ day of _____, 2009.

COUNTY COUNCIL OF PRINCE
GEORGE'S COUNTY, MARYLAND

BY: _____
Marilynn M. Bland
Chairperson

ATTEST:

_____
Redis C. Floyd
Clerk of the Council

APPROVED:

DATE: _____ BY: _____
Jack B. Johnson
County Executive

KEY:
Underscoring indicates language added to existing law.
[Brackets] indicate language deleted from existing law.
Asterisks *** indicate intervening existing Code provisions that remain unchanged.