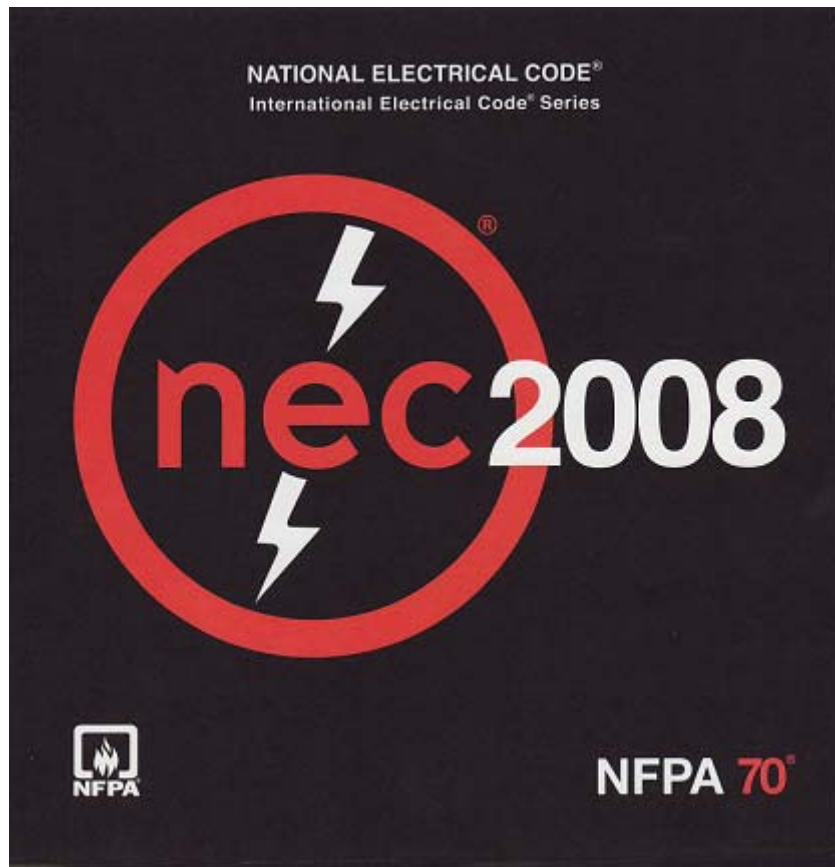


Village of Carol Stream

Local Amendments to
NFPA 70
National Electrical Code, 2008 Edition



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5/15/09

Village of Carol Stream

Community Development Department

Local Amendments to NFPA 70, National Electrical Code, 2008 Edition

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AMENDMENTS TO CHAPTER 1

Chapter 1 General

ARTICLE 100

Definitions

I. General

Other Conditioned Air Space: Conditioned air spaces not associated with HVAC systems used for environmental air.

ARTICLE 110

Requirements For Electrical Installations

I. General

110.8. Wiring Methods. Only wiring methods recognized as suitable are included in this *Code*. The recognized methods of wiring shall be permitted to be installed in any type of building or occupancy, except as otherwise provided in this *Code*. Where any wiring method or material permitted by NFPA 70 *National Electrical Code* (2008) shall have been prohibited by these amendments, such wiring method or materials shall be considered to be prohibited when referred to in any section or provision of NFPA 70 *National Electrical Code* (2008).

110.14 Electrical Connections. Because of different characteristics of dissimilar metals, devices such as pressure terminal or pressure splicing connectors and soldering lugs shall be identified for the material of the conductor and shall be properly installed and used. Conductors of dissimilar metals shall not be intermixed in a terminal or splicing connector where physical contact occurs between dissimilar conductors (such as copper and aluminum, copper and copper-clad aluminum, or aluminum and copper-clad aluminum), unless the device is identified for the purpose and conditions of use. Materials such as solder, fluxes, inhibitors, and compounds, where employed, shall be suitable for the use and shall be of a type that will not adversely affect the conductors, installation, or equipment. All terminations on electrical devices shall be installed using a compression type connection. No back stabbing of the device shall be allowed.

FPN: Many terminations and equipment are marked with a tightening torque.

AMENDMENTS TO CHAPTER 2

Chapter 2 Wiring And Protection

ARTICLE 210

Branch Circuits

I. General Provisions

210.11 Branch Circuits Required. Branch circuits for lighting and for appliances, including motor-operated appliances, shall be provided to supply the loads calculated in accordance with 220.10 where required elsewhere in this *Code* and for dwelling unit loads as specified in 210.11(C).

(C) Dwelling Units.

(4) Sump Pump Branch Circuits. In addition to the number of branch circuits required by other parts of this section, at least one branch circuit shall be provided to supply the necessary loads to the sump pump(s) in accordance with the manufacturer's requirements. This circuit shall have no other outlets.

II. Branch-Circuit Ratings

210.21 Outlet Devices. Outlet devices shall have an ampere rating that is not less than the load to be served and shall comply with 210.21 (A) and (B). Outlet devices installed on an individual branch circuit shall have an ampere rating of not less than that of the branch circuit.

