THE NEW YORK CITY ELECTRICAL CODE

ARTICLE 1101
ENACTMENT AND UPDATE OF THE NEW YORK CITY ELECTRICAL CODE

§ 28-1101.1 Enactment of the New York city electrical code. The 2020 edition of the National Fire Protection Association NFPA 70 National Electrical Code is hereby adopted as the minimum requirements for the design, installation, alteration, or repair of electric wires and wiring apparatus and other appliances used or to be used for the transmission of electricity for electric light, heat, power, signaling, communication, alarm, and data transmission in the city of New York subject to the amendments adopted by local law and set forth in section 28-1101.3. Such amendments shall be known and cited as "the New York city amendments to the 2020 National Electrical Code". Such 2020 edition of the National Fire Protection Association NFPA 70 National Electrical Code with such New York city amendments shall together be known and cited as the "New York city electrical code".

§ 28-1101.2 Update. No later than the third year after the effective date of this section and every third year thereafter, the commissioner shall submit to the city council proposed amendments that they determine should be made to this code to bring it up to date with the latest edition of the National Fire Protection Association NFPA 70 National Electrical Code or otherwise modify the provisions thereof. In addition, prior to the submission of such proposal to the city council, such proposal shall be submitted to an advisory committee established by the commissioner for review and comment.

§ 28-1101.3 The New York city amendments to the 2020 National Electrical Code. The following New York city amendments to the 2020 National Electrical Code are hereby adopted to read as follows:

New York City Amendments to the 2020 National Electrical Code.

New sections EC 80 through EC 87 are added to read as follows:

SECTION EC 80
GENERAL

80.1 Title. This code shall be known and may be cited as the "*New York City Electrical Code*," "NYCEC" or "EC." All section numbers in this code shall be deemed to be preceded by the designation "EC."

80.2 Scope. The provisions of this code shall apply to the installation, alteration, maintenance, repair, or demolition of electric wires and wiring apparatus and other appliances used or to be used for the transmission of electricity for electric light, heat, power, signaling, communication, alarm, or data transmission.

80.3 Intent. The purpose of this code is to provide minimum standards to safeguard life or limb, health, property, public welfare, and the environment by regulating and controlling the design, construction, installation, quality of materials, location, operation, and maintenance or use of electrical systems.

80.4 Severability. If a section, subsection, sentence, clause, or phrase of this code is for any reason held to be unconstitutional, such decision shall not affect the validity of the remaining portions of this code.

SECTION EC 81
APPLICABILITY

81.1 General. Where there is a conflict between a general requirement and a specific requirement, the specific requirement shall govern. Where, in any specific case, different sections of this code specify different materials,

methods of construction, or other requirements, the most restrictive shall govern.

81.2 Existing installations. Except as otherwise specifically provided, electrical installations lawfully in existence at the time of the adoption or a subsequent amendment of this code shall be permitted to have their use and maintenance continued if the use, maintenance, or repair is in accordance with the original design and no hazard to life, health, or property is created by such installations.

81.2.1 Existing buildings. Additions, alterations, renovations, or repairs related to building or structural issues shall be governed by Chapter 1 of Title 28 of the *Administrative Code*, the *New York City Building Code* and the *1968 Building Code*, as applicable.

81.2.2 References to the *New York City Building Code*. For existing buildings, a reference to a section of the *New York City Building Code* in this code shall also be deemed to refer to the equivalent provision of the *1968 Building Code*, as applicable in accordance with Chapter 1 of Title 28 of the *Administrative Code*.

81.3 Maintenance. Installations, both existing and new, and parts thereof shall be maintained in proper operating condition in accordance with the original design and in a safe condition. Devices or safeguards that are required by this code shall be maintained in compliance with the applicable provisions under which they were installed.

81.3.1 Owner responsibility. The owner or the owner's designated agent shall be responsible for maintenance of electrical installations. To determine compliance with this provision, the commissioner shall have the authority to require any electrical installation to be inspected.

81.4 Design, installation, alterations, or repairs. The design, installation, alteration, or repair of electric wires and wiring apparatus and other appliances used or to be used for the transmission of electricity for electric lights, heat, power, signaling, communication, alarm, or data transmission shall conform to the requirements of this code. Alterations or repairs shall not cause an existing installation to become unsafe, hazardous, or overloaded.

81.4.1 Special provisions for prior code buildings. In addition to the requirements of section 81.4, the provisions of sections 81.4.1.1 through 81.4.1.2 shall apply to prior code buildings.

81.4.1.1 Seismic supports. For prior code buildings, the determination as to whether seismic requirements apply to an alteration shall be made in accordance with the *1968 Building Code* and interpretations by the department relating to such determinations. Any applicable seismic loads and requirements shall be permitted to be determined in accordance with Chapter 16 of the *New York City Building Code* or the *1968 Building Code* and Reference Standard RS 9-6 of such code.

81.4.1.2 Wind resistance. For prior code buildings, equipment, appliances, and supports that are exposed to wind shall be designed and installed to resist the wind pressures determined in accordance with Chapter 16 of the *New York City Building Code*.

81.5 Change in occupancy. Refer to Chapter 1 of Title 28 of the *Administrative Code*.

81.6 Reserved.

81.7 Reserved.

81.8 Reserved.

81.8.1 Reserved.

81.9 Requirements not covered by code. Requirements necessary for the strength, stability, or proper operation of an existing or proposed electrical installation, or for the public safety, health, and general welfare, not specifically covered by this code, shall be determined by the commissioner.

81.10 Application of references. Reference to chapter or section numbers, or to provisions not specifically identified by number, shall be construed to refer to such chapter, section or provision of this code.

81.11 Federal and state buildings. Nothing in this code shall be construed to apply to any building, the electrical equipment of which is under the control of the United States of America or the state of New York or of any department, bureau, or office thereof.

81.12 City departments. The various departments, boards, and offices of the city of New York shall be subject to the provisions of this code.

SECTION EC 82
DEPARTMENT OF BUILDINGS

82.1 Enforcement agency. Refer to the *New York City Charter* and Chapter 1 of Title 28 of the *Administrative Code*.

SECTION EC 83
DUTIES AND POWERS OF THE COMMISSIONER OF BUILDINGS

83.1 General. The commissioner shall have the authority to render interpretations of this code and to adopt rules, policies and procedures in order to clarify and implement its provisions. Such interpretations, policies, procedures, and rules shall be in compliance with the intent and purpose of this code. See the *New York City Charter* and Chapter 1 of Title 28 of the *Administrative Code* for additional provisions relating to the authority of the Commissioner of Buildings.

83.2 Scope. The commissioner is authorized to exercise all powers necessary to enforce the electrical code, including but not limited to:

1. Cause any wiring or appliances for electrical light, heat, power, signaling communication, alarm, or data transmission to be examined and inspected and the approval thereof to be certified in writing,
    a. by an officer or employee of the department designated by the commissioner for that purpose, or
    b. by any inspection agency certified by the commissioner in accordance with rules promulgated by the commissioner.
2. Order the remedying of any defect or deficiency that exists in the installation, alteration, or repair of electric wires and wiring apparatus and other appliances used or to be used for the transmission of electricity for electric light, heat, power, signaling, communication, alarm, or data transmission.
3. Order any person or corporation engaged in supplying electrical energy to discontinue such supply as specified in such order if the wiring or appliances for electric light, heat, power, signaling, communication, alarm, or data transmission is deemed dangerous to persons or property therein.
4. Appoint, in accordance with the rules of the department and at the commissioner's discretion, special boards or committees to provide advice or assistance in the implementation, interpretation, variation, or amendment of any provision of the electrical code or any rule promulgated by the department.

SECTION EC 84
PERMITS

84.1 General. Permits shall comply with this section, with Article 105 of Chapter 1 of Title 28 of the *Administrative Code* and with requirements found elsewhere in this code.

84.2 Required. Any owner or authorized agent who intends to construct, add to, alter, repair, move, demolish, or change the occupancy of a building or structure, or to erect, install, add to, alter, repair, remove, convert, or replace any electrical, gas, mechanical, or plumbing system, the installation of which is regulated by this code, or to cause any such work to be done, shall first make application for construction document approval in accordance with Chapter 1 of Title 28 of the *Administrative Code* and this chapter and obtain the required permit.

84.3 Work exempt from permit. Exemptions from permit requirements of this code as authorized in Chapter 1 of Title 28 of the *Administrative Code* and the rules of the department shall not be deemed to grant authorization for any work to be done in any manner in violation of the provisions of this code or any other laws or rules.

84.4 Validity of permit. The issuance or granting of a permit shall not be construed to be a permit for, or an approval of, any violation of any of the provisions of this code or of any other law. Permits presuming to give authority to violate or cancel the provisions of this code or other law shall not be valid. The issuance of a permit based on construction documents and other data shall not prevent the commissioner from requiring the correction of errors in the construction documents and other data. The commissioner is also authorized to prevent occupancy or use of

a structure where in violation of this code or of any other law.

84.5 Notice of unlicensed electrical work. Whenever a master electrician business or special electrician files an application for a permit covering electrical work installed by an unlicensed or unauthorized person, it shall be their duty to specify such fact upon the application.

84.6 Electric utility meter installation. The department shall not issue a permit or, if applicable, an electrical sign-off pursuant to an application that involves the energizing of a utility meter in a one-, two-, three-, or four-family dwelling if the department finds that such action will cause the total number of utility meters for the building to exceed the number of dwelling units specified for such building in the certificate of occupancy, or if there is no certificate of occupancy, as determined by the department, except as permitted herein. A building specified as a one-family residence in the certificate of occupancy or, if there is no certificate of occupancy, as determined by the department, shall have only 1 utility meter. A building in which there are 2 or more dwelling units in accordance with the certificate of occupancy, or if there is no certificate of occupancy, as determined by the department, shall have 1 utility meter for each dwelling unit, and 1 additional utility meter for the common areas of the building is permitted, provided that smoke detecting devices are installed in all common areas in accordance with departmental requirements. Such common areas may include boiler rooms, shared hallway lighting, shared stairway lighting, and outdoor perimeter lighting, but shall not include any habitable space. In the event that a utility meter has been found to have been installed or to exist in violation of this section, the department may take action leading to the disconnecting of such utility meter in accordance with the notice requirements set forth in section 87.2.

84.7 Statement of authorization and compliance. Any application for a permit filed with the department in relation to a request for the authorization to power or energize electrical wiring or appliances or power generating equipment or in relation to work that will result in the issuance of a new or amended certificate of occupancy must include a statement, signed and sealed by the master or special electrician, that the building owner or their authorized representative has authorized in writing the work to be performed. This signed authorization must be available upon request by the department. In addition, any electrical application filed with the department involving the energizing of a meter must include a statement, signed, and sealed by the master or special electrician, that the building owner or their authorized representative has indicated in writing the intended use or purpose of such meter and has affirmed that such meter will be maintained in compliance with the provisions of this section. This statement must be available upon request by the department.

84.8 Documentation of overcurrent protection. Any permit application filed with the department that requires the selective coordination of overcurrent protective devices must include documentation from a professional engineer demonstrating how selective coordination was achieved, including but not limited to short circuit overlay curves and calculations. Such documentation shall be submitted to the department prior to sign off.

SECTION EC 85
CONSTRUCTION DOCUMENTS

85.1 General. Construction documents shall comply with Article 104 of Chapter 1 of Title 28 of the *Administrative Code* and other applicable provisions of this code and its referenced standards as applicable. Such construction documents shall be coordinated with architectural, structural, and means of egress plans. Requirements for electrical plans and drawings shall be in accordance with department rules.

SECTION EC 86
INSPECTIONS AND TESTING

86.1 General. Electrical work for which a permit is required shall be subject to inspection by the department, except for minor electrical work as defined in section 28-101.5. It shall be the duty of the permit holder to schedule such inspection and ensure that all applicable laws and rules are followed. A satisfactory inspection by the department shall not be construed to be an approval by the department of a violation of the provisions of this code or any other provision of law. Refer to Article 116 of Chapter 1 of Title 28 of the *Administrative Code* and applicable rules of the department relating to inspections.

86.2 Required inspections and testing. In addition to any inspections otherwise required by this code or applicable rules, the following inspections shall be required:

1. **Energy Code Compliance Inspections.** Inspections required by the *New York City Energy Conservation Code* shall be made in accordance with the rules of the department, as applicable.

2. **Final Inspection.** It shall be the duty of the permit holder to notify the department when work requiring inspection is ready to be inspected and to schedule a final inspection.

86.2.1 Access to electrical work. It shall be the duty of the permit holder to cause the work to remain accessible for inspection purposes. Neither the commissioner nor the city shall be liable for expense entailed in the removal or replacement of any material required to allow inspection.

86.3 Testing. Electrical work and installations shall be tested as required in this code and in accordance with sections 86.3.1 through 86.3.3. Tests shall be conducted by the department, as applicable.

86.3.1 New, altered, extended, or repaired installations. New installations and parts of existing installations that have been altered, extended, renovated, or repaired shall be tested as prescribed herein to ensure compliance with the electrical code and rules of the department.

86.3.2 Apparatus, instruments, material, and labor for tests. When required by the department, apparatus, instruments, material, and labor required for testing an electrical installation or part thereof shall be furnished by the permit holder.

86.3.3 Reinspection and testing. Where any work or electrical installation does not pass any initial test or inspection, the necessary corrections shall be made so as to achieve compliance with this code. The work or electrical installation shall then be resubmitted to the department for inspection and testing.

86.4 Sign-off of completed work. If, after inspection, such wiring or appliances shall be found to have been installed, altered, or repaired in conformity with the requirements of this code, and the rules of the department, and the required fees paid, the commissioner shall issue to the applicant a sign-off of the approved work completed.

86.5 Temporary connection. The commissioner shall have the authority to authorize the temporary connection of the building or system to the utility source for the purpose of inspecting or testing the electrical installation or for use under a temporary certificate of occupancy.

86.6 Connection of electrical service utilities. Refer to Title 28 of the *Administrative Code*.

SECTION EC 87
VIOLATIONS

87.1 General. Refer to chapters 2 and 3 of Title 28 of the *Administrative Code*.

87.2 Authority to disconnect electrical energy supply. The commissioner may authorize wires or appliances to be disconnected from the supply of electrical energy and to seal the wiring and appliances, after due inspection or where in the commissioner's judgment the continued use of such electric wiring or appliances in or on any building or structure is unsafe or dangerous to persons or property. The commissioner shall notify the serving utility, and wherever possible, the owner and occupant of the building, structure, or service system of the decision to disconnect prior to taking such action. If not notified prior to disconnection, the owner or occupant of the building, structure or service system shall be notified in writing, as soon as practicable thereafter.

87.3 Connection after order to disconnect. No person shall cause or permit electrical energy to be supplied to the wiring or appliances so sealed until the same shall have been made safe and the commissioner shall have authorized the reconnection and use of such wiring or appliances. When an installation is maintained in violation of this code, and in violation of a notice issued pursuant to the provisions of this section, the commissioner shall institute appropriate action to prevent, restrain, correct or abate the violation.

