

Note: Deleted text is shown in strikeout and added or revised text is bolded and capitalized.

**TOWN OF ORO VALLEY
AMENDMENTS TO THE
NATIONAL ELECTRICAL CODE
2005 EDITION**

The following provisions of the National Electrical Code, 2005 Edition, as published by the National Fire Protection Association, Inc., are hereby amended as follows:

CHAPTER 2

Article 210.5. Change paragraph (C) to read:

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

| <u>Volts</u> | <i>Phase</i> | <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.

Add new number (4) to article 210.11 (C)

(4) DISHWASHER AND GARBAGE DISPOSER BRANCH CIRCUITS DWELLING UNITS. IN SINGLE FAMILY RESIDENTIAL OCCUPANCIES, A DISHWASHER AND GARBAGE DISPOSER MAY BE ON THE SAME 20 AMPERE BRANCH CIRCUIT.

Revise Article 210.8. as follows:

(B) Other than Dwelling Units. All 125-volt, single-phase, 15- and 20-ampere receptacles installed in the locations specified in (1) through (5) shall have ground-fault circuit-interrupter protection for personnel.

(No change to items 1 through 4). Insert new number 6.

(6) CONVENIENCE RECEPTACLES LOCATED WITHIN 6 FT (1.8 M) OF ANY SINK OR WASHBASIN.

Revise Article 225.32 by adding 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.

Revise Article 230.40 by deleting exception No. 1 and replace with:

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 LESS THAN TWO FEET. WHEN PART OF A MANUFACTURED GANGABLE METER CENTER (CABLE TERMINAL BOX AND METER/DISCONNECT SECTION BUSSED TOGETHER), A READILY IDENTIFIABLE SEPARATION SHALL EXIST BETWEEN THE TWO GROUPS ON ONE TO SIX DISCONNECTS.

Add New Article 230.63 as follows:

230.63. LOCATION. 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 OCCUPANCY SEPARATION OR FIRE BARRIER INSTALLED IN COMPLIANCE WITH THE INTERNATIONAL BUILDING CODE.

Article 230.70(B). 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).

CHAPTER 3

Revise Article 310.15 (B) (6) as follows:

120/240-Volt and 120/208-volt, 3-Wire, Single-Phase Dwelling Services and Feeders. For ~~individual dwelling units, of one-family, two-family and multi-family~~ conductors as listed in Table 310-15(B)(6), shall be permitted as 120/240-volt and 120/208 volt, 3-wire, single-phase-service-entrance conductors, service lateral conductors, and feeder conductors that serve as the main power feeder to each dwelling unit and are installed in raceway or cable with or without an equipment grounding conductor. For application of this section, the main power feeder shall be the feeder(s) between the main disconnect and the lighting and appliance branch-circuit panelboard(s). The feeder conductors to a dwelling unit shall not be required to ~~have an allowable ampacity rating greater~~ **BE LARGER** than their service-entrance conductors. The grounded conductor shall be permitted to be smaller than the ungrounded conductors, provided the requirements of Sections 215.2, 220.61, and 230.42 are met.

FPN: for single-phase panels fed from a 3-phase system, the grounded conductor cannot be reduced in size for a 120/208-volt system, see 220.22

Revise Article 312.5 (C) to add a 2nd exception as follows:

EXCEPTION #2: WHERE SURFACE MOUNTED PANELBOARDS ARE UTILIZED, WHERE TOP OR BOTTOM ENTRY OF CONDUCTORS IS IMPRACTICAL, THEY MAY BE INSTALLED WITH ENTRY THROUGH THE BACK OF THE PANELBOARD WHEN ALL OF THE FOLLOWING CONDITIONS ARE MET:

- (A) **THE HOLE THROUGH WHICH THE CONDUCTORS PASS MUST PROTECT THE CONDUCTORS FROM ABRASION.**
- (B) **THE CONDUCTORS SHALL REMAIN FULLY SHEATHED AND EXTEND NOT LESS THAN ¼ INCH (6 MM) INSIDE THE PANEL ENCLOSURE.**
- (C) **THE CONDUCTORS MUST BE EFFECTIVELY SECURED WITHIN 8 INCHES (200 MM) OF THE PANELBOARD OPENING.**
- (D) **THE OPENING MUST BE SEALED WITH A FIRE RATED MATERIAL OF NOT LESS THAN ONE HOUR RATING.**

Revise Article 334.10 as follows:

Type NM, Type NMC, and Type NMS cables shall be permitted to be used in the following:

- 1. One- and two-family dwellings, **MULTIFAMILY DWELLINGS, AND OTHER RESIDENTIAL ACCESSORY STRUCTURES**
- 2. Delete in its entirety.

(Items 3 & 4 to remain unchanged)

Revise Article 334.12 as follows:

334.12. Uses Not Permitted.

(A) Types NM, NMC, and NMS. Types NM, NMC, and NMS cables shall not be permitted as follows:

- 1. In any dwelling or structure not specifically permitted in 334.10(1), ~~(2)~~, and (3)
- 2. ~~Exposed in dropped or suspended ceilings in other than one- and two- family dwellings.~~

(Re-number due to deletion with balance of article to remain un-changed)

Add a new Subsection #7 to Article 358.12 as follows:

(7) ON OR BELOW GRADE

CHAPTER 5

Revise Article 501.30 (B) by deleting the exception in its entirety

Revise Article 502.30 (B) by deleting the exception in its entirety

Revise Article 503.30 (B) by deleting the exception in its entirety

CHAPTER 6

Add a sentence to the end of Article 680.26 (C)(3)(b) to read as follows:

FPN: WHERE AN APPROVED DESIGN DOES NOT REQUIRE REINFORCING IN THE POOL SHELL OR DECK THIS SECTION DOES NOT REQUIRE THAT REINFORCING STEEL BE PROVIDED.

CHAPTER 7

Add new Article 725.12 to read:

SEC. 725.12. LOCATION OF POWER SUPPLIES AND TRANSFORMERS.

(A) ACCESSIBILITY. CLASS 1, CLASS 2 AND CLASS 3 POWER SUPPLIES AND TRANSFORMERS SHALL BE ACCESSIBLE.

(B) PROHIBITED LOCATIONS.

1) IN ANY CLOSET OR SPACE WHERE LOCATED CLOSER THAN 6 INCHES FROM THE EDGE OF A SHELF.

Delete Annex G Administration and Enforcement in its entirety (refer to ICC Electric Code, 2006 as amended)