Table 210.21(B)(2) Maximum Cord-and-Plug-Connected Load to Receptacle

Circuit Rating (Amperes)	Receptacle Rating (Amperes)	Maximum Load (Amperes)
15 or 20	15	12
20	20	16
30	30	24

Table 210.21(B)(3) Receptacle Ratings for Various Size Circuits

Circuit Rating (Amperes)	Receptacle Rating (Amperes)
15	Not over 15
20	15 or 20
30	30
40	40 or 50
50	50

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Table 210.24 Summary of Branch Circuit-Requirements

Circuit Rating	15A	20A	30A	40A	50A
Conductors (min. size):					
Circuit wires ¹	14	12	10	8	6
Taps	14	12	10	12	6
Fixture wires and cords – See Section 240.5					
Overcurrent Protection					
Outlet devices:					
Lampholders permitted Receptacle rating ²	Any type 15 max. A	Any type 15 or 20 A	Heavy duty 30A	Heavy duty 40 or 50 A	Heavy duty 50A
Maximum Load					
Permissible load	See 210.23(A)	See 210.23(A)	See 210.23(B)	See 210.23(C)	See 210.23(C)

¹ These gauges are for copper conductors.

² For receptacle rating of cord-connected electric-discharge lighting fixtures, see 410-30 (C).

210.52 Dwelling Unit Receptacle Outlets.

(E) Outdoor Outlets. Outdoor receptacle outlets shall be installed in accordance with (E)(1) through (E)(3). [See 210.8(A)(3).] **The required outdoor receptacle outlet(s) shall be switch-controlled, and the switch(es) shall be located inside the dwelling.**

210.70 Lighting Outlets Required. Lighting outlets shall be installed where specified in 210.70(A), (B), and (C).

(A) Dwelling Units. In dwelling units, lighting outlets shall be installed in accordance with 210.70(A)(1), (A)(2), and (A)(3).

(1) Habitable Rooms. At least one wall switch-controlled lighting outlet shall be installed in every habitable room and bathroom. **In all habitable rooms with more than one entrance, the switches for the lighting outlet(s) shall be located near each entrance.**

Exception No. 1: In other than kitchens and bathrooms, one or more receptacles controlled by a wall switch shall be permitted in lieu of lighting outlets.

Exception No. 2: Lighting outlets shall be permitted to be controlled by occupancy sensors that are (1) in addition to wall switches or (2) located at a customary wall switch location and equipped with a manual override that will allow the sensor to function as a wall switch.

(2) Additional Locations. Additional lighting outlets shall be installed in accordance with (A)(2)(a), (A)(2)(b), and (A)(2)(c).

(a) At least one wall switch-controlled lighting outlet shall be installed in hallways, stairways, attached garages, and detached garages with electric power. **The switches for switch-controlled lighting outlet(s) in a hallway shall be located at each entrance to the hallway.**

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(b) For dwelling units, attached garages, and detached garages with electric power, at least one wall switch-controlled lighting outlet shall be installed to provide illumination on the exterior side of outdoor entrances or exits with grade level access. A vehicle door in a garage shall not be considered as an outdoor entrance or exit. The switches for such lighting outlet(s) shall be located within the dwelling as well as within the garage.

(c) Where one or lighting outlet(s) are installed for interior stairways, there shall be a wall switch at floor level, and landing level that includes an entry way, to control the lighting outlet(s) where the stairway between floor levels has six risers or more.

Exception to (A)(2)(a), (A)(2)(b), and (A)(2)(c): In hallways, in stairways, and at outdoor entrances, remote, central, or automatic control of lighting shall be permitted.

ARTICLE 230

Services

IV. Service-Entrance Conductors.

230.43 Wiring Methods for 600 Volts, Nominal, or Less. Service-entrance conductors shall be installed in accordance with the applicable requirements of this *Code* covering the type of wiring method used and shall be limited to the following methods, except where such methods have been prohibited by these amendments:

V. Service Equipment — General

230.62 Service Equipment — Enclosed or Guarded. Energized parts of service equipment shall be enclosed as specified in 230.62(A) or guarded as specified in 230.62(B). Every service equipment enclosure and meter base enclosure shall be permanently marked or labeled with the address of the premises or unit which it serves.

ARTICLE 250

Grounding and Bonding

III. Grounding Electrode System and Grounding Electrode Conductor.

250.50 Grounding Electrode System. All grounding electrodes as described in 250.52(A)(1) through (A)(7) that are present at each building or structure served shall be bonded together to form the grounding electrode system. Where none of these grounding electrodes exist, one or more of the grounding electrodes specified in 250.52(A)(4) through ~~(A)(8)~~ (A)(7) shall be installed and used. The grounding electrode conductor shall be connected to the domestic or fire suppression water service on the street side of the water meter and/or the sprinkler control system devices.

250.52 Grounding Electrodes.

(A) Electrodes permitted for grounding.

(1) Metal Underground Water Pipe. A metal underground water pipe in direct contact with the earth for 3.0 m (10 ft) or more (including any metal well casing bonded to the pipe) and

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electrically continuous (or made electrically continuous by bonding around insulating joints or insulating pipe) to the points of connection of the grounding electrode conductor and the bonding conductors. Interior metal water piping located more than 1.52 m (5 ft) from the point of entrance to the building shall not be used as a part of the grounding electrode system or as a conductor to interconnect electrodes that are part of the grounding electrode system.