CHAPTER 1

GENERAL

ARTICLE 100
DEFINITIONS

PART 1. General

Part I – Add new definitions for "Coordination (Limited Level)", "Electrical Equipment Room", and "Public Parts (Common Areas)" to part I of article 100 in alphabetical order to read as follows:

Coordination (Limited Level). Localization of an overcurrent condition to restrict outages to the circuit or equipment affected, accomplished by the selection and installation of overcurrent protective devices and their ratings or settings having time-current ratings that do not intersect at a time of 0.1 seconds (6 cycles at 60Hz) or longer.

Electrical Equipment Room. A room designed for and dedicated to the purpose of containing electrical distribution equipment such as vertical risers, bus ducts, transformers, or panelboards.

Public Parts (Common Areas). Public parts of multifamily dwelling include a public hall and any space used in common by the occupants of 2 or more apartments or rooms, or by persons who are not tenants, or exclusively for mechanical equipment of such dwelling or for storage purposes.

ARTICLE 110
REQUIREMENTS FOR ELECTRICAL INSTALLATIONS

SECTION 110.1

Section 110.1 – Revise the Informational Note in Section 110.1 to read as follows:

Informational Note: *For information regarding the mounting height for the operable parts, see ICC A117.1 as referenced in the New York City Building Code for dwelling units and commercial occupancies.*

SECTION 110.2

Section 110.2 – Revise Section 110.2 to read as follows:

110.2 Approval of Electrical Materials, Equipment and Installations.

(A) Equipment. The conductors and equipment required or permitted by this Code shall be acceptable only if approved.

(B) Special Installations. No electrical installations described in (1) through (5) below shall be constructed unless a submission for approval has been made to the commissioner and approval has been granted. For the purpose of this section, an electrical "installation" shall refer to the installation of service equipment, transformers, Uninterruptible Power Supply (UPS) systems, generators, generator paralleling equipment, or other sources, including, but not limited to, Energy Storage Systems, Fuel Cells, Photovoltaic Systems, DC or AC Micro Grids, Co-generation Plants, and Stationary Batteries.

(1) A new installation of equipment totaling 1000 kVA or larger.

(2) Any change in an installation with a rating of 1000 kVA or larger, up to and including 2nd level overcurrent protection unless it was fully described and approved as "future" on the original approved plan.

(3) Any addition to an existing installation, which would bring the total to 1000 kVA or larger.

(4) The addition of any equipment in a room, which would affect clearances around the equipment of a 1000 kVA installation or larger.

(5) A new installation or revised installation above 1000V AC or 1500V DC nominal irrespective of kVA rating.

Exception No. 1: No submission is required solely for fire alarm service taps.

Exception No. 2: No submission is required for the addition of 1 2nd level overcurrent protection device 200 amperes or less.

(C) Capacity.

(1) The capacity of a utility service, in kVA, shall be determined by summing the maximum ampere ratings of each service disconnecting means and calculating total kVA at the operating voltage. Service disconnecting means supplying fire pumps shall be included at 125 percent of the fire pump full load amps. The calculation shall include all new and existing service disconnecting means supplied from the common service entrance.

(2) The capacity of a transformer, UPS system, generator, or other source shall be its maximum kVA output rating.

Informational Note: *See 90.7, Examination of Equipment for Safety, and 110.3, Examination, Identification, Installation, and Use of Equipment. See definitions of Approved, Identified, Labeled, and Listed.*

SECTION 110.3

Section 110.3(D) – Add a new Section 110.3(D) to read as follows:

110.3(D) Electrical Equipment Rooms. Electrical equipment rooms shall be dedicated to electrical equipment not limited to fire alarm equipment, Building Management Systems, and lighting controls. All electrical equipment in the electrical equipment room shall be installed by a licensed electrician. Electrical equipment rooms shall be identified as such, shall be sized to provide the applicable working space requirements, and shall not be used for any other purpose including storage.

Exception: Electrical Equipment Rooms shall conform to requirements of 110.3(D) except as permitted in 800.133(C), 820.133(C) and 830.133(C).

Informational Note: *Refer to Section BC 509, Table 509, and Section 903.2 of the New York City Building Code for additional construction requirements and Section 605.3.1 of the New York City Fire Code for signage requirements.*

SECTION 110.4

Section 110.4 – Add a new Informational Note at the end of Section 110.4 to read as follows:

Informational Note: *See Section 28-101.5 of Title 28 of the Administrative Code for the definition of "Low Voltage Electrical Work."*

SECTION 110.11

Section 110.11 – Revise Section 110.11 to read as follows:

110.11 Environmental Protection of Equipment

(A) Deteriorating Agents. Unless identified for use in the operating environment, no conductors or equipment shall be located in damp or wet locations; where exposed to gases, fumes, vapors, liquids, or other agents that have a deteriorating effect on the conductors or equipment; or where exposed to excessive temperatures.

Informational Note No. l: *See 300.6 for protection against corrosion.*

Informational Note No. 2: *Some cleaning and lubricating compounds can cause severe deterioration of many plastic materials used for insulating and structural applications in equipment.*

Equipment not identified for outdoor use and equipment identified only for indoor use, such as "dry locations", "indoor use only", "damp locations", or enclosure Types 1, 2, 5, 12, 12K, or 13, shall be protected against damage from the weather during construction.

Informational Note No. 3: *See Table 110.28 for appropriate enclosure-type designations.*

(B) Electrical Utilities and Equipment. The metering equipment, panelboards, load centers, main disconnect switches, all service disconnecting means, and all circuit breakers shall be located at or above the design flood elevation specified in Appendix G of the *New York City Building Code*.

Exception: For buildings or structures that are nonresidential, utilities and equipment shall be permitted to be located below the design flood elevation (DFE) when dry floodproofing is provided in accordance with the *New York City Building Code* and Appendix G of such code.

Informational Note: *In flood zones, electric utilities and equipment must be protected from flood damage and associated deteriorating effects of flood exposure. For further requirements for electrical installations in flood zones refer to the 2022 New York City Building Code, Appendix G, 'Flood Resistant Construction'; and ASCE-24-14, 'Flood Resistant Design and Construction'.*

SECTION 110.26

Section 110.26(A)(1) – Add a new Informational Note at the end of Section 110.26(A)(1) to read as follows:

Informational Note: *For Service Rooms or areas with equipment totaling 1000 kVA or larger, see 230.64 for minimum clearance requirements.*

Section 110.26(G) – Add a new Section 110.26(G) to read as follows:

(G) Network Compartments. All network compartments shall have at least 2 means of access. Each door shall access an area that leads to a legal exit.

SECTION 110.33

Section 110.33(A) – Revise Section 110.33(A) to read as follows:

(A) Entrance. At least 1 entrance to enclosures for electrical installations as described in 110.31 not less than 30 in. (762 mm) wide and 6 ½ ft (2 m) high shall be provided to give access to the working space around the electrical equipment.

SECTION 110.34

Section 110.34(A) – Revise Section 110.34(A) to read as follows:

(A) Working Space. Except as elsewhere required or permitted in this Code, equipment likely to require examination, adjustment, servicing, or maintenance while energized shall have clear working space in the direction of access to live parts of the electrical equipment and shall be not less than specified in Table 110.34(A). Distances shall be measured from the live parts, if such are exposed, or from the enclosure front or opening if such are enclosed.

Exception: Working space shall not be required in back of equipment such as switchgear or control assemblies where there are no renewable or adjustable parts (such as fuses or switches) on the back and where all connections are accessible from locations other than the back. Where rear access is required to work on nonelectrical parts on the back of enclosed equipment, a minimum working space of 36 in. (900 mm) horizontally shall be provided.

Informational Note: *For Service Rooms or areas with equipment totaling 1000 kVA or larger, see 230.64 for minimum clearance requirements.*

CHAPTER 2

WIRING AND PROTECTION

ARTICLE 210
BRANCH CIRCUITS

SECTION 210.11

Section 210.11 (C)(4) – Add a new Informational Note to Section 210.11(C)(4) to read as follows:

Informational Note: *See Residential Provision of the New York City Energy Conservation Code, for additional Electrical Vehicle (EV) requirements.*

Section 210.11(C)(5) – Add a new Section 210.11(C)(5) to read as follows:

(5) Air-Conditioning Branch Circuit. In addition to the number of branch circuits required by other parts of this section, an individual branch circuit shall be provided for each air-conditioning receptacle outlet required by 210.52(J).

SECTION 210.12(A)

Section 210.12(A) – Retitle the "Exception" in 210.12(A) "Exception No. 1" and add a new Exception, "Exception No. 2", immediately following which reads:

Exception No. 2: AFCI protection shall not be required for the following outlets in multifamily dwellings greater than 3 stories:

a) In kitchens, all receptacle outlets.
b) In laundry areas, all receptacle outlets supplying laundry equipment such as washers, dryers and leak-detection equipment. This exception does not apply to convenience outlets in laundry areas that may supply irons, steamers or similar appliances.

SECTION 210.19

Section 210.19(A) – Revise Section 210.19(A) to add a new opening paragraph to read as follows:

(A) Branch Circuits Not More Than 600V. The maximum total voltage drop from the service point to the farthest outlet shall not exceed 5 percent on both feeders and branch circuits combined. Where compliance with the applicable *New York City Energy Conservation Code* is mandated, the voltage drop requirements of that code shall apply.

Section 210.19(A) – Revise Informational Note No. 3 in Section 210.19(A) to read as follows:

Informational Note No. 3: *DELETED.*

SECTION 210.50

Section 210.50 – Revise the Informational Note in Section 210.50 to read as follows:

Informational Note: *See Informative Annex J for information regarding ADA accessibility design. See requirements in ICC A117.1 as referenced in the New York City Building Code for information regarding the mounting height for the operable parts for dwelling units that are classified as accessible units.*

SECTION 210.52

Section 210.52(J) – Add a new Section 210.52(J) to read as follows:

(J) Outlet Requirements For Residential-Type Occupancies. In addition to the requirements set forth in (A) through (I) of this section, living rooms, bedrooms, dining rooms or similar rooms shall have at least 1 receptacle outlet installed for air conditioners. Such receptacle outlets shall be supplied by an individual branch circuit.

Exception: For buildings with central air conditioning systems, a separate receptacle outlet shall not be required in any living room, bedroom, dining room, or other similar room served by such system.

ARTICLE 215
FEEDERS

SECTION 215.2

Section 215.2(A)(1) – Revise the opening paragraph in Section 215.2(A)(1) to read as follows:

(1) General. Feeder conductors shall have an ampacity not less than the larger of 215(A)(1)(a) or (A)(1)(b) and shall comply with 110.14(C). The maximum total voltage drop from the service point to the farthest outlet shall not exceed 5 percent on both feeders and branch circuits combined. The minimum feeder size feeding a dwelling unit shall be 3 conductors with minimum 8 AWG copper or 6 AWG aluminum or copper-clad aluminum conductors. Where compliance with the applicable *New York City Energy Conservation Code* is mandated, voltage drop requirements of that code shall apply.

Section 215.2(A)(1) – Revise Informational Note No. 2 in Section 215.2(A)(1) to read as follows:

Informational Note No. 2: *DELETED.*

Section 215.2(A)(1) – Revise Informational Note No. 3 in Section 215.2(A)(1) to read as follows:

Informational Note No. 3: *See 210.19(A) for voltage drop for branch circuits.*

ARTICLE 220
BRANCH-CIRCUIT, FEEDER, AND SERVICE LOAD CALCULATIONS

SECTION 220.14

Section 220.14 – Revise the opening paragraph of Section 220.14 to read as follows:

220.14 Other Loads – All Occupancies. In all occupancies, the minimum load for each outlet for general-use receptacles and outlets not used for general illumination shall not be less than that calculated in 220.14(A) through (N), the loads shown being based on nominal branch-circuit voltages.

Exception: The loads of outlets serving switchboards and switching frames in telephone exchanges shall be waived from the calculations.

SECTION 220.14

Section 220.14(A) – Revise Section 220.14(A) to read as follows:

(A) Specific Appliances or Loads. An outlet for a specific appliance or other load not covered in 220.14(B) through (N) shall be calculated based on the ampere rating of the appliance or load served.

Section 220.14(N) – Add a new Section 220.14(N) to read as follows:

(N) Air Conditioning Circuits. A load of not less than 1500VA shall be calculated for each required branch circuit specified in 210.52(J). It shall be permitted to be included with the appliance load specified in 220.53.

SECTION 220.87

Section 220.87 – Revise Section 220.87 to read as follows:

220.87 Determining Existing Loads. The calculation of a feeder or service load for existing installations shall be permitted to use actual maximum demand to determine the existing load under all of the following conditions:

(1) The maximum demand data is available for a 1-year period.

Exception: If the maximum demand data for a 1-year period is not available, the calculated load shall be permitted to be based on the maximum demand (the highest average kilowatts reached and maintained for a 15-minute interval) continuously recorded over a minimum 30-day period using a recording ammeter or power meter connected to the highest loaded phase of the feeder or service, based on the initial loading at the start of the recording. The recording shall reflect the maximum demand of the feeder or service by being taken when the building or space is occupied and shall include by measurement or calculation the larger of the heating or cooling equipment load, and other loads that might be periodic in nature due to seasonal or similar conditions. This exception shall not apply if the feeder or service has a renewable energy system (i.e., solar photovoltaic or wind electric) or employs any form of peak load shaving.

(2) The maximum demand at 125 percent plus the new load does not exceed the ampacity of the feeder or rating of the service.

(3) The feeder has overcurrent protection in accordance with 240.4, and the service has overload protection in accordance with 230.90.

ARTICLE 225
OUTSIDE BRANCH CIRCUITS AND FEEDERS

SECTION 225.11

Section 225.11 – Revise Section 225.11 to read as follows:

225.11 Overhead Branch Circuits Attached to Buildings or Structures. Overhead branch circuits and feeders attached to buildings or structures shall be installed in accordance with the requirements of 230.54.

Informational Note: *Refer to Part II of Article 225 for underground installation.*

SECTION 225.30

Section 225.30 – Revise the opening paragraph in Section 225.30 to read as follows:

225.30 Number of Supplies. Where more than 1 building or other structure is on the same property and under single management, each additional building or other structure that is served by a branch circuit or feeder on the load side of a service disconnecting means shall be supplied by only 1 feeder or branch circuit unless permitted in 225.30(A) through (F). For the purpose of this section, a multiwire branch circuit shall be considered a single circuit.

SECTION 225.31

Section 225.31 – Revise Section 225.31 to read as follows:

225.31 Disconnecting Means. Means shall be provided for disconnecting all ungrounded conductors that supply or pass through the building or structure. Disconnecting means required by this section shall comply with 230.64.

SECTION 225.34

Section 225.34(A) – Add a new Informational Note at the end of Section 225.34(A) to read as follows:

Informational Note: *In existing buildings, if 1 or more of the 2 to 6 disconnects are not able to be grouped due to space constraints, they may be located in a remote location, if special permission is granted by the AHJ, provided signage is installed in accordance with 225.37. Proof of hardship may be required.*

SECTION 225.37

Section 225.37 – Add a new Informational Note at the end of Section 225.37 to read as follows:

Informational Note: *Where additional approved disconnects are installed in accordance with 225.34, a permanent plaque or directory installed at the entrances of both disconnect locations may be required.*

SECTION 225.52

Section 225.52(B) – Revise Section 225.52(B) to read as follows:

(B) Type. Each building or structure disconnect shall simultaneously disconnect all ungrounded supply conductors it controls and shall have a fault-closing rating not less than the fault current at its supply terminals. The disconnecting means shall comply with 230.64.

