

This is an amendment to 14.10.4 NMAC, Part 4 title and Sections 2, 5, 8 and 11

**TITLE 14 HOUSING AND CONSTRUCTION
CHAPTER 10 ELECTRICAL CODES
PART 4 [2014] 2017 NEW MEXICO ELECTRICAL CODE**

14.10.4.2 SCOPE: This rule applies to all contracting work performed in New Mexico on or after ~~[July 1, 2014]~~ February 1, 2018, that is subject to the jurisdiction of CID, unless performed pursuant to a permit for which an application was received by CID before that date.
[14.10.4.2 NMAC - Rp, 14.10.4.2 NMAC, 6/28/2013; A, 8/1/2014; A, 2/1/2018]

14.10.4.5 EFFECTIVE DATE: ~~[August 1, 2014]~~ February 1, 2018, unless a later date is cited at the end of a section.
[14.10.4.5 NMAC - Rp, 14.10.4.5 NMAC, 6/28/2013; A, 8/1/2014; A, 2/1/2018]
[From the date of publication of this rule in the New Mexico Register, until August 1, 2018, permits may be issued under either the previously-adopted rule, or this rule. After August 1, 2018, permits may be issued only under this rule.]

14.10.4.8 ADOPTION OF THE [2014] 2017 NATIONAL ELECTRICAL CODE:

- A.** This rule adopts by reference the ~~[2014]~~ 2017 national electrical code (NEC), as amended by this rule.
 - B.** In this rule, each provision is numbered to correspond with the numbering of the ~~[2014]~~ 2017 national electrical code.
 - C.** This rule is to be applied in conjunction with 14.7.6 NMAC, the 2009 New Mexico Energy Conservation Code.
- [14.10.4.8 NMAC - Rp, 14.10.3.8 NMAC, 6/28/2013; A, 8/1/2014; A, 2/1/2018]

14.10.4.11 CHAPTER 1 General:

- A. Article 100 - Definitions.** See this article of the NEC.
- B. Article 110 - Requirements for electrical installations.** See this article of the NEC except as provided below.
 - (1) Section 110.2 Approval.** See this section of the NEC and add the following:
 - (a)** product listing and labeling - electrical wiring, equipment or material approval shall be based on listing and labeling by a nationally recognized testing laboratory recognized by the federal occupational safety and health administration;
 - (b)** field evaluation - electrical wiring, equipment or material that is not listed and labeled, but for which a (UL) safety standard exists may be approved upon certification by a nationally recognized testing laboratory recognized by the federal occupational safety and health administration or by a field evaluation body accredited by the international accreditation service, inc.;
 - (c)** engineer certification - electrical wiring, equipment or material for which a (UL) safety standard does not exist may be approved upon certification by an electrical engineer licensed to practice in New Mexico; such a certification will not be valid unless based on a verification of the manufacturer's safety and performance test data for the product.
 - (d)** engineer certification - electrical equipment assemblies that contain only nationally recognized testing laboratories (NRTL) labeled components that are not NRTL listed as an assembly may be approved upon certification by an electrical engineer licensed to practice in New Mexico; such a certification will not be valid unless based on a verification of the UL standard if applicable, NEC 110.3 and the manufacturer's safety and performance test data for the product.
 - (2) Section 110.21. Marking.** See this section of the NEC and add: all equipment used on circuits over 300 volts between conductors shall have a warning sign either on or adjacent to the equipment. Warning signs shall be made in accordance with ANSI Z535 environmental and safety signs. The language shall read:
 - (a)** for voltages over 300 volts but less than 600 volts: "480 VOLTS". (Label dimensions shall be 1" x 4"); and
 - (b)** for voltages over 600 volts and there are exposed parts: "DANGER - HIGH VOLTAGE - KEEP OUT".

(3) Section 110.26 Spaces about electrical equipment.