~~*Exception: In industrial, commercial, and institutional buildings or structures where conditions of maintenance and supervision ensure that only qualified persons service the installation, interior metal water piping located more than 1.52 m (5 ft) from the point of entrance to the building shall be permitted as a part of the grounding electrode system or as a conductor to interconnect electrodes that are part of the grounding electrode system, provided that the entire length, other than short sections passing perpendicularly through walls, floors, or ceilings, of the interior metal water pipe that is being used for the conductor is exposed.*~~

~~**(8) Other Local Metal Underground Systems or Structures.** Other local metal underground systems or structures such as piping systems, underground tanks, and underground metal well casings that are not bonded to a metal water pipe.~~

250.53 Grounding Electrode System Installation.

(D) Metal Underground Water Pipe.

(2) Supplemental Electrode Required. A metal underground water pipe shall be supplemented by an additional electrode of a type specified in 250.52(A)(2) through (A)(8). Where the supplemental electrode is a rod, pipe, or plate type, it shall comply with 250.56. The supplemental electrode shall be permitted to be bonded to the grounding electrode conductor, the grounded service-entrance conductor, the nonflexible grounded service raceway, or any grounded service enclosure.

~~*Exception: The supplemental electrode shall be permitted to be bonded to the interior metal water piping at any convenient point as covered in 250.52(A)(1), Exception.*~~

AMENDMENTS TO CHAPTER 3

CHAPTER 3 Wiring Methods And Materials

ARTICLE 300

Wiring Methods

300.5 Underground Installations.

(L) Grounding Conductor. All conduit installed underground or within concrete shall contain a grounding conductor sized in accordance with Table 250.122, and said grounding conductor shall be bonded to the conduit system as described in this *Code*.

300.6 Protection Against Corrosion and Deterioration. Raceways, cable trays, cablebus, auxiliary gutters, cable armor, boxes, cable sheathing, cabinets, elbows, couplings, fittings, supports, and support hardware shall be of materials suitable for the environment in which they are to be installed.

(A) General. Ferrous raceways, cable trays, cablebus, auxiliary gutters, cable armor, boxes, cable sheathing, cabinets, metal elbows, couplings, fittings, supports, and support hardware shall be suitably protected against corrosion inside and outside (except threads at joints) by a coating of approved corrosion-resistant material such as zinc, cadmium, or enamel. Where protected from corrosion solely by enamel, they shall not be used outdoors or in wet locations as described in 300.6(C). Where boxes or cabinets have an approved system of organic coatings and are marked "Raintight," "Rainproof," or "Outdoor Type," they shall be permitted outdoors. Where corrosion protection is necessary and the conduit is threaded in the field, the threads shall be coated with an approved electrically conductive, corrosion-resistant compound. Aluminum conduit shall not come in contact with concrete. All aluminum conduit shall contain a grounding conductor sized in accordance with Table 250.122, and said grounding wire shall be bonded to the conduit system as described in this *Code*.

(B) In Concrete or in Direct Contact with the Earth. Ferrous or nonferrous metal raceways, cable armor, boxes, cable sheathing, cabinets, elbows, couplings, fittings, supports, and support hardware shall be permitted to be installed in concrete or in direct contact with the earth, or in areas subject to severe corrosive influences where made of material judged suitable for the condition, or where provided with corrosion protection approved for the condition. Any conduit installed in concrete at or below grade shall be rigid metal conduit or intermediate metal conduit.

ARTICLE 310

Conductors For General Wiring

310.2 Conductors.

(B) Conductor Material. Conductors in this article shall be of aluminum, copper-clad aluminum, or copper unless otherwise specified. Conductors of size 4/0 AWG and smaller shall be copper.

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Table 310.5 Minimum Size of Conductors

Conductor Voltage Rating (Volts)	Minimum Conductor Size (AWG)	
	Copper	Aluminum or Copper-Clad Aluminum
0-200	14	12
2001-8000	8	8
8001-15,000	2	2
15,001-28,000	1	1
28,001-35,000	1/0	1/0

Exception: In all other uses except residential, conductors used in systems exceeding 50 volts shall be #12 or larger.

ARTICLE 312

Cabinets, Cutout Boxes, And Meter Socket Enclosures

II. Construction Specifications

312.10 Material.

(C) Nonmetallic Cabinets. Nonmetallic cabinets shall be listed, or they shall be submitted for approval prior to installation. **are not permitted.**

ARTICLE 314

Outlet, Device, Pull, and Junction Boxes; Conduit Bodies; Fittings; and Handhole Enclosures

I. Scope and General

314.3 Nonmetallic Boxes. Nonmetallic boxes shall be **are not** permitted only with open wiring on insulators, concealed knob and tube wiring, cabled wiring methods with entirely nonmetallic sheaths, flexible cords, and nonmetallic raceways.

Exception No. 1: Where internal bonding means are provided between all entries, nonmetallic boxes shall be permitted to be used with metal raceways or metal armored cables.

Exception No. 2: Where integral bonding means with a provision for attaching an equipment bonding jumper inside the box are provided between all threaded entries in nonmetallic boxes listed for the purpose, nonmetallic boxes shall be permitted to be used with metal raceways or metal armored cables.