Exception: Where the individual disconnecting means consists of fused cutouts, the simultaneous disconnection of all ungrounded supply conductors shall not be required if there is a means to disconnect the load before opening the cutouts. A permanent legible sign shall be installed adjacent to the fused cutouts and shall read DISCONNECT LOAD BEFORE OPENING CUTOUTS.

Where fused switches or separately mounted fuses are installed, the fuse characteristics shall be permitted to contribute to the fault- closing rating of the disconnecting means.

SECTION 225.60

Section 225.60 – Retitle the Informational Note in Section 225.60 "Informational Note No. 1" and add a new Informational Note at the end of Section 225.60 to read as follows:

Informational Note No. 2: *The utility company's requirements for vertical and horizontal clearance for overhead service conductors may be more stringent.*

SECTION 225.61

Section 225.61 – Retitle the Informational Note in Section 225.61 "Informational Note No. 1" and add a new Informational Note at the end of Section 225.61 to read as follows:

Informational Note No. 2: *The utility company's requirements for vertical and horizontal clearance for overhead service conductors may be more stringent.*

ARTICLE 230
SERVICES

SECTION 230.6

Section 230.6 – Add a new Item (6) to the list of items in Section 230.6 to read as follows:

(6) Where installed in electric service rooms

SECTION 230.9

Section 230.9 – Add a new Informational Note at the end of Section 230.9 to read as follows:

Informational Note: *The utility company's requirements for vertical and horizontal clearance for overhead service conductors may be more stringent.*

SECTION 230.24

Section 230.24(B)(5) – Add a new Informational Note at the end of Section 230.24 (B)(5) to read as follows:

Informational Note: *The utility company's requirements for vertical and horizontal clearance for overhead service conductors may be more stringent.*

SECTION 230.28

Section 230.28 – Add a new Informational Note at the end of Section 230.28 to read as follows:

Informational Note: *The utility company may have more stringent requirements for service mast and service drop installations.*

SECTION 230.30

Section 230.30(A) – Revise the Exception in Section 230.30(A) to read as follows:

Exception: DELETED.

Section 230.30(B) – Add a new Informational Note at the end of Section 230.30(B) to read as follows:

Informational Note: *The utility company may have more stringent requirements regarding the use of PVC conduits*.

Section 230.30(B)(7) – Revise Item (7) in the list of items in Section 230.30(B) to read as follows:

(7) DELETED.

SECTION 230.33

Section 230.33 – Revise Section 230.33 to read as follows:

230.33 Spliced Conductors. Service conductors shall be permitted to be spliced or tapped in accordance with 300.5(E), 300.13, and 300.15. For underground service conductors, the requirements of 230.46(C) shall apply.

SECTION 230.41

Section 230.41 - Revise the Exception after the opening paragraph in Section 230.41 to read as follows:

Exception: A grounded conductor shall be permitted to be uninsulated bare copper, aluminum, or copper-clad aluminum when used as part of a jacketed cable assembly.

SECTION 230.42

Section 230.42(D) – Add a new Section 230.42(D) to read as follows:

(D) Service Busway. Service busway shall be constructed as required by 368.119.

Section 230.42(E) – Add a new Section 230.42(E) to read as follows:

(E) Services 1000kVA and over. Ampacity of the service-entrance conductors for services 1000 kVA and larger shall not be less than the sum of the maximum ampere ratings of the service disconnecting means. When including fire pump disconnects in the calculation, 125 percent of the fire pump full load amperes shall be added.

Exception: The ampacity of service-entrance conductors need not exceed the maximum demand calculated in accordance with Article 220 for up to a maximum of 4000-ampere per service. For services under 4000-ampere, calculations shall be available upon request by the AHJ.

Informational Note: *See 110.2(B)(1) for determining service capacity.*

SECTION 230.43

Section 230.43 – Revise Section 230.43 to read as follows:

230.43 Wiring Methods for 1000 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:

(1) Rigid metal conduit (RMC)

(2) Intermediate metal conduit (IMC)

(3) Electrical metallic tubing (EMT)

(4) Metallic wireways

(5) Busways

(6) Metallic auxiliary gutters

(7) Rigid polyvinyl chloride conduit (PVC) when installed in accordance with 230.6(1), (2) or (4).

Exception: Exposed PVC service masts on the exterior of residential buildings are permitted within 3,000 feet (914.4 m) of a body of salt water.

(8) Cable bus.

(9) Mineral-insulated, metal-sheathed cable, Type MI

(10) Flexible metal conduit (FMC) not over 6 ft (1.83 m) long or liquidtight flexible metal conduit (LFMC) not over 6 ft (1.83 m) long between a raceway, or between a raceway and service equipment, with a supply-side bonding jumper routed with the flexible metal conduit (FMC) or the liquidtight flexible metal conduit (LFMC) according to the provisions of 250.102(A), (B), (C), and (E).

(11) High density polyethylene conduit (HDPE), underground

(12) Nonmetallic underground conduit with conductors (NUCC)

(13) Reinforced thermosetting resin conduit (RTRC)

Service entrance conductors shall not run within the hollow spaces of frame buildings.

Informational Note: *The utility company may have additional or more stringent requirements.*

SECTION 230.44

Section 230.44 – Revise Section 230.44 to read as follows:

230.44 Cable trays. Cable tray systems shall be permitted to support service-entrance conductors. Cable trays used to support service-entrance conductors shall contain only service-entrance conductors listed for use in cable trays and shall be limited to Type MI Cable.

Such cable trays shall be identified with permanently affixed labels with the wording “Service-Entrance Conductors.” The labels shall be located so as to be visible after installation with a spacing not to exceed 10 ft (3 m) so that the service-entrance conductors are able to be readily traced through the entire length of the cable tray.

SECTION 230.46

Section 230.46 - Revise Section 230.46 to read as follows:

230.46 Spliced and Tapped Conductors. Service entrance conductors shall be permitted to be spliced or tapped in accordance with 300.5(E), 300.13, 300.15, and 230.46(A) through 230.46(C). Power distribution blocks, pressure connectors, and devices for splices and taps shall be listed. Power distribution blocks installed on service conductors shall be marked “suitable for use on the line side of the service equipment” or equivalent.

Pressure connectors and devices for splices and taps installed on service conductors shall be marked "suitable for use on the line side of the service equipment" or equivalent.

(A) Spliced or tapped service-entrance conductors in the form of multi-section service busway, fabricated and installed in accordance with 368.119, shall be permitted.

(B) Service-entrance conductors shall be permitted to be spliced or tapped at the following locations when using listed terminals and are installed in accordance with applicable equipment standards and 110.2 within a:

(1) Service end box.

(2) Copper detail tap box.

(3) Utility metering enclosure.

(4) Service disconnect enclosure.

(5) Service panelboard.

(6) Service switchboard or service switchgear.

(7) Service busway fabricated and installed in accordance with 368.119.

(8) Power Distribution Block

(C) Spliced or tapped service conductors not installed in accordance with A or B shall utilize listed irreversible compression connectors. All splices and taps shall be located within an identified enclosure and be located outside of the building in accordance with 230.6.

Informational Note: *The utility company may have more stringent requirements.*

SECTION 230.52

Section 230.52 – Revise Section 230.52 to read as follows:

230.52. DELETED.

SECTION 230.54

Section 230.54(C) – Add a new Informational Note at the end of Section 230.54 (C) to read as follows:

Informational Note: *Confirm location and requirements of service heads with the electric utility having jurisdiction over the electrical service installation.*

Section 230.54(E) – Revise the Exception in Section 230.54(E) to read as follows:

Exception: DELETED.

SECTION 230.64

Section 230.64 – Add a new Section 230.64 to Part V to read as follows:

230.64 Special Requirements. Where service equipment capacity is 1000kVA or larger, 230.64(A) through (F) shall apply.

Informational Note: *See 110.2(B) to determine service equipment kVA capacity.*

(A) Service rooms shall have a 2-hour fire rating and be constructed of non-combustible materials.

(B) Minimum working space in front of all service disconnecting means shall be 5 ft (1.52 m). When disconnecting means are located face-to-face, the minimum working space shall be 7 ft (2.13 m).

Exception: This requirement shall not apply to service disconnecting means rated 100 amperes or less.

(C) Minimum distance from the floor to uninsulated live parts within the equipment shall be 12 in. (300 mm).

(D) Service equipment requiring rear access shall have a minimum of 3 ft (914 mm) clearance on each side in addition to complying with 110.26(A) or 110.34(A) for rear working space.

(E) If the equipment does not require rear access and the distance from the rear of the equipment to the opposite wall is less than 3 ft (914 mm), then physical barriers shall be installed to prevent access behind the equipment.

Exception: Barriers shall not be required if the rear clearance is 12 in. (300 mm) or less.

(F) There shall be 2 means of egress from the required working space for electrical equipment. A means of egress shall be accessible from each end of the working space. A single means of egress from the working space shall be permitted where either of the conditions in 230.64(F)(1) or 230.64(F)(2) is met.

(1) Unobstructed Egress. Where the location permits a continuous and unobstructed way of egress travel, a single entrance to the working space shall be permitted.

(2) Extra Working Space. Where double the working space specified in Table 110.26(A)(1) or Table 110.34(A) is provided, a single means of egress shall be permitted. The single means of egress shall be located such that the distance from the equipment to the nearest edge of the egress doorway is not less than the minimum clear distance specified in Table 110.26(A)(1) or Table 110.34(A) for equipment operating at that voltage and in that condition. Working space in front of service disconnecting means shall not be less than that required in 230.64 (B).

SECTION 230.70

Section 230.70(B) – Revise Section 230.70(B) to read as follows:

(B) Marking. Each service disconnect shall be permanently marked to identify it as a service disconnect. Legally required labels shall be visible and unobstructed.

Section 230.70(D) – Add a new Section 230.70(D) to read as follows:

(D) Signage. Signage shall be provided when a service is located above street level at the following locations. Such signage shall indicate the specific location of the main electric service room. Signage shall be clearly visible and unobstructed.

(1) All Building Entrances.

(2) Fire Alarm Control Panel location.

SECTION 230.71

Section 230.71 - Revise Section 230.71 as follows:

230.71 Maximum Number of Disconnects. Each service shall have only 1 disconnecting means unless the requirements of 230.71(B) are met.

(A) General. For the purpose of this section, disconnecting means installed as part of listed equipment and used solely for the following shall not be considered a service disconnecting means:

(1) Power monitoring equipment

(2) Surge-protective device(s)

(3) Control circuit of the ground-fault protection system

(4) Power-operable service disconnecting means

(B) Two to Six Service Disconnecting Means. Two to six service disconnects shall be permitted for each service permitted by 230.2 or for each set of service-entrance conductors permitted by 230.40, Exception No. 1, 3, 4, or 5.

(C) Equipment Arrangement. For all new and existing one- and two-family dwellings and other than one-or two-family dwellings for which an application for construction document approval is filed after the effective date of the local law that enacted this code, the 2 to 6 service disconnecting means shall consist of a combination of any of the following:

(1) Separate enclosures with a main service disconnecting means in each enclosure

(2) Panelboards with a main service disconnecting means in each panelboard enclosure

(3) Switchboard(s) where there is only 1 service disconnect in each separate vertical section where there are barriers separating each vertical section

(4) Service disconnects in switchgear or metering centers where each disconnect is located in a separate compartment

Informational Note No. 1: *Metering centers are addressed in UL 67, Standard for Panelboards.*

Informational Note No. 2: *Examples of separate enclosures with a main service disconnecting means in each enclosure include but are not limited to motor control centers, fused disconnects, circuit breaker enclosures, and transfer switches that are suitable for use as service equipment.*

SECTION 230.72

Section 230.72(A) – Add Informational Note at the end of Section 230.72(A) to read as follows:

Informational Note: *In existing buildings, if 1 or more of the 2 to 6 disconnects are not able to be grouped due to space constraints, they may be located in a remote location, if special permission is granted by the AHJ, provided signage is installed in accordance with 225.37. Proof of hardship may be required. Where additional approved disconnects are installed, a permanent plaque or directory installed at the entrances of both disconnect locations may be required.*

SECTION 230.85

Section 230.85 – Add an Exception at the end of Section 230.85 to read as follows:

Exception: If the emergency disconnecting means cannot be located in a readily accessible outdoor location, or if the utility metering equipment is located indoors, 1 of the following disconnecting means shall be permitted:

1. A remote disconnecting means provided by the utility

2. An indoor shunt-trip disconnecting means with the control device located in a readily accessible outdoor location and marked, “Remote Emergency Disconnect”

3. An approved equivalent means.

SECTION 230.96

Section 230.96 –Add a new Section 230.96 to Part VII to read as follows:

230.96 Electrical System Coordination. For systems 1000 volts and below where the service overcurrent protective device (OCPD) rating or setting is 1200 amperes and above, limited level coordination at 0.1 seconds and above on the time-current curve shall be required between the service OCPD and the next downstream OCPD. For systems exceeding 1000 volts, full selective coordination shall be required.

Informational Note: *See definitions for Coordination, Selective and Coordination, Limited Level.*

Exception No. 1: Coordination shall not be required between 2 OCPDs in series with 1 another when no loads are connected in parallel with the downstream device.

Exception No. 2: When the second level OCPD is a single main device having the same ampere rating or setting as the service OCPD, coordination shall be required between the third level devices and the 2 upstream devices.

Exception No. 3: When only 1 OCPD is provided on the transformer secondary, limited level coordination shall be required between the transformer primary and secondary OCPD's and the third level devices.

ARTICLE 250
GROUNDING AND BONDING

SECTION 250.35

Section 250.35(B) – Revise Section 250.35(B) to read as follows:

(B) Nonseparately Derived System. If the generator is installed as a nonseparately derived system, and overcurrent protection is not integral with the generator assembly, a supply-side bonding jumper shall be installed between the generator equipment grounding terminal and the equipment grounding terminal, bar, or bus of the disconnecting mean(s). The supply-size bonding jumper shall be sized in accordance with 250.102(C) based on the size of the conductors supplied by the generator. Generators that supply 3 wire loads with no grounded conductor, or 4 wire loads with grounded conductor and supply conductors smaller than what is required in 250.102(C) and 445.13 shall be installed as a separately derived system in accordance with 250.35(A).

SECTION 250.68

Section 250.68(C)(1) – Revise the Exception in Section 250.68(C)(1) to read as follows:

Exception: DELETED.

SECTION 250.119

Section 250.119 - Revise the Exception No. 1 in Section 250.119 to read as follows:

Exception No. 1: Power-limited Class 2 or Class 3 cables, or communications cables containing only circuits operating at less than 50 volts ac or 60 volts dc where connected to equipment not required to be grounded shall be permitted to use a conductor with green insulation or green with 1 or more yellow stripes for other than equipment grounding purposes.

CHAPTER 3

WIRING METHODS AND MATERIALS

ARTICLE 300
GENERAL REQUIREMENTS FOR WIRING METHODS AND MATERIALS

SECTION 300.3

Section 300.3(C)(1)(a) – Add a new third paragraph to Section 300.3(C)(1) to read as follows:

Barriers shall be provided to isolate conductors energized from different sources when the system voltage exceeds 250 volts nominal and conductors are protected by first or second level overcurrent protective devices. Sources include service entrance points, secondaries of different transformers, generators, and UPS systems.

