Appendix C - International NEC Electric Code Amendments

(Revised Ord 2016-52)

The International NEC Electric Code shall be amended as follows:

Section 220.14(A) **Specific Appliances or Loads.** At the end of this Sub-Section, the following sentence shall be added:

Individual circuits are required for each of the following: microwaves, trash compactors, dishwashers, freezers, refrigerators, furnaces, vacuum system, window air conditioners, circulation pumps, and garbage disposals.

Section 220.14(L) **Other Outlets.** At the end of this Sub-Section, the following sentence shall be added:

Receptacle spacing for other than residential uses shall be set a maximum of twelve feet (12') on center along all walls, as specified in Section 210-52, in all conference rooms, office areas, lunch rooms, and waiting rooms, regardless of furniture layout. The volt-ampere (VA) calculation shall be calculated as specified in Article 220-3(b)(9) of this Section (but only 20 amp circuits are allowed). When a floor to ceiling glass (wall/window) is installed, receptacle spacing is not required.

Section 220.14 (I) **Receptacles Per Circuits.** The maximum of receptacles per circuits shall be nine (9) for 15 ampere branch circuits and eleven (11) for 20 ampere branch circuits.

Section 220.61 **Feeder or Service Neutral Load**. This Section is deleted in its entirety and a new Section is added to read as follows:

Feeder or Service Neutral Load. The feeder or service neutral load shall be the same size as the phase conductor. If nonlinear loads induce a large unbalanced load on the neutrals amperity rating, it must be increased to ample size per Table 310.

Section 230.23(A) **General.** At this end of this Sub-Section, the following shall be added:

All residential service revisions shall be a minimum 100 amp with twenty (20) circuit openings and have a main circuit breaker. The service entrance conductors must be a minimum of three (3) #3 copper wire and be installed in a minimum of not less than one and one-quarter inch (1- 1/4") conduit. The panel must have 10% of spare space at final inspection.

All new single family dwelling units shall have a minimum of 200 amp service with at least forty (40) circuit openings and have a main circuit breaker. The service entrance conductors must be a minimum of three (3) 3/0 copper wires and be installed in a minimum of not less than a two inch (2") conduit. The panel must have 10% of spare space at final inspection.

Exception: Townhomes and apartments under 1400 square feet are allowed to have a 100 amp, twenty (20) circuit panel with main breaker.

For all industrial, commercial, and retail service entrances, must be a minimum of 100 amp with twenty-four (24) circuits with a main circuit breaker and be bolt-on type. Conductor must be a minimum of #3 copper for 100 amp; 1/0 copper for 150 amp; 3/0 copper for 200 amp; and 500 mcm copper for 400 amp. Panels are required to be bolt-on type and have 10% spare space on final inspection.

Section 230.23(C) **Grounded Conductors**. This Sub-Section is deleted in its entirety and a new Sub-Section is added to read as follows:

Grounded Conductors. The grounded conductors shall be the same size as the phase (ungrounded) conductors and be of copper.

Section 230.43(11) At the end of this Sub-Section, the following shall be added:

PVC may be used underground and must be encased in no less than three and a half inches (3 ½") of concrete and emerge up with rigid conduit to the termination point.

Section 250.50 **Grounding Electrode System.** At the end of this Section, the following paragraph shall be added:

Grounding electrode conductors must be installed in a raceway system.

Section 314.4 **Metal Boxes.** At the end of this Section, the following paragraph shall be added:

All conduit boxes for switches and receptacles and other devices must be a minimum of four inches (4") square and not less than one and one half inches (1-1/2") deep (1900 box).

Exception No. 1: For remodeling situation where the wall finish is not removed.

Exception No. 2: Where structural damage will occur because of the installation of the four inch (4") square box.

Exception No. 3: When installed in masonry, a box over fourteen cubic inches (14") may be used.

Article 320 Armored Cable: Type AC

This entire Article shall be deleted in its entirety.

Article 322 Flat Cable Assemblies: Type FC

This entire Article shall be deleted in its entirety.

Article 324 Flat Conductor Cable: Type FCC

This entire Article shall be deleted in its entirety.

Article 326 Integrated Gas Spacer Cable: Type IGS

This entire Article shall be deleted in its entirety.

Article 328 Medium Voltage Cable: Type MV

This entire Article shall be deleted in its entirety.

Section 334.10 **Uses Permitted**. This Section is deleted in its entirety and a new Section is added to read as follows:

Uses Permitted. Type NM, Type NMC, and Type NMS cables shall be permitted only for the use of temporary construction sites as prescribed in Article 590.

Article 338 Service-Entrance Cable: Types SE and USE

This entire Article shall be deleted in its entirety.

Section 348.10 **Uses Permitted.** At the end of this Section, the following language shall be added:

Flexible metallic conduit may be used in remodeling situations where the wall finish is not removed, and/or, where the installation of EMT is not feasible, and must have a grounding conductor installed in all lengths (regardless). The determination must be made by the Building Department. When flex is used, no more than twenty-four inches (24") may be exposed before termination or change over (i.e. when fishing down a wall, in cabinet work, etc.).

Section 348.12 **Uses Not Permitted.** At the end of this Section, the following Sub-Section and language shall be added:

(8) Flexible metal conduit shall not be used in lengths exceeding six feet (6'), or in a daisy chain installation.

Exception: When alterations are made to the electrical system and the wall finish is not removed, flexible metal conduit may be allowed to exceed six feet (6') in length and must have a green grounding conductor installed with the supply conductors and connects to the fixture or appliance to the metal raceway system.

Section 348.60 **Grounding and Bonding.** This Section is deleted in its entirety and a new Section is added to read as follows:

Grounding. All flexible metal conduit shall have a grounding conductor installed, no matter what length. Where an equipment bonding jumper is required around flexible metal conduit, it shall be installed in accordance with Section 250.102.

Section 350.10 **Use Permitted.** At the end of this Section, the following Sub-Section shall be added:

(4) Lengths over six foot (6') need to be approved by the building department. All liquidtight flexible metal conduit must have a green grounding conductor installed.

Article 354 Nonmetallic Underground Conduit with Conductors: Type NUCC

This entire Article shall be deleted in its entirety.

Article 356 Liquidtight Flexible Nonmetallic Conduit: Type LFNC

This entire Article shall be deleted in its entirety.

Article 378 Nonmetallic Wireways

This entire Article shall be deleted in its entirety.

Article 382 Nonmetallic Extensions

This entire Article shall be deleted in its entirety.

Article 394 Concealed Knob-and-Tube Wiring

This entire Article shall be deleted in its entirety.

Section 396.10 **Uses Permitted.** Sub-Sections A through C are deleted in their entirety and a new Sub-Section is added to read as follows:

A. **In Temporary Construction Services.** Messenger supported wiring shall only be permitted for temporary construction services where conditions of maintenance and supervision ensure that only qualified persons will service the installed messenger supported wiring.

Article 398 Open Wiring on Insulators

This entire Article shall be deleted in its entirety.

Section 422.10(A) **Individual Circuits.** At the end of this Sub-Section, the following sentence shall be added:

Individual circuits are required for each of the following: microwaves, trash compactors, dishwashers, freezers, refrigerators, furnaces, vacuum systems, window air conditioners, circulation pumps, and garbage disposals.