ARTICLE 320

Armored Cable: Type AC

This article shall be deleted in its entirety. Type AC cable is not permitted.

ARTICLE 322

Flat Cable Assemblies: Type FC

This article shall be deleted in its entirety. Type FC cable is not permitted.

ARTICLE 324

Flat Conductor Cable: Type FCC

This article shall be deleted in its entirety. Type FCC cable is not permitted.

ARTICLE 326

Integrated Gas Spacer Cable: Type IGS

This article shall be deleted in its entirety. Type IGS cable is not permitted.

ARTICLE 328

Medium Voltage Cable: Type MV

This article shall be deleted in its entirety. Type MV cable is not permitted.

ARTICLE 330

Metal-Clad Cable: Type MC

This article shall be deleted in its entirety. Type MC cable is not permitted.

ARTICLE 332

Mineral-Insulated, Metal-Sheathed Cable: Type MI

This article shall be deleted in its entirety. Type MI cable is not permitted.

ARTICLE 334

**Nonmetallic-Sheathed Cable:
Types NM, NMC, And NMS**

I. General

334.6 Listed. Type NM, **and** Type NMC, ~~and Type NMS~~ cables shall be listed.

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II. Installation

334.10 Uses Permitted. Type NMS cables are not permitted. Type NM, and Type NMC, and Type NMS cables shall be permitted to be used in the following: for low voltage (50 volts or less) wiring systems for cable tray installations and shall be identified for this use. **The remainder of this section shall be deleted in its entirety.**

334.12 Uses Not Permitted. **This section shall be deleted in its entirety.**

334.15 Exposed Work. **This section shall be deleted in its entirety.**

334.17 Through or Parallel to Framing Members. **This section shall be deleted in its entirety.**

334.23 In Accessible Attics. **This section shall be deleted in its entirety.**

334.24 Bending Radius. **This section shall be deleted in its entirety.**

334.30 Securing and Supporting. **This section shall be deleted in its entirety.**

334.40 Boxes and Fittings.

(A) Boxes of Insulating Material. Nonmetallic outlet boxes shall be **are not** permitted as provided in 314.3.

(B) Devices of Insulating Material. Switch, outlet, and tap devices of insulating material shall be permitted to be used without boxes in exposed cable wiring and for rewiring in existing buildings where the cable is concealed and fished. Openings in such devices shall form a close fit around the outer covering of the cable, and the device shall fully enclose the part of the cable from which any part of the covering has been removed. Where connections to conductors are by binding screw terminals, there shall be available as many terminals as conductors.

(C) Devices with Integral Enclosures. Wiring devices with integral enclosures identified for such use shall be permitted as provided in 300.15(E).

334.80 Ampacity. **This section shall be deleted in its entirety.**

III. Construction Specifications

334.100 Construction. **This section shall be deleted in its entirety.**

334.108 Equipment Grounding. **This section shall be deleted in its entirety.**

334.112 Insulation. **This section shall be deleted in its entirety.**

334.116 Sheath. **This section shall be deleted in its entirety.**

ARTICLE 336

Power And Control Tray Cable: Type TC

II. Installation

336.10 Uses Permitted. Type TC tray cable shall be permitted to be used in the following: for low voltage systems (50 volts or less) only. **The remainder of this section shall be deleted in its entirety.**

ARTICLE 338

Service-Entrance Cable: Types SE and USE

This article shall be deleted in its entirety. Types SE and USE cable are not permitted.

ARTICLE 340

Underground Feeder and Branch-Circuit Cable: Type UF

II. Installation

340.10 Uses Permitted. Type UF cable shall be permitted as follows:

- (1) For use underground, including direct burial in the earth. For underground requirements, see 300.5.
 - ~~(2) As single conductor cables. Where installed as single conductor cables, all conductors of the feeder grounded conductor or branch circuit, including the grounded conductor and equipment grounding conductor, if any, shall be installed in accordance with 300.3.~~
 - ~~(3) For wiring in wet, dry, or corrosive locations under the recognized wiring methods of this Code.~~
 - ~~(4) Installed as nonmetallic sheathed cable. Where so installed, the installation and conductor requirements shall comply with Parts II and III of Article 334 and shall be of the multiconductor type.~~
 - ~~(5) For solar photovoltaic systems in accordance with 690.31.~~
 - ~~(6) As single conductor cables as the nonheating leads for heating cables as provided in 424.43.~~
 - ~~(7) Supported by cable trays. Type UF cable supported by cable trays shall be of the multiconductor type.~~
- ~~FPN: See 310.10 for temperature limitation of conductors.~~

ARTICLE 342

Intermediate Metal Conduit: Type IMC

II. Installation

342.10.Uses Permitted.

~~(C) Cinder Fill.~~ IMC shall be permitted to be installed in or under cinder fill where subject to permanent moisture where protected on all sides by a layer of noncinder concrete not less than 50 mm (2 in.) thick; where the conduit is not less than 450 mm (18 in.) under the fill; or where protected by corrosion protection and judged suitable for the condition.

ARTICLE 352

Rigid Polyvinyl Chloride Conduit: Type PVC

II. Installation

352.10 Uses Permitted. The use of PVC conduit shall be permitted in accordance with ~~352.10(A) through (H)~~ 352.10(B), 352.10(D) and 352.10(G) only.