SECTION 300.6

Section 300.6(B) – Revise Section 300.6(B) to read as follows:

(B) Aluminum Metal Equipment. Aluminum raceways, cable trays, cable bus, auxiliary gutters, cable armor, boxes, cable sheathing, cabinets, elbows, couplings, nipples, fittings, supports, and support hardware shall not be embedded in concrete or come in direct contact with the earth unless provided with a protective coating by the manufacturer that is listed for use in direct burial and concrete encasement applications.

SECTION 300.25

Section 300.25 – Revise the Informational Note in Section 300.25 to read as follows:

Informational Note: *For more information, refer to Section 1023.5 of the New York City Building Code.*

ARTICLE 310
CONDUCTORS FOR GENERAL WIRING

SECTION 310.16

Table 310.16 – Modify Table 310.16 as follows:

Delete Type XHWN from the 90 degree columns for copper and aluminum or copper-clad aluminum conductors.

SECTION 310.17

Table 310.17 – Modify Table 310.17 as follows:

Delete Type XHWN from the 90 degree columns for copper and aluminum or copper-clad aluminum conductors.

SECTION 310.20

Table 310.20 – Modify Table 310.20 as follows:

Delete Type XHWN from the 90 degree columns for copper and aluminum or copper-clad aluminum conductors.

ARTICLE 326
INTEGRATED GAS SPACER CABLE: TYPE IGS

SECTION 326.10

Section 326.10 – Revise Section 326.10 to read as follows:

326.10 Uses Permitted. Type IGS cable shall be permitted for use underground, including direct burial in the earth as feeder or branch-circuit conductors.

ARTICLE 330
METAL-CLAD CABLE: TYPE MC

SECTION 330.10

Section 330.10(A)(1) – Revise Item 1 in the list of items in Section 330.10(A) to read as follows:

(1) For feeders and branch circuits.

Section 330.10(B)(3) – Revise Section 330.10(B)(3) to read as follows:

(3) DELETED.

SECTION 330.12

Section 330.12 – Add new Sections 330.12(3) and 330.12(4) to read as follows:

(3) Where used as service conductors.

(4) In any building exceeding 3 floors above grade, where the cable has an outer jacket of PVC, unless the PVC jacketed cable is concealed within non-plenum walls, floors, or ceilings constructed with materials providing a listed 1-hour fire rated assembly.

ARTICLE 334
NONMETALLIC-SHEATHED CABLE: TYPES NM AND NMC

SECTION 334.10

Section 334.10 – Revise Items (2), (3), (4), and (5) in Section 334.10 to read as follows:

(2) Multifamily dwellings.

(3) DELETED.

(4) DELETED.

(5) DELETED.

Section 334.10(A) – Revise Item (1) in the list of items in Section 334.10(A) to read as follows:

(1) For both exposed and concealed work in normally dry locations.

Section 334.10(B)(1) – Revise Item (1) in the list of items in Section 334.10(B) to read as follows:

(1) For both exposed and concealed work in dry, moist, damp, or corrosive locations.

SECTION 334.12

Section 334.12(A)(1) – Revise Item (1) in the list of items in Section 334.12(A) to read as follows:

(1) In any one- or two-family dwelling or multifamily dwelling and any attached or detached garages and storage buildings exceeding 3 floors above grade.

Section 334.12(A)(11) –Add a new Item (11) to Section 334.12(A) to read as follows:

(11) In non-residential buildings.

ARTICLE 336
POWER AND CONTROL TRAY CABLE: TYPE TC

SECTION 336.10

Section 336.10 – Revise Item (6) in the list of items in Section 336.10 to read as follows:

(6) DELETED.

SECTION 336.12

Section 336.12 – Add a new Item (4) to the list of items in Section 336.12 to read as follows:

(4) As fire alarm circuit wiring.

SECTION 336.104

Section 336.104(A) – Revise Section 336.104(A) to read as follows:

(A) DELETED.

ARTICLE 344
RIGID METAL CONDUIT: TYPE RMC

SECTION 344.10

Section 344.10(A)(2) – Revise Section 344.10(A)(2) to read as follows:

(2) Aluminum RMC. Aluminum RMC shall be permitted to be installed where judged suitable for the environment. Rigid aluminum conduit encased in concrete or in direct contact with the earth shall be provided with listed supplementary corrosion protection.

Section 344.10(B)(2) – Revise Section 344.10(B)(2) to read as follows:

(2) Supplementary Protection of Aluminum RMC. Aluminum RMC shall be provided with listed supplementary corrosion protection where encased in concrete or in direct contact with the earth.

ARTICLE 350
LIQUIDTIGHT FLEXIBLE METAL CONDUIT: TYPE LFMC

SECTION 350.12

Section 350.12 – Revise Section 350.12 to read as follows:

350.12 Uses Not Permitted. LFMC shall not be used as follows:

(1) Where subject to physical damage.

(2) In lengths exceeding 6 ft (1.8 m).

SECTION 352.10
Section 352.10 – Add new Sections 352.10(J) and 352.10(K) to read as follows:

(J) Buildings Not Exceeding 3 Stories. In any building or dwelling unit not exceeding 3 stories above grade.

(K) Buildings Exceeding 3 Stories. Unless prohibited elsewhere by other articles of this code; in any building exceeding 3 stories above grade where the PVC conduit is concealed within non-plenum walls, floors, or ceilings constructed with materials providing a listed 1-hour fire rated assembly or PVC conduit encased in concrete, minimum 2 inches (50.8 mm) thick.

ARTICLE 355
REINFORCED THERMOSETTING RESIN CONDUIT: TYPE RTRC

SECTION 355.10

Section 355.10(J) – Add a new Section 355.10(J) to read as follows:

(J) Buildings Exceeding 3 Stories. In any building exceeding 3 stories above grade, only Phenolic type RTRC is permitted.

ARTICLE 356
LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT TYPE LFNC

SECTION 356.12

Section 356.12 – Add a new Item (5) to the list of items in Section 356.12 to read as follows:

(5) In any building exceeding 3 stories above grade, unless encased in at least 2 in. (50 mm) of concrete or limited to 6 ft (1.8 m) of length exposed.

ARTICLE 362
ELECTRICAL NONMETALLIC TUBING: TYPE ENT

SECTION 362.10

Section 362.10(2) – Revise the opening paragraph of Item (2) in the list of items in Section 362.10 to read as follows:

(2) In any building exceeding 3 floors above grade, ENT shall be concealed within walls, floors, and ceilings where the walls, floors, and ceilings provide a thermal barrier of material that has at least a 1-hour finish rating as identified in listings of fire-rated assemblies. The 1-hour-finish-rated thermal barrier shall be permitted to be used for combustible or noncombustible walls, floors, and ceilings.

Section 362.10(2) – Revise the Exception in Section 362.10(2) to read as follows:

Exception to (2): DELETED.

Section 362.10(5) – Revise Item (5) in the list of items in Section 362.10 to read as follows:

(5) Above suspended ceilings where the suspended ceilings provide a thermal barrier of material that has at least a 1-hour finish rating as identified in listings of fire-rated assemblies, except as permitted in 362.10(1)(a).

Section 362.10(5) – Revise the Exception at the end of Section 362.10(5) to read as follows:

Exception to (5): DELETED.

SECTION 362.12

Section 362.12 – Add New Items (9) and (10) to the list of items in Section 362.12 to read as follows:

(9) In ducts, plenums and other air handling spaces.

(10) For use as risers in any structure exceeding 3 floors above grade.

ARTICLE 366
AUXILIARY GUTTERS

SECTION 366.12

Section 366.12 – Add a new Item (3) to the list of items in Section 366.12 to read as follows:

(3) In any building exceeding 3 stories above grade non-metallic auxiliary gutters are prohibited.

ARTICLE 368
BUSWAYS

SECTION 368.2

Section 368.2 – Revise the opening Section of Section 368.2 to read as follows:

368.2 Definitions. The definitions in this section shall apply within this article and throughout the Code.

Section 368.2 – Revise Section 368.2 to add a new definition for "Service Busway" in alphabetical order to read as follows:

Service Busway. Busway used to connect from the service point to the line terminals of the service equipment.

SECTION 368

Section 368.119 – Add a new Section 368.119 to Part III to read as follows:

368.119 Service Busway. Service busway shall conform to the specifications in (A) through (I) below or be a listed busway suitable for services.

(A) Ampacity and Ratings of Busbars. Ampacity and ratings of busbars shall be in accordance with 230.42(A).

(B) Length. Service busway shall be limited to a maximum of 10 ft (3.0 m) in length, unless otherwise approved by special permission.

C) Insulation. Busbars and busbar joints shall be insulated with a material listed for the purpose and rated for use at a minimum of 600 volts.

(D) Enclosure. Enclosure shall be fabricated from aluminum, minimum 1/8 in. (3.2 mm) thick, or other non-magnetic material approved by the commissioner.

(E) Enclosure Vents. Ventilating openings shall be permitted in the sides and bottom of the enclosure. The top of the enclosure must be solid.

(F) Mounting. Busbars shall be mounted on insulating supports, properly spaced and braced to withstand the maximum available short circuit current.

(G) Clearance. A minimum clearance of 4 in. (102 mm) shall be provided from the phase bars to the enclosure.

(H) Plating. All busbar joints and connections shall be plated with silver, tin or nickel.

(I) Accessibility. All busbar joints and connections shall be accessible.

ARTICLE 382
NONMETALLIC EXTENSIONS

Section 382 Part II – After subheading "Part II. Installation" of the Article, add a sentence to read as follows and delete remainder of the Article:

Part II. Installation

382.12 Uses Not Permitted. Installation of non-metallic extensions shall not be permitted.

382.10 DELETED.

382.15 DELETED.

382.26 DELETED.

382.30 DELETED.

382.40 DELETED.

382.42 DELETED.

382.56 DELETED.

382.100 DELETED.

382.104 DELETED.

382.112 DELETED.

382.120 DELETED.

ARTICLE 388
SURFACE NONMETALLIC RACEWAYS

SECTION 388.12

Section 388.12 – Add a new Item (8) to the list of items in Section 388.12 to read as follows:

(8) In any building exceeding 3 stories above grade.

ARTICLE 392
CABLE TRAYS

SECTION 392.10

Section 392.10(D) - Revise Section 392.10(D) to read as follows:

(D) Nonmetallic Cable Tray. Nonmetallic cable tray shall be listed and its use shall be limited to corrosive areas and areas requiring voltage isolation.

ARTICLE 394
CONCEALED KNOB-AND-TUBE WIRING

SECTION 394.12

Article 394 Part II – After subheading "Part II. Installation" of the Article, add a sentence to read as follows and delete remainder of the Article.

II. Installation

394.12 Uses Not Permitted. Installation of Concealed Knob-and-Tube Wiring shall not be permitted.

394.10 DELETED.

394.17 DELETED.

394.19 DELETED.

394.23 DELETED.

394.30 DELETED.

394.42 DELETED.

394.56 DELETED.

394.104 DELETED.

CHAPTER 4

EQUIPMENT FOR GENERAL USE

ARTICLE 404
SWITCHES

SECTION 404.10

Section 404.10(A) – Revise Section 404.10(A) to read as follows:

(A) DELETED.

ARTICLE 406
RECEPTACLES, CORD CONNECTORS, AND ATTACHMENT PLUGS (CAPS)

SECTION 406.2

Section 406.2 – Revise the opening paragraph in Section 406.2 to read as follows:

406.2 Definitions. The definitions in this section shall apply only within this article.

Section 406.2 – Revise the definition of "Child Care Facility" in Section 406.2 to read as follows:

Child Care Facility. A building or structure, or portion thereof, for educational, supervisory, or personal care services for more than 2 children 7 years old or less.

ARTICLE 408
SWITCHBOARDS, SWITCHGEAR, AND PANELBOARDS

SECTION 408.10

Section 408.10 – Add a new Section 408.10 to Part I to read as follows:

408.10 Listing Requirements. Switchboards, Switchgear, and Panelboards shall be listed.

Informational Note: *For further information on listing standards, see UL 891 for Switchboards, UL 1558 for Switchgear, and UL 67 for Panelboards.*

SECTION 408.11

Section 408.11 – Add new Section 408.11 to Part I read as follows:

408.11 Modification of Equipment. For the purpose of this section, the modification of equipment shall be considered equipment that is changed in rating, dimension, configuration, or altered from the original manufacturer's design.

The modification of equipment shall use design qualified parts verified under applicable standards and shall be performed by an approved qualified person in accordance with any instructions provided by the manufacturer.

The modified equipment shall be marked with the name, trademark, or other descriptive marking by which the organization responsible for modification of the electrical equipment can be identified, along with the date and description of the modification.

SECTION 408.60

Section 408.60 – Add a new Section 408.60 to Part IV to read as follows:

408.60 Freestanding Switchboards and Switchgear. Freestanding switchboards and switchgear, which require rear access, shall have hinged rear doors fastened by captive screws or suitable latches. Freestanding switchboards and switchgear, which do not require rear access~~,~~ shall have non-removable rear covers.

SECTION 408.61

Section 408.61 – Add a new Section 408.61 to Part IV to read as follows:

408.61 Barriers in Switchboards and Switchgear Rated Over 150 Volts to Ground. Barriers fabricated from materials identified for the use shall be placed between adjacent sections of the switchboard and between the switchboard and its pull box, whether located at the top or bottom of the equipment. All openings in the barriers for busbars and cables shall be as small as practicable.

ARTICLE 410
LUMINAIRES, LAMPHOLDERS, AND LAMPS

SECTION 410.151

Section 410.151(B) – Add an Informational Note to Section 410.151(B) to read as follows:

Informational Note: *For energy code compliance, see the applicable provisions of the New York City Energy Conservation Code.*

ARTICLE 422
APPLIANCES

SECTION 422.12

Section 422.12 – Add an Informational Note at the end of "Exception No. 2" in Section 422.12 to read as follows:

Informational Note: *For Safety, Controls, and Electrical requirement for Low-Pressure Steam-Heating Boiler and Low-Pressure Hot-Water Heating Boiler, see New York City Mechanical Code, Chapter 10, "Safety and Pressure Relief Valves and Controls". For definition of Low-Pressure Hot Water Heating Boiler and Low-Pressure Steam-Heating Boiler refer to the New York City Mechanical Code.*

ARTICLE 430
MOTORS, MOTOR CIRCUITS, AND CONTROLLERS

SECTION 430.5

Table 430.5 – Revise Table 430.5 to add 2 new lines after the line beginning "Resistors and reactors" to read as follows:

Equipment/Occupancy	Article	Section
Services	230	
Switchboards, Switchgears, and Panelboards	408	

ARTICLE 445
GENERATORS

SECTION 445.10

Section 445.10 – Revise the Informational Note in Section 445.10 to read as follows:

Informational Note: *See NFPA 37, Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines, for information on the location of generator exhaust. Also see New York City Mechanical Code Chapter 8, Section MC 811.*

ARTICLE 450
TRANSFORMERS AND TRANSFORMER VAULTS (INCLUDING SECONDARY TIES)

SECTION 450.14

Section 450.14 – Revise Section 450.14 to read as follows:

450.14 Disconnecting Means

(A) Location. Transformers, other than Class 2 or Class 3 transformers, shall have a disconnecting means located either in sight of the transformer or in a remote location. Where located in a remote location, the disconnecting means shall be lockable open in accordance with 110.25, and its location shall be field marked on the transformer.

