

NEW YORK ELECTRICAL INSPECTION AGENCY

2017 National Electrical Code Changes – Summary of Non-Residential Only

Covered: The main Non-Residential Code changes in the 2017 NEC.

Not Covered: Hazardous Locations, Microgrids, Pools/Hot Tubs, PV Systems, Generators, and Special Occupancies

- 1) **90.3** – Chapters 5-7 may supplement or modify the general requirement of Chapters 1-7 and not just 1-4
- 2) **100 Definition** – Readily Accessible does not consider a key a tool under controlled & supervised condition
- 3) **110.14(D)*** - When torquing is indicated by the manufacturer, a torque wrench is required to be used
- 4) **110.16(B)*** - Arc-Flash Hazard Warning label is required on non-dwelling unit service equipment >1000v
- 5) **110.21(A)(2)** – Marking is required on all reconditioned equipment to include date, who did it, etc.
- 6) **110.26(A)(4)** – Additional requirements regarding working space for equipment located in areas with limited access such as crawlspaces and above suspended ceilings.
- 7) **110.26(E)(2)** – Exterior enclosures must be protected from accidental contact by unauthorized personnel and vehicular traffic and protected from accidental spillage or leakage from piping systems.
- 8) **110.41(A) & (B)** – Requirements for performance and reporting on electrical equipment over 1000v
- 9) **210.5(C)(1)Ex** – Existing ungrounded conductors of a voltage systems do not need to be identified, only the newly installed voltage system. New label must include “other unidentified systems exist on premises”
- 10) **210.8 Info Note #2*** - Clarification on how to properly measure the distance of a GFCI receptacle.
- 11) **210.8(A)(7)*** - Clarification on how to properly measure the distance of a GFCI receptacle at sinks.
- 12) **210.8(B)** – GFCI required in wet locations for all single-phase receptacles 150v or less, 50amps or less, and all 3-phase receptacles 150v or less, and 100 amps or less. See 210.8(B) for locations.
- 13) **210.8(B)(9)** – GFCI required on 50amp or less single-phase and 100amp or less 3-phase receptacles in non-dwelling unit crawlspaces.
- 14) **210.8(B)(10)** - GFCI required on 50amp or less single-phase and 100amp or less 3-phase receptacles in non-dwelling unit basements.
- 15) **210.12(C)** – AFCI protection required for all 120v, single-phase, 15- and 20 amp outlets in Guest Rooms and Guest Suites in hotels and motels.
- 16) **210.64** – Accessible receptacle required within 25ft of indoor service equipment and in the same room
- 17) **210.70(C)** – Lighting required in utility rooms and basements used for storage or equipment spaces.
- 18) **210.71*** – Receptacles are required in meeting rooms
- 19) **215.2(A)(1)(a) Ex2** – Allows portion of feeder not more than 600v and not connected directly to the load terminations to have allowable amps of not less than the sum of the continuous and non-continuous loads. (rather than the non-continuous load +125% of the continuous load)
- 20) **230.29** - Bonding is required for grounded overhead service conductors where metal supports are used
- 21) **240.67** – New arc energy reduction requirements added for fuses rated 1200 amps or higher.
- 22) **250.22(6)** – Class 2 load-side circuits for suspended ceiling low voltage lighting is not to be grounded
- 23) **250.30(A)(4)&(A)(5)** – Removed metal water pipe or building steel as first options as grounding electrode on separately derived systems.
- 24) **250.30(A)(6)(a)** – Added metal water pipe to method to ground on multiple separately derived systems
- 25) **250.52(B)(3)** – In-ground swimming pool structures cannot be used as a grounding electrode
- 26) **250.122(F)** – Revision and new text added to clarify how to size and install equipment grounding conductors when installed in parallel in a single or multiple raceway, multiconductor cable, auxiliary gutter, or cable tray.
- 27) **250.148** – All equipment grounding conductors associated with any and all circuits in a box must be connected together and to the box and not just each equipment grounding conductors of each indiv circuit