ARTICLE 356

Liquidtight Flexible Nonmetallic Conduit: Type LFNC

This article shall be deleted in its entirety. Type LFNC cable is not permitted.

ARTICLE 358

Electrical Metallic Tubing: Type EMT

II. Installation

358.42 Couplings and Connectors. Couplings and connectors used with EMT shall be made up tight. Where buried in masonry or concrete, they shall be concretetight type. Where installed in wet locations, they shall comply with 314.15. Only set-screw and compression type fittings shall be used.

ARTICLE 362

Electrical Nonmetallic Tubing: Type ENT

This article shall be deleted in its entirety. Type ENT cable is not permitted.

ARTICLE 372

Cellular Concrete Floor Raceways

**This article shall be deleted in its entirety.
Cellular Concrete Floor Raceways are not permitted.**

ARTICLE 378

Nonmetallic Wireways

This article shall be deleted in its entirety. Nonmetallic Wireways are not permitted.

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ARTICLE 380

Multioutlet Assembly

This article shall be deleted in its entirety. Multioutlet Assemblies are not permitted.

ARTICLE 382

Nonmetallic Extensions

This article shall be deleted in its entirety. Nonmetallic Extensions are not permitted.

ARTICLE 388

Surface Nonmetallic Raceways

**This article shall be deleted in its entirety.
Surface Nonmetallic Raceways are not permitted.**

ARTICLE 394

Concealed Knob-and-Tube Wiring

**This article shall be deleted in its entirety.
Concealed Knob-and-Tube Wiring is not permitted.**

ARTICLE 396

Messenger-Supported Wiring

This article shall be deleted in its entirety. Messenger-Supported Wiring is not permitted.

ARTICLE 398

Open Wiring on Insulators

This article shall be deleted in its entirety. Open Wiring on Insulators is not permitted.

AMENDMENTS TO CHAPTER 4

Chapter 4 Equipment For General Use

ARTICLE 404

Switches

404.14 Rating and Use of Snap Switches.

(C) CO/ALR Snap Switches. CO/ALR snap switches shall not be permitted. Snap switches rated 20 amperes or less directly connected to aluminum conductors shall be listed and marked CO/ALR.

ARTICLE 410

Luminaires, Lampholders, And Lamps

410.16 Luminaires in Clothes Closets. Every clothes closet shall have a luminaire. Luminaires in clothes closets larger than thirty (30) square feet shall be controlled by a wall switch.

VI. Wiring of Luminaires

410.54 Pendant Conductors for Incandescent Filament Lamps. Pendant conductors for incandescent filament lamps shall not be permitted. The remainder of Section 410.54 shall be deleted in its entirety.

AMENDMENTS TO CHAPTER 5

CHAPTER 5 Special Occupancies

ARTICLE 550

Mobile Homes, Manufactured Homes, And Mobile Home Parks

I. General

550.4 General Requirements.

(E) Inspection Access. All electrical wiring, luminaires, equipment and appurtenances related to electrical installations within or on mobile and manufactured homes shall be made accessible for inspection.

AMENDMENTS TO CHAPTER 6

CHAPTER 6 Special Equipment

ARTICLE 604

Manufactured Wiring Systems

**This article shall be deleted in its entirety.
Manufactured Wiring Systems are not permitted.**

ARTICLE 605

**Office Furnishings (Consisting
Of Lighting Accessories
And Wired Partitions)**

605.2 General. Wiring systems shall be **of approved wiring methods contained in this Code, and shall be** identified as suitable for providing power for lighting accessories and appliances in wired partitions. These partitions shall not extend from floor to ceiling.

AMENDMENTS TO CHAPTER 7

CHAPTER 7 Special Conditions

ARTICLE 760

Fire Alarm Systems

I. General

760.3 Other Articles. Circuits and equipment shall comply with 760.3(A) through ~~(G)~~ (H). Only those sections of Article 300 referenced in this article shall apply to fire alarm systems.

(G) Abandoned Fire Alarm Wiring and Equipment. All abandoned fire alarm wiring and associated equipment shall be removed.

760.53 Multiconductor NPLFA Cables.

(A) NPLFA Wiring Method. Multiconductor non-power-limited fire alarm circuit cables shall be installed in accordance with 760.53 (A)(1), (A)(2), and (A)(3).

(1) Exposed or Fished in Concealed Spaces. In raceway ~~to a height of 3 m (10 ft.)~~ or exposed on surface of ceiling and sidewalls ~~above a height of 3 m (10 ft.)~~ or fished in concealed spaces ~~in a metal raceway~~. Cable splices or terminations shall be made in listed fittings, boxes, enclosures, fire alarm devices, or utilization equipment. Where installed exposed, cables shall be adequately supported and installed in such a way that maximum protection against physical damage is afforded by building protection such as baseboards, door frames, ledges, and so forth. Where located within 2.1 m (7 ft.) of the floor, cables shall be securely fastened in ~~an approved manner at intervals of not more than 450 mm (18 in.)~~ ~~a metal raceway to the building structure~~.

(2) Passing through a Floor or Wall. In metal raceway ~~or rigid nonmetallic conduit~~ where passing through a floor or wall to a height of ~~2.1 m (7 ft.)~~ ~~3 m (10 ft.)~~ above the floor unless adequate protection can be afforded by building construction such as detailed in 760.53(A)(1) or unless an equivalent solid guard is provided.