(B) Rating. For all step-up transformer applications over 225kVA, the selection of the Primary Disconnect and Step-Up Transformer shall be considered as an engineered system and shall be installed in accordance with 110.3(B) and in compliance with 110.9 and 110.10. The Primary Disconnect device shall be capable of handling the maximum inrush current of the specific transformer being installed. The selection shall be made by a registered design professional engaged primarily in the design, installation, or maintenance of electrical systems. The selection shall be documented and made available to those authorized to design, install, inspect, maintain, and operate the system.

SECTION 450.25

Section 450.25 – Revise Section 450.25 to read as follows:

450.25 Askarel-Insulated Transformers. New installation of Askarel-insulated transformers shall not be permitted.

SECTION 450.42

Section 450.42 – Revise Section 450.42 to read as follows:

450.42 Walls, Roofs, and Floors. The vault shall be of such dimension as to permit the installation of all electrical equipment in accordance with 110.26 or 110.34 as applicable. The vault shall be of fireproof construction with a minimum fire resistance rating of 3 hours with floors, walls, and ceilings 6 in. (152 mm) thick if made of concrete, or 8 in. (203 mm) thick if made of brick, or 8 in. (203 mm) thick if made of filled cement block. All building steel forming part of the vault construction shall have a comparable fire resistance rating. Each compartment within a vault shall be built to the same specifications in respect to the thickness of walls and fireproof door, as the vault. The floors shall have approved structural strength for the load imposed thereon to be installed in the vault. The floors and walls, to the height of the sill, shall be given a hard impervious finish and painted to prevent the absorption of oil.

Exception: Where transformers are protected with automatic sprinkler, carbon dioxide, water spray, or approved gas suppression system, construction of 1-hour rating shall be permitted.

Informational Note No. 1: *For additional information, see ANSI/ASTM E119-18a, Method for Fire Tests of Building Construction and Materials.*

Informational Note No. 2: *A typical 3-hour construction is 6 in. (150 mm) thick reinforced concrete.*

SECTION 450.43

Section 450.43(A) – Revise Section 450.43(A) to read as follows:

(A) Type of Door. Each doorway leading into a vault from the building interior shall be provided with a tight-fitting door that has a minimum rating of 3 hours. Where practicable, basement vaults or vaults with an opening on a roof shall be provided with an outside entrance so that no entrance directly into the vault from the interior of the building

will be necessary. Where entrance into the vault is from the interior of the building, the vault shall open into a vestibule, passage hall, or switchboard room not commonly in public use.

Exception: Where transformers are protected with an automatic sprinkler, water spray, carbon dioxide, or approved gas suppression system, construction of 1-hour rating shall be permitted.

Informational Note: *For additional information, see NFPA 80-2016, Standard for Fire Doors and Other Opening Protectives.*

SECTION 450.46

Section 450.46 – Revise Section 450.46 to read as follows:

450.46 Drainage. Where practicable, vaults containing more than 100 kVA transformer capacity shall be provided with a drain or other means that will carry off any accumulation of oil or water in the vault unless local conditions make this impracticable. Such drain or other means shall be permitted to discharge only water accumulation and prevent discharge of transformer oil or coolant into a public or private sewer and shall comply with the New York City Construction Codes and other authorities having applicable regulations. The floor shall be pitched to the drain where provided.

ARTICLE 480
STORAGE BATTERIES

SECTION 480.1

Section 480.1 – Retitle the Informational Note in Section 480.1 "Informational Note No. 1" and add a new Informational Note to read as follows:

Informational Note No. 2: *Refer to Article 706, Energy Storage Systems, for additional requirements when Storage Batteries are used in such a system.*

SECTION 480.10

Section 480.10(A) – Revise "Informational Note No. 1" in Section 480.10(A) to read as follows:

Informational Note No. 1: *Refer to the New York City Mechanical Code and the New York City Fire Code for mechanical ventilation requirements, including ventilation rates. Refer to the New York City Fire Code for supervision and monitoring of mechanical ventilation system requirements.*

CHAPTER 5

SPECIAL OCCUPANCIES

ARTICLE 500
HAZARDOUS (CLASSIFIED) LOCATIONS, CLASSES I, II, & III, DIVISIONS 1 & 2

SECTION 500.8

Section 500.8(A)(3) – Revise Item (3) in the list of items in Section 500.8(A) to read as follows:

(3) Evidence acceptable to the authority having jurisdiction.

ARTICLE 502
CLASS II LOCATIONS

SECTION 502.100

Section 502.100(B)(2) – Revise Section 502.100(B)(2) to read as follows:

(2) Containing Askarel. The use of transformers containing askarel is prohibited.

(1) DELETED.

(2) DELETED.

(3) DELETED.

ARTICLE 503
CLASS III LOCATIONS

SECTION 503.160

Section 503.160 – Add a new Informational Note at the end of Section 503.160 to read as follows:

Informational Note: *Refer to New York City Fire Code and the Rules of the City of New York for additional requirements.*

ARTICLE 506
ZONE 20, 21, & 22 LOCATIONS FOR COMBUSTIBLE DUSTS OR IGNITABLE FIBERS/FLYINGS

SECTION 506.9

Section 506.9(A)(3) – Revise Item (3) in the list of Items in Section 506.9(A) to read as follows:

(3) Evidence acceptable to the authority having jurisdiction.

ARTICLE 517
HEALTH CARE FACILITIES

SECTION 517.17

Section 517.17(D) – Add a new Informational Note at the end of Section 517.17(D) to read as follows:

Informational Note: *Where manufacturer's instructions are not available for existing equipment with ground fault protection, a qualified person may perform testing and calibration to determine the tripping ground fault current and time delay setting for such equipment.*

SECTION 517.26

Section 517.26(2) – Revise Section 517.26(2) to read as follows:

(2) DELETED.

SECTION 517.30

Section 517.30(B)(2) – Revise Section 517.30(B)(2) as follows:

(2) DELETED.

SECTION 517.31

Section 517.31(C)(3)(1) – Revise Item (1) in the list of items in Section 517.31(C)(3) to read as follows:

(1) Nonflexible metal raceways, Type MI cable, or Type RTRC marked with the suffix –XW. Nonmetallic raceways shall not be used for branch circuits that supply patient care areas.

Section 517.31(C)(4) – Add a new Section 517.31(C)(4) to read as follows:

(4) Generator Control Wiring. Control conductors installed between the transfer equipment and the emergency generator shall be kept entirely independent of all other wiring and shall meet the conditions of 700.10(D)(1).

SECTION 517.32

Section 517.32 – Revise Section 517.32 to read as follows:

517.32 Branches Requiring Automatic Connection.

(A) Those functions of patient care depending on lighting or appliances that are connected to the essential electrical system shall be divided into the life safety branch and the critical branch, as described in 517.33 and 517.34.

(B) The life safety and critical branches shall be installed and connected to the alternate power source specified in 517.30(A) and (B) so that all functions specified herein for the life safety and critical branches are automatically restored to operation within 10 seconds after interruption of the normal source. {99:6.7.5.3.1}

SECTION 517.43

Section 517.43 – Revise the title and first paragraph of Section 517.43 to read as follows:

517.43 Automatic Connection to Life Safety Branch. The life safety branch shall be installed and connected to the alternate source of power specified in 517.41 so that all functions specified herein for the life safety branch are automatically restored to operation within 10 seconds after interruption of the normal source.

SECTION 517.44

Section 517.44 – Revise the opening paragraph in Section 517.44 to read as follows:

517.44 Connection to Equipment Branch. The equipment branch shall be installed and connected to the alternate power source such that equipment described in 517.44(A) is automatically restored to operation at appropriate time-lag intervals following the energizing of the life safety branch. {99:6.7.5.l.4.2(A)}

Section 517.44(B) – Revise Item (3) in the list of items in Section 517.44(B) to read as follows:

(3) Optional Connections to the Equipment Branch. Additional illumination, receptacles, and equipment shall be permitted to be connected only to the equipment branch.

ARTICLE 518
ASSEMBLY OCCUPANCIES

SECTION 518.1

Section 518.1 – Revise Section 518.1 to read as follows:

518.1 Scope. This article covers all buildings or portions of buildings or structures classified as Assembly Occupancies in the New York City Construction Codes.

SECTION 518.2

Section 518.2(A) – Revise the opening paragraph in Section 518.2(A) to read as follows:

(A) General. Assembly Occupancies shall be classified as places of assembly in accordance with *New York City Construction Codes* and the *New York City Fire Code* and shall include, but not limited to, the following:

Armories
Assembly halls
Auditoriums
Bowling lanes
Club rooms
Conference rooms
Courtrooms
Dance halls
Dining and drinking facilities
Skating rinks
Exhibition halls
Gymnasiums
Mortuary chapels
Multipurpose rooms
Museums
Places of awaiting transportation
Places of religious worship
Pool rooms
Restaurants

Section 518.2(B) – Revise Section 518.2(B) to read as follows:

(B) Multiple Occupancies. Where an assembly occupancy forms a portion of a building containing other occupancies, Article 518 applies only to that portion of the building considered an assembly occupancy. Occupancy of any room or space for assembly purposes by less than 75 persons in a building of other occupancy, and incidental to such other occupancy, shall be classified as part of the other occupancy and subject to the provisions applicable thereto.

SECTION 518.4

Section 518.4(B) – Revise Section 518.4(B) to read as follows:

(B) DELETED.

SECTION 518.4

Section 518.4(C) – Revise Section 518.4(C) to read as follows:

(C) DELETED.

ARTICLE 520
THEATERS, MOTION PICTURE & TELEVISION STUDIOS & SIMILAR LOCATIONS

SECTION 520.5

Section 520.5(C) – Revise Section 520.5(C) to read as follows:

(C) DELETED.

ARTICLE 525
CARNIVALS, CIRCUSES, FAIRS, AND SIMILAR EVENTS

SECTION 525.20

Subsection 525.20(G) – Revise Section 525.20(G) to read as follows:

(G) Protection. Flexible cords or cables accessible to the public shall be arranged to minimize the tripping hazard and shall be covered with nonconductive matting secured to the walkway surface or protected with another approved cable protection method, provided that the matting or other protection method does not constitute a greater tripping hazard than the uncovered cables. Burying cables shall be permitted. Buried cables shall be identified at the surface. The requirements of 300.5 shall not apply.

ARTICLE 545
MANUFACTURED BUILDINGS AND RELOCATABLE STRUCTURES

SECTION 545.1

Section 545.1 – Revise Section 545.1 to read as follows:

545.1 Scope. Part I of this article covers requirements for department-approved manufactured building and building components as herein defined. Part II covers relocatable structures and the conductors that connect relocatable structures to a supply of electricity.

Exception: Factory manufactured one- and two-family homes or multiple dwellings of not more than 2 stories or less in height, provided such multiple dwellings are not intended for use as hotels or motels, are not subject to the requirement of this code. Such dwellings shall comply with NY State Uniform Fire Prevention, Building Codes, and governing laws for Manufactured Buildings, as stipulated in New York State executive law section 383 as amended.

Informational Note: *As per Title 19 of the Rules of the City of New York Part 1209.5, an Insignia of Approval will be attached to manufactured homes installed in the State of New York.*

SECTION 545.6

Section 545.6 – Revise the Exception in Section 545.6 to read as follows:

Exception: DELETED.

ARTICLE 550
MOBILE HOMES, MANUFACTURED HOMES, AND MOBILE HOME PARKS

SECTION 550.15

Section 550.15 – Revise Section 550.15 to read as follows:

550.15 Wiring Methods and Materials. Except as specifically limited in this section, the wiring methods and materials included in this Code shall be used in mobile homes. Where conductors are terminated, they shall be used with equipment listed and identified for the conductor materials.

ARTICLE 551
RECREATIONAL VEHICLES AND RECREATIONAL VEHICLE PARKS

SECTION 551.47

Section 551.47(L) – Revise Section 551.47(L) to read as follows:

(L) Receptacle Faceplates. Metal faceplates shall comply with 406.6(A). Nonmetallic faceplates shall comply with 406.6(C).

ARTICLE 552
PARK TRAILERS

SECTION 552.48

Section 552.48(K) – Revise Section 552.48(K) to read as follows:

(K) Receptacle Faceplates. Metal faceplates shall comply with 406.6(A). Nonmetallic faceplates shall comply with 406.6(C).

ARTICLE 590
TEMPORARY INSTALLATIONS

SECTION 590.1

Section 590.1 – Add new Informational Notes Nos. 1 and 2 at the end of Section 590.1 to read as follows:

Informational Note No. 1: *See Chapter 1 of Title 28 of the Administrative Code for retroactive requirements of Section 28-315.8.2 as it pertains to "Connections for Temporary External Generators."*

Informational Note No. 2: *See Section G304.5 of Appendix G of the New York City Building Code for additional construction standards with respect to temporary external generator connections in areas of special flood hazard.*

SECTION 590.9

Section 590.9 – Add a new Section 590.9 to read as follows:

590.9 Sidewalk Shed Lighting. All sidewalk shed lighting installations shall comply with the following conditions in addition to all other relevant provisions of this code:

(1) All lighting shall be installed in a metal raceway approved for outdoor use. Branch circuits installed within such metal raceway shall comply with the additional equipment grounding requirement of 250.118(1).

(2) All junction boxes shall be suitable for damp or wet locations.

(3) A minimum wire size of 14 AWG shall be used for the installation.

(4) All luminaires shall be high-efficacy type and suitable for wet locations.

Informational Note: *High-Efficacy lamps are those lamps with 60 lumens/ watt for lamps over 40 watts, 50 lumens/ watt for lamps over 15 watts to 40 watts, and 40 lumens/ watt for lamps 15 watts or less.*

(5) Ground-Fault Circuit Interrupter (GFCI) protection is required on receptacles and lighting.

(6) The panel supplying power to the sidewalk shed lighting shall have a directory that clearly indicates which circuit is being used to supply power.

CHAPTER 6

SPECIAL EQUIPMENT

ARTICLE 600
ELECTRIC SIGNS AND OUTLINE LIGHTING

SECTION 600.1

Section 600.1 – Retitle the Informational Note in Section 600.1 "Informational Note No. 1" and add a new Informational Note No. 2 at the end of Section 600.1 to read as follows:

Informational Note No. 2: *All plastic materials to be used in the manufacturing of electric signs shall be in accordance with the Chapter 26 of the New York City Building Code. Outdoor signs shall comply with Appendix H of the New York City Building Code.*

SECTION 600.3

Section 600.3 – Add new Subsections (C), (D), and (E) to Section 600.3 to read as follows:

(C) Inspection. Electric signs manufactured for installation in the city shall be inspected by the department and approved prior to installation. The department may direct that such inspection take place at the factory before final assembly or at the place of installation.

(D) Relocated Signs. The relocation of an approved sign from 1 location to another may be permitted without inspection provided that no alterations in or additions to the existing sign are made, and the application to connect at the new location shows the previous location, lettering, and the connected electrical load of the sign.

(E) Receptacles. Only receptacles for sign maintenance shall be installed in or on sign enclosures.