PLEASE CONTACT OUR MAIN OFFICE OR YOUR LOCAL INSPECTOR IF YOU HAVE ANY QUESTIONS

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- 28) **300.5 (D)(4)** – Electric metallic tubing (EMT) allowed underground and for protection from physical damage
- 29) **T310.15(B)(3)(c)** – Raceways & Cables installed on rooftops must be at least 7/8in above rooftop
- 30) **312.8(B)** – Power Monitoring Equipment must be listed when installed inside cabinets and outlet boxes
- 31) **314.16 (A) & (B)** – Box volume and fill calculations for boxes with an internal barrier. (Newly added)
- 32) **314.17 (B)** – Exterior sheathing of Type NM or UF cable must extend at least ¼” inside metal boxes.
- 33) **314.27 (E)** – Outlet boxes can be used to support listed locking support and mounting receptacles.
- 34) **320.6** – Listing is required for all Armored Cable (Type AC) wiring methods and associated fittings.
- 35) **324.12(5)** – Flat Conductor Cable (FCC) permitted in administration office areas of hospitals and schools
- 36) **344.14** – Stainless steel RMC can only be used with stainless steel boxes, enclosures, and fittings
- 37) **350.28** – Type LFMC must be trimmed inside and out to remove rough edges
- 38) **358.10** – Type EMT revised “Uses Permitted” to the same as Type IMC and RMC
- 39) **366.20** – Revised to clearly address how to install conductors in parallel in an auxiliary gutter
- 40) **404.2(C)** – Clarification that grounded conductor of lighting circuit at switches must be connected to the electronic device
- 41) **404.22** – Prohibits current on equipment grounding conductor of Electronic Lighting Control Switches
- 42) **406.3 (E)** – Receptacles controlled by an automatic control device must be permanently & clearly marked.
- 43) **406.3 (F)** – Requirements have been added for receptacle outlets with a built in USB charger(s).
- 44) **406.4 (D)(4) Exc No1 & No2*** – Exceptions were added for AFCI requirements when replacing an outlet.
- 45) **406.6 (D)** – Requirements added to faceplates with integral night lights and/or USB chargers.
- 46) **406.12*** – TR Receptacles are now also required in all businesses where small children will likely be
- 47) **406.15** – Dimmer-Controlled Receptacles have been deleted from the Code – Not allowed anymore
- 48) **408.3 (A)(2)** – Barriers must be installed on all ungrounded/uninsulated service busbar or service terminals inside panels operating at 1000v or less
- 49) **409.22(B)** – Documentation required for short-circuit current at industrial control panels with dates
- 50) **422.5** – GFCI Protection requirements for appliances for protection of personnel hazards
- 51) **425** – New Article added for Fixed Resistance and Electrode Industrial Process Heating Equipment
- 52) **430.53(D)(4)** – New tap rule for single motor allows for 25ft taps
- 53) **430.99** – Documents must be available to AHJ at short-circuit current at the motor control center and the date on when calculation was performed.
- 54) **440.9** – Rooftop A/C and refrigerating equipment using metallic raceways with non-threaded fittings must be bonded with a wire-type grounding conductor.
- 55) **445.18** – Standby Generator requires a disconnect means and shutdown of the prime mover
- 56) **517.2** – Health Care Facilities definition revised to include “mobile enclosures” and “human”
- 57) **517.16** – This was divided into two subdivisions for receptacles inside and outside Patient Care Vicinities
- 58) **590.4** – SE cable is now acceptable to be used for temporary wiring methods
- 59) **590.6(A)(1)*** - Temporary wiring must have GFCI protection on all 15-, 20, & 30-amp 125volt single phase
- 60) **600.4(B)** – Signs with retrofitted Illumination Systems must be marked that it is a retrofit kit
- 61) **600.6(A)(1) Ex2** – Disconnect for sign is not required at the point of entry of the sign if the energized conductors within the sign contain a warning label
- 62) **605.9(C)** - Thirteen duplex receptacles are the maximum number of receptacles in office furnishings
- 63) **620.16** – Require elevator control panels to be marked with short-circuit current rating and cannot be installed where the available short-circuit current exceeds the marked short-circuit current rating.
- 64) **625** – Article 625 for Electric Vehicle Charging Systems has been reorganized.

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- 65) **625.2** – New definitions have been added for wireless power transfer & wireless power transfer equipment
- 66) **625 Part IV** – New Part IV added for Wireless Power Transfer Equipment for charging electric vehicles
- 67) **645.5(E)** – Requirements for installing wiring under raised floor in an IT Equipment room revised
- 68) **645.18** – New requirements added for surge protection for critical operations data systems
- 69) **670.6** – New requirements added for surge protection of Industrial Machinery with safety interlock circuits
- 70) **695.6(G)** – Revision to clarify that GFCI protection is not permitted for fire pump power circuits
- 71) **695.15** - New requirements added for surge protection of fire pump controllers
- 72) **700.10(A)** – Emergency circuits and boxes must be permanently marked with a distinct color
- 73) **700.10(D)** – Fire protection is required of emergency systems in health care facilities where persons are not capable of self-preservation and educational occupancies with more than 300 occupants.
- 74) **702.12 (C)** – Power inlets on portable generators rated at 100 amps or greater cannot be disconnected while under loads

* = Key Change