760.130 Wiring Methods and Materials on Load Side of the PLFA Power Source.

(B) PLFA Wiring Methods and Materials.

(1) Exposed or Fished in Concealed Spaces. In raceway or exposed on the surface of ceiling and sidewalls or fished ~~installed in flexible metal conduit~~ in concealed spaces. Cable splices or terminations shall be made in listed fittings, boxes, enclosures, fire alarm devices, or utilization equipment. Where installed exposed, cables shall be adequately supported and installed in such a way that maximum protection against physical damage is afforded by building construction such as baseboards, door frames, ledges, and so forth. Where located within 2.1 m (7 ft.) of the floor, cables shall be securely fastened in ~~an approved manner at intervals of not more than 450 mm (18 in.)~~ ~~a metal raceway to the building structure~~.

(2) Passing Through a Floor or Wall. In metal raceways ~~or rigid nonmetallic conduit~~ where passing through a floor or wall to a height of ~~2.1 m (7 ft.)~~ ~~3m (10 ft.)~~ above the floor, unless

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adequate protection can be afforded by building construction such as detailed in 760.130(B)(1) or unless an equivalent solid guard is provided.

AMENDMENTS TO CHAPTER 8

CHAPTER 8 Communications Systems

ARTICLE 800
Communications Circuits

V. Installation Methods Within Buildings

800.133 Installation of Communications Wires, Cables, and Equipment. Communications wires and cables from the protector to the equipment or, where no protector is required, communications wires and cables attached to the outside or inside of the building shall comply with 800.133 (A) through ~~(C)~~ **(D)**.

(D) Orientation. Communications wires and cables shall be run perpendicular or parallel to the wall or roof framing systems. All changes in direction shall be done at a 90⁰ angle.

AMENDMENTS TO ANNEXES A THROUGH H

Annex A Product and Safety Standards

Annex A shall be adopted in its entirety and made a part of this Code.

Annex B Application Information for Ampacity Calculation

Annex C Conduit and Tubing Fill Tables for Conductors and Fixture Wires of the Same Size

Annex D Examples

Annex E Types of Construction

Annex F Availability and Reliability for Critical Operations Power Systems; and Development and Implementation of Functional Performance Tests (FPTs) for Critical Operations Power Systems

Annex G Supervisory Control And Data Acquisition (SCADA)

Annexes B through G are for informational purposes only and are not adopted as part of this Code.

Annex H Administration and Enforcement

Annex H shall be adopted in its entirety and made a part of this Code as amended herein.

80.2 Definitions.

Chief Electrical Inspector. ~~An electrical inspector who either is the authority having jurisdiction or is designated by the authority having jurisdiction~~ The Community Development Director, or his or her designee, is the Chief Electrical Inspector of the Village of Carol Stream, and is responsible for administering the requirements of this Code.

80.3 Purpose. The purpose of this article shall be to provide requirements for administration and enforcement of the *National Electric Code* as amended and adopted by the Village of Carol Stream.

80.7 Title The title of this code shall be NFPA 70, National Electrical Code[®], of the National Fire Protection Association. The short title of this Code shall be the *NEC*[®]. This amended code shall be known as the Electrical Code as amended and adopted by the Village of Carol Stream.

80.15 Electrical Board. Article 80.15 shall be deleted in its entirety, and replaced with the following:

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80.15 Electrical Board.

- (A) **Creation of the Electrical Commission.** The creation of an Electrical Commission shall be done in accordance with Section 3-4-1(A) of the Carol Stream Code of Ordinances.
- (B) **Appointments.** Electrical Commission members shall be appointed in accordance with Section 3-4-1(B) of the Carol Stream Code of Ordinances.
- (C) **Terms.** The terms of Electrical Commission members shall be in accordance with Section 3-4-1(B) of the Carol Stream Code of Ordinances.
- (D) **Duties.** The duties of the Electrical Commission shall be in accordance with Section 3-4-2 of the Carol Stream Code of Ordinances.
- (E) **Appeals.** In order to hear and decide appeals of orders, decisions or determinations made by the Chief Electrical Inspector or the Electrical Commission relative to the application and interpretation of this code, there shall be and is hereby created a Board of Appeals. The Board shall adopt rules of procedure for conducting its business.
- (1) **Membership of Board.** The Board of Appeals shall consist of the Village President and Board of Trustees of the Village of Carol Stream. The Village President shall serve as Chairman and the Village Clerk shall serve as Secretary.
- (2) **Fees.** Fees for appeal hearings shall be in accordance with the Schedule of Fees contained in Article 13 of Chapter 6 of the Village Code.
- (3) **Limitations on authority.** An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted there under have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed.
- (4) **Jurisdiction.** The Board of Appeals shall have no jurisdiction to hear an appeal when the facts and issues raised in the application for appeal are subject of a quasi-criminal complaint brought in the name of the Village charging a violation of the Code of Ordinances of the Village. The filing of such a complaint shall constitute a determination that a decision of the building official, refusing to grant a modification of the provisions of this code, is correct. Any appeal pending at the time of filing of such a complaint shall be dismissed for want of jurisdiction.