SECTION 604.12:

Section 604.12 revise to read as follows:

604.12 Uses Not Permitted. Manufactured wiring system types shall not be permitted where limited by the applicable article in Chapter 3 for the wiring method used in its construction. Manufactured wiring systems shall not be used for emergency exit signs or emergency lighting.

ARTICLE 605
OFFICE FURNISHINGS

SECTION 605.1

Section 605.1(A) – Revise Section 605.1(A) to read as follows:

605.1(A) Covered. This article covers electrical equipment, lighting accessories, and wiring systems used to connect, contained within, or installed on office furnishings. All such office furnishings shall be listed and labeled. Furniture systems that are not listed shall be installed using wiring methods in accordance with Chapter 3.

Informational Note: *Refer to Annex A, Product Safety Standards, for applicable standards.*

SECTION 605.5

Section 605.5 – Revise Section 605.5 to read as follows:

605.5 Office Furnishing Interconnections. The electrical connection between office furnishings shall be flexible assemblies listed and approved for the intended use with office furnishings.

ARTICLE 620
ELEVATORS, DUMBWAITERS, ESCALATORS, MOVING WALKS, PLATFORM LIFTS, AND STAIRWAY CHAIRLIFTS

SECTION 620.13

Subsection 620.13(E) – Add a new Subsection 620.13(E) and an Informational Note to read as follows:

(E) Fire Protection. Where the following elevator types are provided, the feeder and branch-circuit conductors that provide normal or legally required standby power, control signals, communication with the car, lighting, heating, air conditioning, ventilation, and fire detecting systems shall be protected by construction having a fire-resistance rating of not less than 2 hours, or shall be circuit integrity cable having a fire-resistance rating of not less than 2 hours, or shall be protected by a listed electrical circuit protective system having a fire-resistance rating of not less than 2 hours.

(1) Fire Service Access Elevator, where such conductors are located outside the elevator hoistway and machine room.

(2) Occupant Evacuation Elevator, where such conductors are located outside the elevator hoistway, machine room, control room, and control space.

Exception: Where encased in concrete, which provides a 2-hour fire-resistance rating.

Informational Note: *For additional information on Fire Service Access Elevator and Occupant Evacuation Elevator, refer to Chapter 30 of the New York City Building Code and applicable rules.*

SECTION 620.21

Section 620.21– Revise the opening paragraph of Section 620.21 to read as follows:

620.21 Wiring Methods. Conductors, cables, and optical fiber cables located in hoistways, escalator and moving walk wellways, platform lifts, stairway chairlift runways, machinery spaces, control spaces, in or on cars, machine rooms, and control rooms, not including the traveling cables connecting the car or counterweight and hoistway wiring, shall be installed in rigid metal conduit, intermediate metal conduit, electrical metallic tubing, or wireways, or shall be Type MC, MI, or AC cable unless otherwise permitted in 620.21(A) through (C). Unused conductors in an enclosure shall be insulated or protected from accidental contact with exposed live parts.

Exception: Cords and cables of listed cord-and-plug-connected equipment shall not be required to be installed in a raceway.

Informational Note: *When an elevator is classified as a Fire Service Access Elevator or occupant evacuation operation elevator, some building codes require additional protection for conductors that are located outside of the elevator hoistway and machine room.*

SECTION 620.24

Section 620.24(C) – Revise Informational Note No.1 in Section 620.24(C) to read as follows:

Informational Note No. 1: *For additional power requirements and the current reference standard for "Safety Code for Elevators and Escalators", see Appendix K of Chapter 30 of the New York City Building Code.*

SECTION 620.42

Section 620.42 – Revise Section 620.42 to read as follows:

620.42 Hazardous (Classified) Locations. In hazardous (classified) locations, traveling cables shall be of a type approved for hazardous (classified) locations as permitted in 501.10(B)(2)(7), 502.10(A)(2)(6), 503.10(A)(3)(6), 505.15(C)(2), and 506.15(A)(6).

SECTION 620.62

Section 620.62 – Revise Section 620.62 to read as follows:

620.62 Coordination of Overcurrent Protective Devices. Where more than 1 driving machine disconnecting means is supplied by the same source, the overcurrent protective devices in each disconnecting means shall be coordinated in accordance with either (A) or (B).

Selective coordination shall be selected by a licensed professional engineer or other qualified person engaged primarily in the design, installation, or maintenance of electrical systems. The selection and device setting shall be documented and made available to those authorized to design, install, inspect, maintain, and operate the system.

(A) New Elevator Systems. Elevator system(s) overcurrent devices shall be selectively coordinated with all supply-side overcurrent protective devices.

(B) Modifications to Previously Approved Elevator Systems. Elevator system(s) overcurrent devices shall have limited level coordination with all supply-side overcurrent protective devices.

Exception No. 1: Selective coordination shall not be required between transformer primary and secondary overcurrent protective devices where only 1 overcurrent device or set of overcurrent devices exists on the transformer secondary.

Exception No. 2: Selective coordination shall not be required between overcurrent protective devices of the same rating located in series where no loads are connected in parallel with the downstream device.

ARTICLE 625
ELECTRIC VEHICLE POWER TRANSFER SYSTEM

SECTION 625.1

Section 625.1 – Add Informational Note No. 3 at the end of Section 625.1 to read as follows:

Informational Note No.3: *See Section 406 of the New York City Building Code for additional requirements to support Electric Vehicle Charging Stations for open and enclosed public parking garages and open parking lots. Refer to the New York City Energy Conservation Code, and Section 28-315 of the Administrative Code for additional requirements regarding electrical vehicle charging stations.*

ARTICLE 640
AUDIO SIGNAL PROCESSING, AMPLIFICATION, AND REPRODUCTION EQUIPMENT

SECTION 640.3

Section 640.3(J) – Revise Section 640.3(J) to read as follows:

(J) DELETED.

ARTICLE 645
INFORMATION TECHNOLOGY EQUIPMENT

SECTION 645.3

Section 645.3(B) – Revise Item (3) in the list of items in Section 645.3(B) to read as follows:

(3) Fire alarm systems: 760.135(C) and Table 760.154

SECTION 645.11

Section 645.11 – Retitle the Informational Note in Section 645.11 "Informational Note No. 1" and add a new Informational Note No. 2 at the end of Section 645.11 to read as follows:

Informational Note No. 2: *In addition to the requirements of this Article, UPS shall be installed in accordance with Chapter 5 of the New York City Building Code and the New York City Fire Code.*

SECTION 645.27

Section 645.27 – Revise Section 645.27 to read as follows:

645.27 Coordination of Overcurrent Protective Devices. Critical operations data system(s) overcurrent protective devices shall be coordinated in accordance with either (A) or (B).

Selective coordination shall be selected by a licensed professional engineer or other qualified persons engaged primarily in the design, installation, or maintenance of electrical systems. The selection shall be documented and made available to those authorized to design, install, inspect, maintain, and operate the system.

(A) New Systems. Critical operations data system(s) overcurrent devices shall be selectively coordinated with all supply-side overcurrent protective devices.

(B) Modifications to Previously Approved Systems. Critical operations data system(s) overcurrent devices shall have limited level coordination with all supply-side overcurrent protective devices.

ARTICLE 646
MODULAR DATA CENTER

SECTION 646.3

Section 646.3(D) – Revise Section 646.3(D) to read as follows:

646.3(D) Electrical Classification of Data Circuits. Section 725.121(A)(4) shall apply to the electrical classification of listed information technology equipment signaling circuits. Sections 725.139(D)(1) and 805.133(A)(1)(b) shall apply to the electrical classification of Class 2 and Class 3 circuits in the same cable with communications circuits.

ARTICLE 668
ELECTROLYTIC CELLS

SECTION 668.1

Section 668.1 – Revise Section 668.1 to read as follows:

668.1 Scope. This article applies to the installation of the electrical components and accessory equipment of electrolytic cells, electrolytic cell lines, and process power supply for the production of aluminum, cadmium, chlorine, copper, fluorine, hydrogen peroxide, magnesium, sodium, sodium chlorate, and zinc.

Not covered by this article are cells used as a source of electric energy and for electroplating processes and cells used for the production of hydrogen.

No new electrolytic cell line shall be installed, nor any existing cell line modified, without approval from the department.

Informational Note No. 1: *In general, any cell line or group of cell lines operated as a unit for the production of a particular metal, gas, or chemical compound may differ from any other cell lines producing the same product because of variations in the particular raw materials used, output capacity, use of proprietary methods or process practices, or other modifying factors to the extent that detailed Code requirements become overly restrictive and do not accomplish the stated purpose of this Code.*

Informational Note No. 2: *For further information, see IEEE 463-2013, Standard for Electrical Safety Practices in Electrolytic Cell Line Working Zones.*

ARTICLE 680
SWIMMING POOLS, FOUNTAINS, AND SIMILAR INSTALLATIONS

SECTION 680.1

Section 680.1 – Add an Informational Note to Section 680.1 to read as follows:

Informational Note: *Refer to Section 47 of Article 165 of the New York City Health Code, for illumination level, lighting, emergency lighting illumination, wiring for public and commercial use.*

SECTION 680.10

Section 680.10 – Revise Section 680.10 to read as follows:

680.10 Electric Pool Water Heaters. All electric pool water heaters shall have the heating elements subdivided into loads not exceeding 48 amperes and protected at not over 60 amperes. The ampacity of the branch-circuit conductors and the rating or setting of overcurrent protective devices shall not be less than 125 percent of the total nameplate-rated load. All such circuits shall be provided with GFPE. Electric water heaters of the immersion or submersible type shall not be permitted.

SECTION 680.41

Section 680.41 – Revise Section 680.41 to read as follows:

680.41 Emergency Switch for Spas and Hot Tubs. A clearly labeled emergency shutoff or control switch for the purpose of stopping the motor(s) that provide power to the recirculation system and jet system shall be installed at a point readily accessible to the users and not less than 5 ft (1.5 m) away, adjacent to, and within sight of the spa or hot tub. This requirement shall not apply to one-family dwellings where the spa or the hot tub is provided with an integral shutoff or control switch.

ARTICLE 690
SOLAR PHOTOVOLTAIC (PV) SYSTEMS

SECTION 690.1

Section 690.1 – Add the following sentence to the end of Section 690.1 and add 2 additional Informational Notes Nos. 3 and 4 to read as follows:

A detailed diagram of the photovoltaic system must be made available upon request of the department.

Informational Note No. 3: *Photovoltaic systems adhered or attached to the roof covering shall be labeled to identify the fire classification in accordance with Chapter 15 of the New York City Building Code.*

Informational Note No. 4: *Rooftop installations of photovoltaic systems shall comply with the rooftop area access requirements of the New York City Fire Code.*

SECTION 690.4

Section 690.4(C) – Revise Section 690.4(C) to read as follows:

(C) Equipment Installation. The installation of equipment referenced in 690.4(B) and all associated wiring and interconnections shall be performed only by qualified persons who are licensed master electricians or licensed special electricians.

SECTION 690.12

Section 690.12 – Add new Informational Note to Section 690.12 to read as follows:

Informational Note: *Where rapid shutdown function is provided, the location of the rapid shutdown initiation equipment shall be coordinated with the fire department as required.*

ARTICLE 691
LARGE-SCALE PHOTOVOLTAIC (PV) ELECTRIC SUPPLY STATIONS

SECTION 691.6

Section 691.6 – Revise Section 691.6 to read as follows:

691.6 Engineered Design. Comply with the requirements in 110.2.

SECTION 691.7

Section 691.7 – Revise Section 691.7 to read as follows:

691.7. DELETED.

SECTION 691.10

Section 691.10 – Revise Section 691.10 to read as follows:

691.10 Arc-Fault Mitigation. PV systems that do not comply with the requirements of 690.11, shall be noted in the documentation required in 691.6, and special permission is required.

ARTICLE 695
FIRE PUMPS

SECTION 695.2

Section 695.2 – Revise Section 695.2 to add new definitions for "Fire pump", "Fire pump, automatic standpipe", "Fire pump, foam", "Fire pump, limited service", "Fire pump, special service", "Fire pump, sprinkler booster pump", and "Fire pump, water mist system" in alphabetical order to read as follows:

Fire pump. A pump exclusively used to boost water supply pressures in a fire protection system.

Fire pump, automatic standpipe. A fire pump located at or below street level or as required, at the design flood elevation, that supplies the lower 300 feet (91.4 m) of an automatic standpipe system or a combined standpipe and sprinkler system. This does not apply to Manual Wet Standpipe systems which are combined with sprinkler systems.

Fire pump, foam. A fire pump used to boost water supply pressures in a fire protection system where such system uses firefighting foam as an additive.

Fire pump, limited service. A fire pump with a motor rating not exceeding 30 hp and utilizing a limited service fire pump controller.

> Informational Note: Limited service fire pumps include sprinkler booster, water mist, sprinkler mist, foam, or special service fire pumps that employs a listed limited service fire pump controller.

Fire pump, special service. A fire pump that is located above street level and above flood level, and that receives its water supply from a gravity tank or suction tank.

Fire pump, sprinkler booster pump. A fire pump that supplies sprinkler systems only.

Fire pump, water mist system. A fire pump used to boost water supply pressures in a fire protection system where such system utilizes water misting technology.

SECTION 695.3

Section 695.3 – Revise the Informational Note to read as follows:

Informational Note: *For occupancy and equipment to be provided with emergency power, transfer equipment location, fuel and additional requirements, see Chapter 27 of the New York City Building Code.*

Section 695.3(A)(1) – Revise Section 695.3(A)(1) to read as follows:

(1) Electric Utility Service Connection. A fire pump shall be permitted to be supplied by a separate service, or from a connection located ahead of and not within the same cabinet, enclosure, vertical switchgear section, or vertical switchboard section as the service disconnecting means. The connection shall be located and arranged so as to minimize the possibility of damage by fire from within the premises and from exposing hazards. A tap ahead of the service disconnecting means shall comply with 230.82(5). The service equipment shall comply with the labeling requirements in 230.2 and the location requirements in 230.72(B). {20:9.2.2(1)}. Metering of fire pumps shall be current transformer driven or bypass type such that meter removal will not interrupt service to the fire pump. Metering may be dedicated to the fire pump or coincident with other building power use.

Section 695.3(B) – Revise Section 695.3(B) to read as follows:

(B) Multiple Sources. Where required by the New York City Construction Codes, power shall be supplied from an approved combination of 1 or more of the sources in 695.3(A) and an on-site standby generator complying with 695.3(D).

(1) Individual Sources. An approved combination of 2 or more of the sources from 695.3(A).

(2) Individual Source and On-site Standby Generator. An approved combination of 1 or more of the sources in 695.3(A) and an on-site standby generator complying with 695.3(D). {20:9.3.4}

Exception to 695.3(B)(1) and (B)(2): An alternate source of power shall not be required where a back-up engine-driven fire pump, back-up steam turbine-driven fire pump, or back-up electric motor-driven fire pump with an independent power source in accordance with 695.3(A) or (C) is installed.

Section 695.3(D)(2) – Revise Section 695.3(D)(2) to read as follows:

(2) Connection. A connection on the load side of a generator disconnecting means shall not be permitted.