(a) 110.26 (A) Working space. See this section of the NEC and add the following exception: Disconnects that do not provide over-current, overload, short circuit, or ground fault protection are not required to maintain the dimensions of 110.26(A)(1), (A)(2) and (A)(3) where adequate space is not readily available and the disconnect is permanently labeled "INADEQUATE WORKING SPACE-DO NOT WORK ON WHILE ENERGIZED". The label shall be readily visible on the exterior of the disconnect.

(b) 110.26 (A) (3) Height of working space. See this section of the NEC and add: Exception No. 3: In underground water well pump enclosures, service equipment or panel boards that do not exceed 200 amperes, operating at 250 volts or less and only feeding equipment associated with the water well enclosure, shall be permitted in spaces where the headroom is less than six and one half feet (6 1/2 ft.) but greater than five feet (5 ft.) provided the enclosure is supplied with a removable lid, that when removed would allow a minimum of six and one half feet (6 1/2 ft.) headroom.

C. Article 210. Branch circuits. See this article of the NEC except as provided below.

(1) Section 210.11 Branch circuits required.

(a) 210.11 (A) Number of branch circuits. See this section of the NEC and add: In dwelling units, branch circuits for 125-volt, 15- and 20- ampere general purpose lighting and receptacle outlets shall be limited to a maximum of ten (10) lighting and/or receptacle outlets per branch circuit. Single and duplex receptacle outlets are considered to be one receptacle outlet. Exception: Branch circuits serving only lighting loads may be calculated per article 220 of the national electrical code.

(b) 210.11 (C) Dwelling units. See this section of the NEC except as provided below.

(i) (1) Small appliance branch circuits. See this section of the NEC and add: not more than four (4) 20 ampere 125 volt receptacle outlets shall be connected to these circuits. Single and duplex receptacle outlets are considered to be one receptacle outlet. Exception: small appliance circuits that supply only dining area receptacles may serve not more than six (6) receptacle outlets.

(ii) (2) Laundry branch circuits. Delete the text of this section of the NEC and substitute: in addition to the number of branch circuits required by other parts of this section, at least one additional 20-ampere branch circuit shall be provided to supply the laundry receptacle outlet. Such circuits shall have no other outlets.

(2) Section 210.19 Conductors - minimum ampacity and size. See this section of the NEC and add the following to subsection (A) Branch circuits not more than 600 volts: (1) General: add: conductors for branch circuits shall be sized to prevent excessive voltage drop. (2) General purpose branch circuits with more than one receptacle. Conductors of general purpose branch circuits supplying more than one receptacle outlet for cord-and-plug connected portable loads shall have an ampacity of not less than the rating of the branch circuit and shall be not less than 12 AWG.

(3) Section 210.52 Dwelling unit receptacle outlets.

(a) 210.52 (A) General provisions. (2) Wall space. See this section of the NEC and add: exception: free-standing cabinets designed to be used as an eating or drinking bar where stools or chairs are pulled up to a counter top which extends at least one (1) foot from the front of the cabinet, shall not be considered as wall space.

(b) 210.52 (G) Basement, garages and accessory buildings. See this section of the NEC and add: receptacle outlets must be installed a minimum of eighteen (18) inches above finished floor, in attached or detached garages.

(4) Section 210.70 Lighting outlets required.

(a) 210.70 (A) (2) Dwelling units - additional locations. See this section of the NEC and add a new subsection as follows: (d) on single family dwellings at least one wall switch, located within five (5) feet from each entrance or exit or automatic lighting control such as a motion detector shall be installed to control exterior illumination.

(b) 210.70 (A) (3) Dwelling units - storage or equipment spaces. See this section of the NEC and add: at least one (1) switched lighting outlet shall be installed in all accessible attics and crawl spaces adjacent to the usual point of entry.

(c) 210.70 (C) Other than dwelling units. See this section of the NEC and add: at least one (1) switched lighting outlet shall be installed in all accessible attics and crawl spaces adjacent to the usual point of entry.