80.19 Permits and Approvals. Permits and approvals shall conform to 80.19(A) through (H).

(A) Application.

- (1) Activity authorized by a permit issued under this *Code* shall be conducted by the permittee or the permittee's agents or employees in compliance with all requirements of this *Code* applicable thereto and in accordance with the approved plans and specifications. No permit issued under this *Code* shall be interpreted to justify a violation of any provision of this code or any other applicable law or regulation. Any addition or alteration of approved plans or specifications shall be approved in advance by the authority having jurisdiction, as evidenced by the issuance of a new or amended permit.
- (2) A copy of the permit shall be posted or otherwise readily accessible at each work site or carried by the permit holder as specified by the authority having jurisdiction.
- (3) Electrical work shall be performed by Electrical Contractors licensed by any municipality in the State of Illinois after having obtained a permit to do so from the Village of Carol Stream. Electrical wiring to connect and operate heating, ventilating and air conditioning devices

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may be performed by HVAC contractors after having obtained a permit from the Village of Carol Stream.

(4) The owner of a single family residence in which he or she lives or intends to live may perform his or her own electrical wiring, provided he or she obtains a permit and that such wiring is done without the assistance of any other person.

(C) Issuance of permits. The authority having jurisdiction shall be authorized to establish and issue permits, certificates, notices, and approvals, or orders pertaining to electrical safety hazards pursuant to 80.23. No electrical wiring, equipment or devices shall be installed, altered or removed without first obtaining an electrical permit, except that no permit shall be required to execute any of the classes of electrical work specified in the following:

(1) Installation or replacement of equipment such as lamps and of electric utilization equipment approved for connection to suitable permanently installed receptacles. Replacement of flush or snap switches, fuses, lamp sockets, and receptacles, and other minor maintenance and repair work, such as replacing worn cords and tightening connections on a wiring device.

(2) The process of manufacturing, testing, servicing, or repairing electric equipment or apparatus.

(D) Annual permits. In lieu of an individual permit for each installation or alteration, an annual permit shall, upon application, be issued to any person, firm, or corporation regularly employing one or more employees for the installation, alteration, and maintenance of electric equipment in or on buildings or premises owned or occupied by the applicant for the permit. The person employed shall be a licensed electrical contractor. Upon application, an electrical contractor as agent for the owner or tenant shall be issued an annual permit. The applicant shall keep records of all work done, and such records shall be transmitted periodically to the Electrical Inspector.

(E) Fees. Any political subdivision that has been provided for electrical inspection in accordance with the provisions of Article 80 may establish fees that shall be paid by the applicant for a permit before the permit is issued. Fees shall be charged in accordance with Article 13 of Chapter 6 of Appendix C of the Village of Carol Stream Code of Ordinances.

(F) Inspection and Approvals.

(1) Upon the approval of any installation of electrical equipment that has been made under a permit other than an annual permit, it shall be the duty of the person, firm, or corporation making the installation to notify the Electrical Inspector having jurisdiction, who shall inspect the work within a reasonable time.

(2) Where the Inspector finds the installation to be in conformity with the statutes of all applicable local ordinances and all rules and regulations, the Inspector shall issue to the person, firm, or corporation making the installation a certificate of approval, with duplicate copy for delivery to the owner, authorizing the connection to the supply of electricity and shall send written notice of such authorization to the supplier of electric service. When a certificate of temporary approval is issued authorizing the connection of an installation, such certificates shall be issued to expire at a time to be stated therein and shall be revocable by the Electrical Inspector for cause.

(3) When any portion of the electrical installation within the jurisdiction of an Electrical Inspector is to be hidden from view by a permanent placement of parts of the building, the person, firm, or corporation installing the equipment shall notify the Electrical Inspector, and such equipment shall not be concealed until it has been approved by the Electrical Inspector. ~~or until ___ days have elapsed from the time of such notification, provided that on~~ **On** large

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installations, where the concealment of equipment proceeds continuously, the person, firm, or corporation installing the equipment shall give the Electrical Inspector due notice in advance, and inspections shall be made periodically during the progress of the work. **No work shall be concealed without an inspection. Any electrical work that has been concealed without an inspection shall be exposed for inspection at the owner's expense.**

- (4) At regular intervals, the Electrical Inspector having jurisdiction shall visit all buildings and premises where work may be done under annual permits and shall inspect all electric equipment installed under such permits since the date of the previous inspection. The Electrical Inspector shall issue a certificate of approval for such work as is found to be in conformity with the provisions of Article 80 and all applicable ordinances, orders, rules, and regulations, after payments of all required fees.
- (5) If, upon inspection, any installation is found not to be fully in conformity with the provisions of Article 80, and all applicable ordinances, rules, and regulations the Inspector making the inspection shall at once forward to the person, firm, or corporation making the installation a written notice stating the defects that have been found to exist.