SECTION 695.4

Section 695.4(B)(2)(a)(1) – Revise Section 695.4(B)(2)(a)(1) to read as follows:

(1) Overcurrent protective device(s) shall be rated to carry indefinitely the sum of the locked-rotor current of the largest fire pump motor and the pressure maintenance pump motor(s) and the full-load current of all of the other pump motors and associated fire pump accessory equipment when connected to this power supply. Where the locked-rotor current value does not correspond to a standard overcurrent device size, the next standard overcurrent device size shall be used in accordance with 240.6. The requirement to carry the locked-rotor currents indefinitely shall not apply to conductors or devices other than overcurrent devices in the fire pump motor circuit(s). {20:9.2.3.4}

The provisions of this section shall be used for sizing overcurrent protective devices for a Limited Service Fire Pump.

Section 695.4(B)(2)(b) – Revise Section 695.4(B)(2)(b) to read as follows:

(b) On-Site Standby Generators. Overcurrent protective devices between an on-site standby generator and a fire pump controller shall be selected and sized to allow for instantaneous pickup of the full pump room load but shall not be larger than the value selected to comply with 430.62 to provide short-circuit protection only. {20:9.6.1.1}

Informational Note: *The provisions of this section shall be permitted to be used for sizing overcurrent protective devices for a Limited Service Fire Pump.*

Section 695.4(B)(3) – Revise Section 695.4 (B)(3) to read as follows:

(3) Disconnecting Means. All disconnecting devices that are unique to the fire pump loads shall be red in color and comply with items 695.4(B)(3)(a) through 695.4(B)(3)(e).

Section 695.4(B)(3)(e) – Revise Section 695.4 (B)(3)(e) to read as follows:

(e) Supervision. The power continuity shall be supervised by 1 of the following:

(1) Central station signals confirming power source availability and pump running where central station connection is provided as required by building occupancy or use.

(2) Local signaling device, audible and visual, for power source availability and pump running that is activated at a continuously attended location where central station connection is not otherwise required.

SECTION 695.6

Section 695.6(A)(2)(4) – Retitle Exception at the end of Section 695.6(A)(2)(4) as Exception No.1 and add Exception No. 2 to read as follows:

Exception No. 2 to (A)(2)(4): Limited Service Fire Pumps Controller. Limited service fire pump controller feeder conductors shall be installed in rigid metal conduit (steel RMC) or intermediate metal conduit (steel IMC) and shall not be required to be installed in accordance with this subsection. Where connected to multiple sources of supply in accordance with subsection 695.3(B) and provided with means of automatic transfer, the limited service fire pump controller feeder conductors shall be permitted to be installed in electrical metallic tubing (EMT) and shall not be required to be installed in accordance with this subsection.

Section 695.6(A)(2)(5) – Add new Section 695.6(A)(2)(5) to read as follows:

(5) Outside the building. The conductors shall be protected from potential damage by fire, structural failure, or operational accident. When installed on exterior of building, it shall be located 30 ft (9.0 m) away from adjacent buildings or combustible materials or installed in accordance with 1 of the methods specified in 695.6(A)(2)(4).

Section 695.6(D) – Revise Section 695.6(D) to read as follows:

(D) Pump Wiring. All wiring from the controllers to the pump motors shall be in rigid metal conduit, intermediate metal conduit, or electrical metallic tubing with watertight fittings. Liquidtight flexible metal conduit (maximum of 36 in. (915 mm)) is permitted for the final connection to motor terminal housing. Electrical connections at motor terminal boxes shall be made with a listed means of connection. Twist-on, insulation-piercing-type, and soldered wire connectors shall not be permitted for this purpose.

Section 695.6(I)(1) – Revise Section 695.6(I)(1) to read as follows:

(1) The junction box shall be securely mounted at an elevation of at least 12 in. (300 mm) above the floor level.

SECTION 695.14

Section 695.14(E) – Revise Section 695.14(E) to read as follows:

(E) Electric Fire Pump Control Wiring Methods. All electric motor-driven fire pump control wiring shall be in rigid metal conduit, intermediate metal conduit, or electrical metallic tubing with watertight fittings.

Section 695.14(F) – Add exception at the end of Section 695.14(F) to read as follows:

Exception to 695.14(F)(1) and (F)(2): The control conductors located in the electrical equipment room where they originate and in the fire pump room shall not be required to have the minimum 2-hour fire separation or fire resistance rating.

CHAPTER 7

SPECIAL CONDITIONS

ARTICLE 700
EMERGENCY SYSTEMS

SECTION 700.1

Section 700.1 – Add a new Informational Note No. 5 at the end of Section 700.1 to read as follows:

Informational Note No. 5: *For the occupancy groups and equipment for which emergency power must be provided, transfer equipment locations, power source enclosure fire rating and other applicable requirements, see Chapter 27 of the New York City Building Code.*

SECTION 700.3

Section 700.3 - Revise Section 700.3(A) to read as follows:

(A) Conduct or Witness Test. Inspection and testing requirements shall be performed in accordance with Chapter 17 of the *New York City Building Code*.

Section 700.3 - Revise Section 700.3(B) to read as follows:

(B) Tested Periodically. Systems shall be periodically tested in accordance with the schedule and requirements set forth in the *New York City Fire Code* to ensure the systems are maintained in proper operating condition.

Section 700.3 - Revise Section 700.3(D) to read as follows:

(D) Written Record. A written record shall be kept on premises of such tests and maintenance.

Section 700.3 - Revise Section 700.3(E) to read as follows:

(E) Testing Under Load. Means for testing all emergency lighting and power systems during maximum anticipated load conditions shall be provided.

Informational Note: *For information on testing and maintenance of emergency power supply systems (EPSSs), see the New York City Fire Code and its amended referenced standard NFPA 110, Standard for Emergency and Standby Power Systems.*

Section 700.3 – Revise the opening paragraph in Section 700.3(F) to read as follows:

(F) Temporary Source of Power for Maintenance or Repair of the Alternate Source of Power. If the emergency system relies on a single alternate source of power, the emergency system shall include permanent switching means to connect a portable or temporary alternate source of power, which shall be available for the duration of the maintenance or repair. The permanent switching means to connect a portable or temporary alternate source of power shall comply with the following:

SECTION 700.5

Section 700.5 – Add new Sections 700.5(F) and 700.5(G) to read as follows:

(F) Manual Operation. Means shall be provided to manually operate the switch without hazard to personnel.

(G) Permanent Connections for Portable Generators. Where a permanent connection is made for a portable generator, a disconnecting means and overcurrent protection shall be provided at the point of installation for the portable generator. Capacity of the permanent connection shall not exceed the capacity of the permanent installation.

SECTION 700.6

Section 700.6 – Revise the opening paragraph of Section 700.6 to read as follows:

700.6 Signals. Where required by the *New York City Building Code*, audible and visual signal devices shall be provided, for the purposes described in 700.6(A) through (D) and shall announce at a constantly attended location.

SECTION 700.10

Section 700.10 – Revise Section 700.10(A)(2) to read as follows:

(2) An acceptable means of marking shall include, but is not limited to, a permanently affixed identification nameplate, yellow in color with black lettering. Accessible cable or raceway systems shall be marked at intervals not to exceed 10 ft (3 m) or identified by a continuous yellow outer finish along raceways entire length.

SECTION 700.11

Section 700.11 – Add a new Section 700.11 to read as follows:

700.11 Generator Supply Conductors without Overcurrent Protection.

(A) Conductors Ampacity. See 445.13 of this code.

(B) Installation of Generator Conductors. Conductors from the generator output terminal to the first overcurrent device shall be installed in accordance with 230.6.

(C) Overcurrent Devices. The number of overcurrent devices supplied by the generator shall not be limited.

SECTION 700.12

Section 700.12(B) – Revise Section 700.12(B) to read as follows:

(B) Equipment Design and Location. Equipment shall be designed and located so as to minimize the hazards that might cause complete failure due to flooding, fires, icing, and vandalism.

In areas of special flood hazard, as defined in G201.2 of Appendix G of the *New York City Building Code*, installation of equipment shall comply with the additional requirements of Appendix G of the *New York City Building Code*.

Equipment for sources of power as described in 700.12(C) thorough (H) shall be installed either in spaces fully protected by approved automatic fire protection systems or in spaces with a 2-hour fire rating where located within the following:

(1) Assembly occupancies for more than 1000 persons

(2) Buildings above 75 ft (23 m) in height in occupancy groups - assembly, educational, residential, detention and correctional, business, and mercantile

(3) Educational occupancies with more than 300 occupants

Informational Note No. 1: *For the definition of Use and Occupancy Classification, see Chapter 3 of the New York City Building Code.*

Informational Note No. 2: *For information regarding power system reliability, see IEEE 3006.5-2014, Recommended Practice for the Use of Probability Methods for Conducting a Reliability Analysis of Industrial and Commercial Power Systems.*

Informational Note No. 3: *For the occupancy groups and equipment for which emergency power must be provided, transfer equipment locations, power source enclosure fire rating and other applicable requirements, see Chapter 27 of the New York City Building Code.*

Section 700.12(C) – Add an Informational Note at the end of Section 700.12(C) to read as follows:

Informational Note: *See Chapter 27 of New York City Building Code, New York City Fire Code, and Articles 480 and 706 for additional requirements for storage batteries.*

Section 700.12 – Revise Section 700.12(D)(2)(a) to read as follows:

(a) On-Site Fuel Supply. Where internal combustion engines are used as the prime mover, an on-site fuel supply shall be provided with an on-premises fuel supply sufficient for not less than 6 hours' operation of the system.

Section 700.12 – Revise the exception in Section 700.12(D)(2)(c) to read as follows:

Exception: Emergency generators relying on natural gas as a fuel supply, where allowed by the *New York City Building Code*, shall not be required to maintain an on-site fuel supply.

Section 700.12 - Add an Informational Note after Section 700.12(D)(2)(d) to read as follows:

Informational Note: *Operational requirements in other codes and regulations may specify fuel supplies that support longer durations of operation for certain occupancies. See Articles 517 and 708.*

Section 700.12 – Add a new Section 700.12(D)(6) to read as follows:

(6) Grounding of Temporary Generators Connected to Building Wiring System. Temporary generators used to supply building wiring systems shall comply with 250.35(A) for separately derived systems or 250.35(B) for non-separately derived systems.

Section 700.12 – Revise Section 700.12(F) to read as follows:

(F) DELETED.

Section 700.12 – Revise Section 700.12(G) to read as follows:

(G) Fuel Cell System. Fuel cell systems shall be permitted to be used as a source of power for emergency systems in Group R-2 occupancies and shall be of suitable rating and capacity to supply and maintain the load for not less than 6 hours of full-demand operation. Installation of a fuel cell system shall meet the requirements of Parts II through VIII of Article 692. Where a single fuel cell system serves as the normal supply for the building or group of buildings concerned, it shall not serve as the sole source of power for the emergency standby system.

Section 700.12 - Revise Section 700.12(H) to read as follows:

(H) DC Microgrid Systems. DC Microgrid systems shall not be permitted unless approved by the AHJ. The system shall be capable of being isolated from all non-emergency sources.

DC microgrid systems used as a source of power for emergency systems shall be of sufficient rating and capacity to supply and maintain the total emergency load for not less than 6 hours of full demand operation.

Where a DC microgrid system source serves as the normal supply for the building or group of buildings concerned, it shall not serve as the sole source of power for the emergency standby system.

SECTION 700.31

Section 700.31 – Revise Section 700.31 to read as follows:

700.31 Ground Fault Protection of Equipment. The alternate source for emergency systems shall not be permitted to have ground fault protection for equipment with automatic disconnecting means. Ground fault indication of the emergency source shall be provided pursuant to 700.6(D).

SECTION 700.32

Section 700.32 – Revise the first 2 paragraphs in Section 700.32 to read as follows:

700.32 Coordination of Overcurrent Protective Devices. Overcurrent protective devices shall be coordinated in accordance with (A) or (B). Selective coordination shall be selected by a licensed professional engineer or other qualified person engaged primarily in the design, installation, or maintenance of electrical systems. The selection shall be documented and made available to those authorized to design, install, inspect, maintain, and operate the system.

(A) New Emergency Systems. Emergency system(s) overcurrent devices shall be selectively coordinated with all supply-side overcurrent protective devices.

(B) Modifications to Previously Approved Emergency Systems. Emergency system(s) overcurrent devices shall have limited level coordination with all supply-side overcurrent protective devices.

Exception to (A) and (B): Selective coordination shall not be required between 2 overcurrent devices located in series if no loads are connected in parallel with the downstream device.

ARTICLE 701
LEGALLY REQUIRED STANDBY SYSTEMS

SECTION 701.1

Section 701.1 – Add a new Informational Note No. 4 at the end of Section 701.1 to read as follows:

Informational Note No. 4: *See New York City Building Code Chapter 27, Electrical, for additional requirements including load type, transfer equipment location, power source enclosure fire rating, fuel types, and additional requirements.*

SECTION 701.3

Section 701.3 – Revise Section 701.3 to read as follows:

(A) Conduct or Witness Test. Inspection and testing requirements shall be performed in accordance with *New York City Building Code* Chapter 17.

(B) Tested Periodically. Systems shall be periodically tested in accordance with the schedule and requirements set forth in the *New York City Fire Code* to ensure the systems are maintained in proper operating condition.

(C) Maintenance. Legally required standby system equipment shall be maintained in accordance with manufacturer instructions and industry standards.

(D) Written Record. A written record of such tests and maintenance shall be kept on premises.

(E) Testing Under Load. Means for testing legally required standby systems under load shall be provided.

Informational Note: *For information on testing and maintenance of legally required standby systems, see New York City Fire Code and its amended referenced standard NFPA 110, Standard for Emergency and Standby Power Systems.*

SECTION 701.5

Section 701.5 – Add new Sections 701.5(E) and 701.5(F) to read as follows:

(E) Manual Operation. Means shall be provided to manually operate the switch without hazard to personnel.

(F) Permanent Connections for Portable Generators. Where a permanent connection is made for a portable generator, a disconnecting means and overcurrent protection shall be provided at the point of connection for the portable generator. Capacity shall not exceed the capacity of the permanent installation.

SECTION 701.6

Section 701.6 - Revise the opening paragraph in Section 701.6 to read as follows:

701.6 Signals. Where required by the *New York City Building Code*, audible and visual signal devices shall be provided for the purposes described in 701.6(A) through (D), and shall announce at a constantly attended location.

SECTION 701.11

Section 701.11 – Add a new Section 701.11 to read as follows:

701.11 Generator Supply Conductors without Overcurrent Protection.

(A) Conductors Ampacity. See 445.13 of this code.

(B) Installation of Generator Conductors. Conductors from the generator output terminal to the first overcurrent device shall be installed in accordance with 230.6.

(C) Overcurrent Devices. The number of overcurrent devices supplied by the generator shall not be limited.

SECTION 701.12

Section 701.12 – Add an Informational Note at the end of Section 701.12(C) to read as follows:

Informational Note: *See Chapter 27 of the New York City Building Code, New York City Fire Code, and Articles 480 and 706 for additional requirements for storage batteries.*

Section 701.12 - Revise Section 701.12(D)(2) to read as follows:

(2) Internal Combustion Engines as Prime Mover. Where internal combustion engines are used as the prime mover, an on-site fuel supply shall be provided with an on-premises fuel supply sufficient for not less than 6 hours of full-demand operation of the system. Where power is needed for the operation of the fuel transfer pumps to deliver fuel to a generator set day tank, the pumps shall be connected to the legally required standby power system.