D. Article 215. Feeders. Section 215.1. Scope. See this section of the NEC and add: approved wiring methods for feeders: nonmetallic-sheathed cable types NM, NMC and NMS (Article 334) , and service

entrance cable type SER (Article 338), shall be permitted to be used for feeders in dwelling units providing that the cables shall not pass through or under any other dwelling unit(s). Underground feeder and branch circuit cable type UF cable (Article 340) shall be permitted to be used underground for any occupancy, and indoors only in accordance with nonmetallic-sheathed cable (Article 334) providing that the cable shall not pass through or under any other dwelling unit(s).

E. Article 225. Outside branch circuits and feeders. See this article of the NEC except as follows.

(1) **Section 225.19 Clearance from buildings for conductors of not over 600 volts nominal-above roofs. (A) Above roofs.** See this section of the NEC but delete exception no. 2 in its entirety.

(2) **Section 225.32 Location.** See this section of the NEC except as follows.

(a) Add the following provision: the disconnecting means shall be installed at a readily accessible location. Where the disconnecting means is located outside the building or structure served, the disconnecting means enclosure shall be installed within ten (10) feet from the building or structure and visible, or on the exterior wall of the building or structure served. Where the disconnecting means is installed inside the building or structure served, the disconnecting means enclosure shall be located within forty eight (48) inches from where the feeder conductor raceway enters the building or structure.

(b) Delete the text of exception no. 1 and substitute: for industrial installations under single management, where documented safe switching procedures are established and maintained for disconnection, the disconnecting means shall be permitted to be located elsewhere on the premises.

F. Article 230. Services. See this article of the NEC except as provided below.

(1) **Section 230.24 Clearances. (A) Above roofs.** Delete exception no. 2 and exception no. 5 in their entirety.

(2) **Section 230.28. Service masts as supports.** See this section of the NEC and add: where a service mast is used for the support of service drop conductors, it shall be a minimum two inch (2") rigid metal conduit, intermediate metal conduit or comply with local utility requirements.

(3) **Section 230.31 Size and rating. (A) General.** See this section of the NEC and add: where the underground service lateral is customer owned, the service lateral conductors shall be sized to prevent excessive voltage drop. The maximum voltage drop on the service lateral conductors shall not exceed five percent (5%). For the purpose of this calculation, the ampacity shall be based on the calculated demand load of the building or structure served. Customer owned includes all non-utility owned or operated service lateral conductors.

(4) **Section 230.43. Wiring methods for 600 volts, nominal, or less.** See this section of the NEC but delete subsection (1) open wiring on insulators, and subsection (6), Electrical nonmetallic tubing (ENT).

(5) **Section 230.54 Overhead service locations.** See this section of the NEC and add a new section as follows: (H) overhead service support shall comply with the serving utility requirements or be at least six inch by six inch (6" x 6") pressure-treated timber or equivalent round poles (minimum 6" diameter crown) installed to a depth not less than four (4) feet below finish grade.

(6) **Section 230.70 Service equipment - disconnecting means.**

(a) **230.70 General. (A) Location.** See this section of the NEC and add: the disconnecting means for each occupant of a multiple occupancy building shall be grouped at a common location.

(b) **230.70 General. (A) Location. (1) Readily accessible location.** Delete the text of this section of the NEC and substitute: (1) service disconnects located outside the building or structure. Where the service disconnect is located outside of the building or structure it shall be located in a readily accessible location within 48 inches of the metering equipment. Remote service disconnects that are located not more than 10 feet from the building or structure shall be considered to be located on the building or structure. Exception: Where metering equipment is installed at the utility transformer, the disconnecting means on the outside of the building shall be installed within 48 inches from where the service conductors emerge from the earth. (2) Service disconnects located inside the building or structure. Where the service disconnect is located inside of a building or structure it shall be located in a readily accessible location within 48 inches from the metering equipment or the service equipment enclosure shall be installed within 48 inches of where the service conductors penetrate the building or structure.