(H) Applications and Extensions. Applications and extensions of permits shall conform to the following:

- (1) **An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing, unless such application has been pursued in good faith or a permit has been issued; except that the authority having jurisdiction is authorized to grant one or more extensions of time for additional periods not exceeding 90 dayseach. The extension shall be requested in writing and justifiable cause demonstrated. Every permit issued shall become invalid within 180 days after its issuance, or if the work authorized on the site by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. The authority having jurisdiction shall be permitted to grant an extension of the permit time period upon presentation by the permittee of a satisfactory reason for failure to start or complete the work or activity authorized by the permit. Such extension shall be for a period of 180 days.**

80.23 Notice of Violations, Penalties. Notice of violations and penalties shall conform to 80.23(A) and (B).

(A) Violations.

- (1) Whenever the authority having jurisdiction determines that there are violations of this *Code*, a written notice shall be issued to confirm such findings. **The written form shall be on an official document that is consistent with the policies and procedures of the authority having jurisdiction.**
- (2) Any order or notice issued pursuant to this *Code* shall be served upon the owner, operator, occupant, or other person responsible for the condition or violation, either by personal service or mail or by delivering the same to and leaving it with, some person of responsibility upon the premises. For unattended or abandoned locations, a copy of such order or notice shall be posted on the premises in a conspicuous place at or near the entrance to such premises and the order or notice shall be mailed by registered or certified mail, ~~with return receipt requested~~, to the last known address of the owner, occupant, or both.

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(B) Penalties.

- (1) Any person who fails to comply with the provisions of this *Code* or who fails to carry out an order made pursuant to this *Code* or violates any condition attached to a permit, approval, or certificate shall be subject to the penalties established by this jurisdiction.
- (2) Failure to comply with the time limits of an abatement notice or other corrective notice issued by the authority having jurisdiction shall result in each day that such violation continues being regarded as a new and separate offence.
- (3) Any person, firm or corporation who shall willfully violate any of the applicable provisions of this ~~article~~ *Code*, or who shall fail to comply with any of the requirements thereof, or who shall install, extend, alter or remove an electrical wiring system in violation of any approved plan or direction of the authority having jurisdiction or of a permit issued under the provisions of this code, shall be guilty of a ~~misdemeanor~~ code violation and, upon conviction thereof, shall be punished by a fine of not less than **seventy-five dollars (\$75.00)** or more than **seven hundred fifty dollars (\$750.00)** for each offense, ~~together with the costs of prosecution, imprisonment, or both, for not less than _____ (____) days or more than _____ (____) days.~~

80.25 Connection to Electricity Supply. Connections to the electric supply shall conform to 80.25 (A) through (E).

(A) Authorization. Except where work is done under an annual permit and except as otherwise provided in 80.25, it shall be unlawful for any person, firm, or corporation to make connection to a supply of electricity or to supply electricity to any electric equipment installation for which a permit is required or that has been disconnected or ordered to be disconnected. **No electrical service shall be connected until the utility company has been notified by the authority having jurisdiction.**

(B) Special Consideration. By special permission of the authority having jurisdiction **after having performed an inspection**, temporary power shall be permitted to be supplied to the premises for specific needs of the construction project. The Board shall determine what needs are permitted under this provision.

(C) Notification. If, within **90** business days after the Electrical Inspector is notified of the completion of an installation of electric equipment, other than a temporary approval installation, the Electrical Inspector has neither authorized connection nor disapproved the installation, the supplier of electricity is authorized to make connections and supply electricity to such installation.

80.27 Inspector's Qualifications.

~~**(A) Certificate.** All electrical inspectors shall be certified by a nationally recognized inspector certification program accepted by the Board. The certification program shall specifically qualify the inspector in electrical inspections. No person shall be employed as an Electrical Inspector unless that person is the holder of an Electrical Inspector's certificate of qualification issued by the Board, except that any person who on the date on which this law went into effect was serving as a legally appointed Electrical Inspector of _____ shall, upon application and payment of the prescribed fee and without examination, be issued a special certificate permitting him or her to continue to serve as an Electrical Inspector in the same territory.~~

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(B) Experience. Electrical inspector applicants shall demonstrate the following:

- (1) Have a demonstrated knowledge of the standard materials and methods used in the installation of electric equipment.
- (2) Be well versed in the approved methods of construction for safety to persons and property.
- (3) ~~Be well versed in the statutes of _____ relating to electrical work and the National Electrical Code, as approved by the American National Standards Institute~~
- (4) ~~Have had at least _____ years' experience as an Electrical Inspector or _____ years in the installation of electrical equipment. In lieu of such experience, the applicant shall be a graduate in electrical engineering or of a similar curriculum of a college or university considered by the Board as having suitable requirements for graduation and shall have had two years' practical electrical experience.~~

~~**(C) Recertification.** Electrical inspectors shall be recertified as established by provisions of the applicable certification program.~~

~~**(D) Revocation and Suspension of Authority.** The Board shall have the authority to revoke an inspector's authority to conduct inspections within a jurisdiction.~~

80.29 Liability for Damages. Article 80 shall not be construed to affect the responsibility or liability of any party owning, designing, operating, controlling, or installing any electric equipment for damages to persons or property caused by a defect therein, nor shall the **Village of Carol Stream** or any of its employees be held as assuming any such liability by reason of the inspection, reinspection, or other examination authorized.

~~**80.33 Repeal of Conflicting Acts.** All acts or parts of acts in conflict with the provisions of Article 80 are hereby repealed.~~

~~**80.35 Effective Date.** Article 80 shall take effect _____ (_____) days after its passage and publication.~~