

Town of Marana

2005 National Electrical Code Amendments

Chapter 2

Sec. 210.5. Identification for Branch Circuits. Change paragraph (C) to read:

(C) Ungrounded Conductors. Branch circuits shall conform to the following color code.

<u>Volts</u>	<u>Phase</u>	<u>System</u>	<u>Phase A</u>	<u>Phase B</u>	<u>Phase C</u>	<u>Grounded Conductor</u>
120/208	3	WYE	Black	Red	Blue	White
277/480	3	WYE	Brown	Orange	Yellow	Grey
120/240	3	DELTA	Black	Orange	Red	white

Exception No. 1: The above color coding is not required in residential occupancies.

Exception No. 2: Industrial occupancies holding a Registered Plant Permit may use their own coding system.

Exception No. 3: Additions to an existing electrical system, where an acceptable color coding system exists, the existing color coding system shall be continued.

Section 210.8. (B) Other than Dwelling Units. Revise by Changing (5) to (6) and adding:

(6) Convenience receptacles located within 6 feet of any sink or washbasin.

Sec. 210.11 (C) Dwelling Units. Add Item (4) to read:

(4) Dishwasher and Garbage Disposer Branch Circuits-Dwelling Units. In residential occupancies, dishwasher and garbage disposer may be on the same 20-ampere branch circuit.

Sec. 220.89. Optional Calculation – Non-dwelling Unit Occupancies. Add section to read:

The calculation of feeder or service load in non-dwelling unit occupancies shall be permitted to be calculated in accordance with Table 220.89 in lieu of Part II of this article. This section shall not apply to calculations performed under Sections 220.86, 220.87, or 220.88. Calculations for this section shall be prepared by a registered electrical engineer.

Table 220.89. Add table to read:

Table 220.89
Optional Method-Demand Factors for
Non-Dwelling Unit Occupancies

Connected Loads from Part II, Article 220	Demand Factors¹ (Percent)
Connected load up to and including 800 amperes	100
Connected load over 800 amperes	90

Footnote:

¹Other demand factors may be permitted at the discretion of the Building Official.

Sec. 225.32. Location. Add Exception No. 5:

Exception No. 5: For freestanding canopies, carports, towers, and similar structures, a branch circuit disconnecting means shall be permitted to be located elsewhere on the premises. A bonding conductor sized per Section 250.122 shall be run with the circuit conductors.

Sec. 230.40. Number of Service-Entrance Conductor Sets. Add Exception No. 6:

Exception No. 1: For multiple-occupancy buildings, not more than two groups of one to six disconnects shall be permitted to be tapped from a single service drop or set of service lateral conductors. When mounted in individual enclosures, the groups of one to six disconnects shall be separated by not more than six feet. Signage shall be installed indicating the total number of disconnects for the structure. The meter and disconnect for circuits described in 210-25 shall be counted as one of the disconnects.

Section 230.63 Enclosures. Add new section as follows:

Section 230.63 Enclosures. All service equipment rated 1000 Amperes or more located inside a building shall be enclosed within a room or space separated from the rest of the building by not less than one-hour fire resistive assembly in compliance with the Building Code.

Sec. 230.70(B). Marking. Add two sentences to the subsection to read:

The markings shall be of sufficient durability to withstand the environment involved. Identifying labels required for disconnecting means shall have engraved or raised letters and be secured by screws or rivets (plastic tape shall not be considered durable material).

Sec. 250.118: Types of Equipment Grounding Conductors. Delete items (5), (6), (7), and (8).

Chapter 3

TABLE 310.5. Minimum Size of Conductors. Revise Table 310.5 to read:

Table 310.5

Voltage Rating of Conductor - Volts	Minimum Conductor Size - AWG
0 through 2000	14 Copper 12 Copper-Clad Aluminum 8 Aluminum
2001 through 8000	8
8001 through 15000	2
15001 through 28000	1
28001 through 35000	1/0

Sec. 340.10 Uses Permitted. Add item (8) to read:

(8) Type UF Cable shall be permitted to be used in mortar joints of adobe construction in occupancies where the use of Nonmetallic Sheathed Cable is permitted by this code.

Sec. 348.60 Grounding and Bonding. Delete and replace with:

Flexible metal conduit shall not be permitted as a grounding means. An equipment grounding conductor, sized in accordance with Table 250.122, shall be installed in all flexible metal conduit. Where an equipment bonding jumper is required around flexible metal conduit, it shall be installed in accordance with Section 250.102.

Exception: Listed and labeled factory assembled (prewired) fixtures and equipment with flexible metal conduit will not require the addition of the grounding conductor in the prewired raceway.

Sec. 350.10 Uses Permitted. Add item (4) to read:

(4) for feeders.

Sec. 350.60 Grounding and Bonding. Delete section and replace with:

Liquidtight flexible metal conduit shall not be permitted as a grounding conductor. A conductor (as determined by Table 250.122) shall be installed in all liquidtight flexible metal conduit. Where an equipment bonding jumper is required around liquidtight flexible metal conduit, it shall be installed in accordance with Section 250.102.

Exception: Listed and labeled factory assembled (prewired) fixtures and equipment with liquidtight flexible metal conduit will not require the addition of the grounding conductor in the prewired raceway.

Sec. 352.12 Uses Not Permitted. Add subsection (G) and exception to read:

(G) where exposed in exterior locations.

Exception: Schedule 80 PVC may be used exposed out of doors.

Chapter 4

Sec. 410.16 (C) Means of Support. Add numbered paragraphs (1), (2), (3), and (4) to read:

1. Mount luminaires (fixtures) installed in acoustical tile or lay-in panel ceilings in a manner that will not compromise ceiling performance.
2. Pendant luminaire (fixture) hangers attached to main or cross runners shall have approved support direct from structure.
3. Luminaires (fixtures) weighing less than 25.5kg (56 pounds) shall have two No. 12 gage hangers connected from the luminaire (fixture) housing to the structure above. These wires may be slack.
4. Luminaires (fixtures) weighing over 25.5kg (56 pounds) shall be supported directly from structure with approved hangers.

Sec. 422.12. Central Heating Equipment. Delete the word “Central” in all areas and Add sentence to the end of the paragraph to read:

Evaporative cooler fan and pump motors shall be permitted to be connected to the same branch circuit as the heating equipment when the controls do not permit the evaporative cooler and the heating to operate at the same time or the air distribution system is designed to not have the evaporative cooler and the heating equipment operating at the same time.

Sec. 440.65. Leakage Current Detection and Interruption and Arc Fault Circuit Interrupter. Delete section in its entirety.

Chapter 5

Sec. 501.30(B). Types of Equipment Grounding Conductors. Delete Exception, including (1), (2), and (3).

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Chapter 6

Sec. 680,26 (C)(3) b.. Equipotential Bonding Grid. Add to the end of subsection (1): Where the pool design does not call for reinforcing in the pool shell or deck this section does not require the installation of reinforcing steel.

Chapter 7

Sec. 725.12. Location of Power Supplies and Transformers. Add section:

(A) Accessibility. Class 1, Class 2 and Class 3 power supplies and transformers shall be accessible.

(B) Prohibited locations.

- 1) In any closet or storage space within 6 inches of the front of the shelf.