(7) **Section 230.72 Grouping of service disconnects. (A) General.** See this section of the NEC and add: all building or structure disconnects of each service shall be grouped at one location and shall be separated by the least practical distance, within sight of each other and not to exceed an overall distance of [~~twenty~~ fifty (50)] feet.

G. Article 250 - Grounding and bonding. See this article of the NEC except as provided below.

(1) **Section 250.50 Grounding electrode system.** See this section of the NEC and add: on new construction, a concrete encased electrode shall be considered available and installed in compliance with NEC 250.52(A) (3). If a concrete encased electrode is not present, then at least 20 feet of 2 AWG bare copper in direct contact with the earth at a depth below the earth's surface of not less than thirty (30) inches shall be installed in a continuous trench that is at least twenty (20) feet in length, augmented with a minimum of two (2), eight (8) foot grounds rods one at each end of the 2 AWG conductor.

(2) **Section 250.52 (A) Grounding electrodes. (5) Rod and pipe electrodes.** See this section of the NEC but delete subsection (a) in its entirety.

(3) **Section 250.53 (A) (2) Exception # 2.** See this section of the NEC and add: A single grounding electrode consisting of a rod or plate may be utilized on temporary construction services rated 200 amperes or less.

(4) **Section 250.66 Size of alternating-current grounding electrode conductor. (B) Connections to concrete-encased electrodes.** See this section of the NEC and add: the grounding electrode conductor shall not be smaller than 4 AWG copper.

(5) **Section 250.104. Bonding of piping systems and exposed structural steel. (B) Other metal piping.** See this section of the NEC and add: CSST gas piping systems shall be bonded to the electrical service grounding electrode system at the point where the gas service enters the building. The bonding jumper shall not be smaller than (6) AWG copper wire.

(6) **Section 250.106. Lightning protection systems.** See this section of the NEC and add: Where a lightning protection system is installed, the bonding of the gas piping system shall be in accordance with NFPA 780, standard for installation of lightning protection systems.

(7) **Section 250.118. Types of equipment grounding conductors.** See this section of the NEC and add the following new subsection: (15) an equipment grounding conductor shall be installed in all branch circuit and feeder raceways on or above a roof. The equipment grounding conductor shall be sized in accordance with table 250.122.

H. Article 300. Wiring methods. See this article of the NEC except as provided below.

(1) **Section 300.11 Securing and supporting.** See this section of the NEC except as provided below.

(a) **300.11(A) Secured in place.** See this section of the NEC and add: independent support wires shall be limited to support of flexible wiring methods from the last means of support or junction box for connections within an accessible ceiling to luminaire(s) or equipment served.

(b) **300.11 (A) (1). Fire rated assemblies.** Delete the text of this section of the NEC and substitute: the ceiling support system shall be permitted to support listed junction boxes and/or support brackets that have been tested as part of a fire-rated assembly.

(c) **300.11 (A) (2). Non-fire rated assemblies.** Delete the text of the exception and substitute: the ceiling support system shall be permitted to support listed junction boxes and/or support brackets where installed in accordance with the ceiling system manufacturer's instructions.

(2) **Section 300.14. Length of free conductors at outlets, junctions, and switch points.** Delete the text of this section of the NEC and substitute: at least six (6) inches of free conductor, measured from the point in the box where it emerges from its raceway or cable sheath, shall be left at each outlet, junction, and switch point for splices or the connection of luminaire (fixtures) or devices. Where the opening of an outlet, junction, or switch point is less than eight (8) inches in any dimension, each conductor shall be long enough to extend at least six (6) inches outside of the opening.

I. Article 310. Conductors for general wiring. See this article of the NEC and add the following new subsection 310.10 (J) **Conductor material.** The use of aluminum current carrying conductors shall be of the AA-8000 series or equivalent and shall be limited to size 8 AWG or larger. Exception: the equipment-grounding conductor shall be limited to size 10 AWG or larger if in a listed cable assembly.

