



HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS

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**Subject:** Testimony Regarding Adoption of 2017 National Electrical Code

**To:** Lonnie Robbins  
Chief Administrative Officer

**From:** Robert J. Frances, P.E., Director  
Department of Inspections, Licenses, and Permits

**Date:** August 9, 2017

The Department of Inspections, Licenses, and Permits has proposed legislation to adopt the 2017 Edition of the National Electrical Code (NEC) as the Howard County Electrical Code. There have been very few changes made, mostly corrective language to maintain current construction practices.

The previous edition of the NEC (2014) delayed required Arc-Fault Circuit-Interrupter Protection until January 1, 2017; therefore, this requirement is already in effect. Overall, there are no significant changes from the previous adopted version of the NEC. The amendments as proposed enable us to stay current with the most up to date construction codes and allow us to maintain our current construction practices.

I have attached a detailed list of all code changes that were made that are different from the previously approved code adoption.

If you have any questions, I can be reached at ext 3946.

Copy: Donald L. Mock, P.E., Chief, DILP Plan Review (x3948)  
Jennifer Sager, County Administration

**110.11 Deteriorating Agents.** New Informational Note intended to make *Code* users aware that there are minimum flood provisions contained in other building codes as they relate to electrical installations.

**110.14 Conductor Termination and Splicing.** A properly calibrated tool must be used when torqueing terminal connections. In 2014 NEC contained an informational note. For 2017 this code is enforceable.

**210.8 GFCI Protection.** New informational note added, the methods used for measuring GFCI requirements are now addressed, some three-phase circuits now require protection, and new requirements for crawl spaces have been added.

**210.11 Branch Circuits Required.** The rules for the circuiting of dwelling unit garages have been relocated, and an exception was added. At least one branch circuit is required in garages that only serve the garage except for readily accessible receptacle located outdoors.

**210.12 Arc-Fault Circuit-Interrupter Protection.** The AFCI requirements have been expanded. Now dormitory rooms and guestrooms require AFCI protection.

**210.52 Dwelling Unit Receptacle Outlet Requirements.** Changes have been made to dwelling unit receptacle location rules, most having to do with countertops and work surfaces.

**230.42 Size and Rating.** The sizing requirements for service conductors have been revised for consistency with similar rules elsewhere in the *NEC*.

**240.24 Location of Overcurrent Devices.** The accessibility of overcurrent devices was clarified.

**250.24 Service Equipment—Grounding and Bonding.** Sizing the service neutral conductor when using a cable wiring methods is now addressed.

**250.52 Grounding Electrode Types.** The description of what used to be known as structural metal was revised, coatings for plate electrodes must be electrically conductive, and swimming pools can't be used as a grounding electrode now.

**300.4 Protection Against Physical Damage.** An Informational Note was added to address superficial damage of cables or conduits.

**300.11 Securing and Supporting.** The rules for securing and supporting wiring methods were revised to clarify it is a general rule.

**334.6 Listing Requirements.** Type NM Cable fittings must now be listed.

**334.12 Uses Not Permitted.** An editorial change was made to the language regarding ceilings. The *NEC* now clearly states dropped or suspended ceiling cavity.

**334.30 Securing and Supporting.** Cable ties for securing and supporting must now be listed.

**406.12 Tamper-Resistant Receptacles.** The locations requiring tamper-resistant receptacles have been expanded, as have the types of receptacles requiring such protection.

**422.5 Ground-Fault Circuit-Interrupter (GFCI) Protection for Personnel.** The rules for providing GFCI protection for specific appliances found throughout Article 422 have been relocated to this section, the voltage and current ratings for equipment requiring GFCI's have been specified, and the options for protection methods have been expanded.

**422.16 Flexible Cords.** The cord requirements for dishwashers and trash compactors have been revised to reflect product standards.

**550.13 Receptacle Outlets.** Dishwashers in mobile and manufactured homes must now be GFCI protected.

**550.25 AFCI Protection.** The AFCI protection requirements for manufactured and mobile homes now mirror the rules for dwellings in 210.12.

**680.4 Approval of Equipment.** A new rule requires electrical equipment associated with pools to be listed.

**680.7 Grounding and Bonding Terminals.** Grounding and bonding terminals now have specific location-driven requirements.

**680.12 Equipment Rooms and Pits.** A reminder was added that pools and similar installations are considered corrosive environments.

**680.14 Corrosive Environment.** A new section provides the requirements for equipment subject to corrosion.

**680.28 Gas-Fired Water Heaters.** New GFCI provisions for gas-fired water heaters were added.

**680.74 Equipotential Bonding.** The rules for bonding hydro-massage tubs have been revised.

**695.14 Control Wiring.** The fire pump control wiring methods have been expanded.

**695.15 Surge Protection.** Fire pump controllers must now have surge protection.

**700.3 Tests and Maintenance.** The equipment that might require maintenance is no longer limited to just batteries.