J. Article 334. Nonmetallic-sheathed cable: Types NM, NMC and NMS.

(1) **Section 334.10 Uses permitted.** See this section of the NEC but delete subsection (4) and (5) in its entirety.

(2) **Section 334.12 Uses not permitted. (A) Types NM, NMC, and NMS.** See this section of the NEC and add the following subsection: (11) type NM, NMC, or NMS shall not be installed in buildings, or structures such as stores, professional offices, motels, hotels, and other occupancies classified as R-1, R-4, commercial or industrial.

K. Article 340. Underground feeder and branch circuit cable: type UF. See this article of the NEC except as provided below.

(1) **Section 340.10 Installation - uses permitted.** See this section of the NEC and add the following new subsections:

- (a) (8) type UF cable shall be permitted to be imbedded in adobe construction;
- (b) (9) type UF cable, or an approved electrical raceway shall be installed on straw

bale residential construction.

(2) **Section 340.12 Installation - uses not permitted.** See this section of the NEC and add the following new subsection: (12) Type UF cable shall not be installed in buildings or structures such as stores, professional offices, motels, hotels, or other occupancies classified as commercial or industrial.

L. Article 352 Rigid polyvinyl chloride conduit : Type PVC. See this article of the NEC and add the following to section 352.10 uses permitted. (F) Exposed: PVC conduit, type schedule 40 shall not be used where the raceway is exposed and under eight (8) feet from finished floor or grade.

M. Article 358 Electrical metallic tubing: Type EMT. See this article of the NEC and add the following section to 358.12 uses not permitted: (7) electrical metallic tubing shall not be permitted to be installed underground or in concrete slabs or walls which are in contact with the earth.

N. Article 394 Concealed knob and tube wiring. See this article of the NEC and add the following to section 394.12 uses not permitted: concealed knob and tube wiring shall not be permitted to be installed except by special written permission from the electrical bureau.

O. Article 422. Appliances. See this article of the NEC and add the following to section 422.19. evaporative cooling units: where an evaporative cooler is installed, a listed raceway shall be installed during rough-in from the control point to the evaporative cooler location. The raceway shall contain an equipment-grounding conductor from the control point outlet box to the junction box at the unit. The equipment grounding conductor shall be sized in accordance with table 250.122.

P. Article 550. Mobile homes, manufactured homes and mobile home parks. See this article of the NEC except as provided below.

(1) **Section 550.32 Service equipment. (A) Mobile home service equipment.** Delete the text of this section of the NEC and substitute the following: the mobile home service equipment shall be located adjacent to the mobile home and not mounted in or on the mobile home. The service equipment shall be located in sight from and not more than one hundred (100) feet from the exterior wall of the mobile home it serves. The service equipment shall be permitted to be located elsewhere on the premises, provided that a disconnecting means marked "suitable for use as service equipment" is located in sight from and not more than thirty (30) feet from the exterior wall of the mobile home it serves. Grounding at the disconnecting means shall be in accordance with 250.32.

(2) **Section 550.32 Service equipment.** See this section of the NEC and add the following new subsections.

(a) **(H) Required receptacle.** A 125 volt 15 or 20 amp receptacle outlet shall be installed with ground fault circuit interruption protection at each remote mobile home or manufactured home service equipment, or the local external disconnecting means permitted in 550.32 (A).

(b) **(I) Overhead services.** Overhead service support shall comply with the serving utility requirements or be at least six inch by six inch (6" x 6") pressure-treated timber or equivalent round poles (minimum 6" diameter crown) installed to a depth not less than four (4) feet below finish grade.

Q. Article 800. Communications circuits. See this article of the NEC and add the following to Section 800.156: Any exterior wall penetration shall be installed in a listed raceway.
[14.10.4.11 NMAC - Rp, 14.10.4.11 NMAC, 6/28/2013; A, 8/1/2014; A, 2/1/2018]