Informational Note: *Operational requirements in other codes and regulations may specify fuel supplies that support longer durations of operation for some occupancies. See Articles 517 and 708.*

Section 701.12 - Revise Exception in Section 701.12(D)(3) to read as follows:

Exception: Legally required standby generators relying on natural gas as a fuel supply where allowed by the *New York City Building Code* shall not be required to maintain an on-site fuel supply.

Section 701.12 - Add a new Section 701.12(D)(6) to read as follows:

(6) Grounding of Temporary Generators Connected to Building Wiring System. Temporary generators used to supply building wiring systems shall comply with 250.35 (A) for separately derived systems or 250.35(B) for non-separately derived systems.

Section 701.12 – Revise Section 701.12(F) to read as follows:

(F) DELETED.

Section 701.12 – Revise Section 701.12(G) to read as follows:

(G) DELETED.

Section 701.12 – Revise Section 701.12(H) to read as follows:

(H) Fuel Cell System. Fuel cell systems used as a source of power for legally required standby systems shall be of suitable rating and capacity to supply and maintain the total load for not less than 6 hours of full-demand operation. Installation of a fuel cell system shall meet the requirements of Parts II through VIII of Article 692. Where a single fuel cell system serves as the normal supply for the building or group of buildings concerned, it shall not serve as the sole source of power for the legally required standby system.

Section 701.12 – Revise Section 701.12(I) to read as follows:

(I) DC Microgrid Systems. Microgrid systems shall not be permitted unless approved by the AHJ. Sources connected to a DC microgrid system shall be permitted where the system is capable of being isolated from all sources that are not legally required.

A DC microgrid system used as a source of power for legally required systems shall be of suitable rating and capacity to supply and maintain the total legally required load for not less than 6 hours of full-demand operation.

Where a DC microgrid system source serves as the normal supply for the building or group of buildings concerned, it shall not serve as the sole source of power for the legally required standby system.

SECTION 701.31

Section 701.31 – Revise Section 701.31 to read as follows:

701.31 Ground Fault Protection of Equipment. The alternate source for legally required standby systems shall not be permitted to have ground fault protection for equipment with automatic disconnecting means. Ground fault indication of the legally required standby source shall be provided pursuant to 701.6(D).

SECTION 701.32

Section 701.32 – Revise Section 701.32 to read as follows:

701.32 Coordination of Overcurrent Protective Devices. Overcurrent protective devices shall be coordinated in accordance with (A) or (B). Selective coordination shall be selected by a licensed professional engineer or other qualified person engaged primarily in the design, installation, or maintenance of electrical systems. The selection shall be documented and made available to those authorized to design, install, inspect, maintain, and operate the system.

(A) New Legally Required Standby Systems. Legally required standby system(s) overcurrent devices shall be selectively coordinated with all supply-side overcurrent protective devices.

(B) Modifications to Previously Approved Legally Required Standby Systems. Legally required standby system(s) overcurrent devices shall have limited level coordination with all supply-side overcurrent protective devices.

Exception to (A) and (B): Selective coordination shall not be required between 2 overcurrent devices located in series if no loads are connected in parallel with the downstream device.

ARTICLE 702
OPTIONAL STANDBY SYSTEMS

SECTION 702.1

Section 702.1 – Add a new Informational Note at the end of Section 702.1 to read as follows:

Informational Note: *For optional standby power system classification, power source enclosure fire rating, and additional requirements see Chapter 27 of the New York City Building Code.*

ARTICLE 705
INTERCONNECTED ELECTRIC POWER PRODUCTION SOURCES

SECTION 705.11

Section 705.11 - Revise Section 705.11(C)(2) to read as follows:

(2) In other than dwelling units, supply side source connection conductors shall be installed in accordance with the requirements of Article 230.

SECTION 705.30

Section 705.30 - Revise Section 705.30(C) to read as follow:

(C) Transformers. The following apply to the installation of transformers:

(1) For the purpose of overcurrent protection, the primary side of transformers with sources on each side shall be the side connected to the largest source of available fault current.

(2) Transformer secondary conductors shall be protected in accordance with 240.21 (C).

SECTION 705.40

Section 705.40 – Add a new Informational Note No. 3 at the end of Section 705.40 to read as follows:

Informational Note No. 3: *Utility companies may have additional requirements for interconnecting such power production sources.*

ARTICLE 706
ENERGY STORAGE SYSTEMS

SECTION 706.1

Section 706.1 – Add a paragraph after the opening paragraph in Section 706.1 to read as follows:

An Energy Storage System ("ESS") shall be of a chemistry that is recognized by the New York City Construction Codes, the *New York City Fire Code*, and other applicable New York City laws, rules and regulations, unless otherwise approved by the department. In addition to an electrical permit, the equipment shall be filed and approved by the department in accordance with Article 113 of the *Administrative Code*.

Section 706.1 – Add a new Informational Note No. 4 to read as follows:

Informational Note No. 4: *Contact the Office of Technical Certification and Research ("OTCR") for evaluation requirements of ESS battery chemistry not addressed or recognized by the New York City Construction Codes.*

SECTION 706.20

Section 706.20 – Revise Informational Notes Nos. 1-4 in Section 706.20(A) to read as follows:

Informational Note No. 1: *See Chapter 6 of the New York City Fire Code and rules promulgated by the fire department for ventilation considerations for specific battery chemistries.*

Informational Note No. 2: *Some storage technologies do not require ventilation.*

Informational Note No. 3: *A source for design of ventilation of battery systems is IEEE 1635-2018/ASHRAE Guideline 21-2018 Guide for the Ventilation and Thermal Management of Batteries for Stationary Applications.*

Informational Note No. 4: *Fire protection considerations are addressed in the New York City Fire Code and rules promulgated by the fire department.*

ARTICLE 725
CLASS 1, 2, & 3 REMOTE-CONTROL, SIGNALING, & POWER-LIMITED CIRCUITS

SECTION 725.24

Section 725.24 – Revise Section 725.24 to read as follows:

725.24 Mechanical Execution of Work. Class 1, Class 2, and Class 3 circuits shall be installed in a neat and workmanlike manner. Cables and conductors installed exposed on the surface of ceilings and sidewalls shall be

supported by the building structure in such a manner that the cable will not be damaged by normal building use. Such cables shall be supported and secured by approved non-combustible straps, staples, cable ties, hangers, or similar fittings and related installation accessories designed and installed so as not to damage the cables. The installation shall also comply with 300.4(D).

Informational Note No.1: *Paint, plaster, cleaners, abrasives, corrosive residues, or other contaminants can result in an undetermined alteration of Class 1, Class 2, Class 3, and Power Limited Tray Cable (PLTC) properties.*

Informational Note No.2: *Exposed wiring is intended to be securely held in place to avoid entanglement of fire response personnel during fire conditions.*

SECTION 725.25

Section 725.25 – Revise Section 725.25 to read as follows:

725.25 Abandoned Cables, Power Sources and Other Associated Equipment. The accessible portion of abandoned Class 2, Class 3, and PLTC cables shall be removed. Where cables are identified for future use with a tag, the tag shall be of sufficient durability to withstand the environment involved. Abandoned cables, power sources, and other associated equipment shall be removed. Power sources and other associated equipment tagged for future use shall be de-energized.

SECTION 725.48

Section 725.48(B)(1) – Revise Section 725.48(B)(1) to read as follows:

(1) **In a Cable, Enclosure, or Raceway.** Class 1 circuits and power-supply circuits shall be permitted to occupy the same cable, enclosure, or raceway without a barrier only where the equipment powered is functionally associated. Class I circuits shall be permitted to be installed together with the conductors of electric light, power, and medium power network-powered broadband communications circuits where separated by a barrier.

SECTION 725.136

Section 725.136 – Revise Section 725.136 to read as follows:

725.136 Separation from Electric Light, Power, Class 1, and Medium-Power Network-Powered Broadband Communications Cables.

(A) General. Cables and conductors of Class 2 and Class 3 circuits shall not be placed in any cable, cable tray, compartment, enclosure, manhole, outlet box, device box, raceway, or similar fitting with conductors of electric light, power, Class 1, and medium-power network-powered broadband communications circuits unless permitted by 725.136(B) through (I).

(B) Separated by Barriers. Class 2 and Class 3 circuits shall be permitted to be installed together with the conductors of electric light, power, Class 1, and medium power network-powered broadband communications circuits where they are separated by a barrier.

(C) Raceways Within Enclosures. In enclosures, Class 2 and Class 3 circuits shall be permitted to be installed in a raceway to separate them from Class 1 and medium-power network-powered broadband communications circuits.

(D) Associated Systems Within Enclosures. Class 2 and Class 3 circuit conductors in compartments, enclosures, device boxes, outlet boxes, or similar fittings shall be permitted to be installed with electric light, power, Class 1, and medium-power network-powered broadband communications circuits where they are introduced solely to connect the equipment connected to Class 2 and Class 3 circuits, and where (1) or (2) applies:

(1) The electric light, power, Class 1 and medium-power network-powered broadband communications circuit conductors are routed to maintain a minimum of 0.25 in. (6 mm) separation from the conductors and cables of Class 2 and Class 3 circuits.

(2) The circuit conductors operate at 150 volts or less to ground and also comply with 1 of the following:

a. The Class 2 and Class 3 circuits are installed using Type CL3, CL3R, or CL3P or permitted substitute cables, provided these Class 3 cable conductors extending beyond the jacket are separated by a minimum of 0.25 in. (6 mm) or by a nonconductive sleeve or nonconductive barrier from all other conductors.

b. The Class 2 and Class 3 circuit conductors are installed as a Class 1 circuit in accordance with 725.41.

(E) Enclosures with Single Opening. Class 2 and Class 3 circuit conductors entering compartments, enclosures, device boxes, outlet boxes, or similar fittings shall be permitted to be installed with Class 1 and medium-power network-powered broadband communications circuits where they are introduced solely to connect the equipment connected to Class 2 and Class 3 circuits. Where Class 2 and Class 3 circuit conductors must enter an enclosure that is provided with a single opening, they shall be permitted to enter through a single fitting (such as a tee), provided the conductors are separated from the conductors of the other circuits by a continuous and firmly fixed nonconductor, such as flexible tubing.

(F) Manholes. Underground Class 2 and Class 3 circuit conductors in a manhole shall be permitted to be installed with Class 1 and medium power network-powered broadband communications circuits where 1 of the following conditions is met:

(1) The electric light, power, Class 1, and medium-power network-powered broadband communications circuit conductors are in a metal enclosed cable or Type UF cable.

(2) The Class 2 and Class 3 circuit conductors are permanently and effectively separated from the conductors of other circuits by a continuous and firmly fixed nonconductor, such as flexible tubing, in addition to the insulation or covering on the wire.

(3) The Class 2 and Class 3 circuit conductors are permanently and effectively separated from conductors of the other circuits and securely fastened to racks, insulators, or other approved supports.

(G) Cable Trays. Class 2 and Class 3 circuit conductors shall be permitted to be installed in cable trays, where the conductors of the electric light and Class 1 circuits are separated by a solid fixed barrier of a material compatible with the cable tray or where the Class 2 or Class 3 circuits are installed in Type MC cable.

(H) In Hoistways. In hoistways, Class 2, or Class 3 circuit conductors shall be installed in rigid metal conduit, intermediate metal conduit, or electrical metallic tubing. For elevators or similar equipment, these conductors shall be permitted to be installed as provided in 620.21.

(I) Other Applications. For other applications, conductors of Class 2 and Class 3 circuits shall be separated by at least 2 in. (50 mm) from conductors of any electric light, power or medium-power network-powered broadband communications circuits unless 1 of the following conditions is met:

(1) Either all of the electric light, power, Class 1 and medium-power network-powered broadband communications circuit conductors or all of the Class 2 and Class 3 circuit conductors are in a raceway or in metal-sheathed, metal-clad, non–metallic-sheathed, Type TC, or Type UF cables; or

(2) All of the electric light, power, and medium-power network-powered broadband communications circuit conductors are permanently separated from all of the Class 2 and Class 3 circuit conductors by a continuous and firmly fixed nonconductor, such as porcelain tubes or flexible tubing, in addition to the insulation on the conductors.

SECTION 725.139

Section 725.139(E)(1) – Revise Item (1) in the list of items in Section 725.139(E)(1) to read as follows:

(1) DELETED.

SECTION 725.144

Section 725.144 – Revise the first sentence in Section 725.144 to read as follows:

725.144 Transmission of Power and Data. Sections 725.144(A), (B), and (C) shall apply to Class 2 and Class 3 circuits that transmit power and data to a powered device.

Section 725.144(C) - Add a new Section 725.144(C) to read as follows:

(C) Use of Class 2-LP or Class 3-LP Cables to Transmit Power and Data for Emergency and Egress Lighting Systems.

(1) System design shall be permitted by qualified persons under engineering supervision.

(2) System Design shall be in accordance with requirements as listed In Article 700 Emergency Systems.

ARTICLE 760
FIRE ALARM SYSTEMS

SECTION 760.1

Section 760.1 – Revise Section 760.1 to read as follows:

760.1 Scope. This article covers the installation of wiring and equipment of fire alarm systems including all circuits controlled and powered by the fire alarm system.

Informational Note No. 1: *Fire alarm systems include fire detection and alarm notification, sprinkler waterflow, and sprinkler supervisory systems. Circuits controlled and powered by the fire alarm system include circuits for the control of building systems safety functions, elevator capture, elevator shutdown, door release, smoke doors and damper control, fire doors and damper control and fan shutdown, but only where these circuits are powered by and controlled by the fire alarm system. For further information on the installation and monitoring of integrity requirements for fire alarm systems, refer to NFPA 72, National Fire Alarm Code, as amended by Appendix Q of the New York City Building Code.*

Informational Note No. 2: *Class 1, 2, and 3 circuits are defined in Article 725.*

Informational Note No. 3: *See Section 907 of the New York City Building Code for components description and use.*

SECTION 760.2

Section 760.2 – Revise Section 760.2 to add new definitions for "Dedicated Function Fire Alarm System (DFS)", "Dedicated Function Fire Alarm Control Unit (DFCU)", and "Releasing Fire Alarm System (RFAS)" in alphabetical order to read as follows:

Dedicated Function Fire Alarm System (DFS). A protected premises fire alarm system installed specifically to perform emergency control function(s) where a building fire alarm system is not required. (NFPA 72 - 3.3.103.4.2 as amended by Appendix Q of *New York City Building Code*.)

Dedicated Function Fire Alarm Control Unit (DFCU). A protected premises fire alarm control unit that is intended to operate specifically identified emergency control function(s). {NFPA 72 – 3.3.100.2.1 as amended by Appendix Q of the *New York City Building Code*.}

Informational Note: *Examples of a dedicated function fire alarm control unit include a supervisory control unit and either an automatic sprinkler alarm or an elevator recall control.*

Releasing Fire Alarm System (RFAS). A protected premises fire alarm system that is part of a fire suppression system or that provides control inputs to a fire suppression system related to the fire suppression system's sequence of operations and outputs for other signaling and notification. {NFPA 72 - 3.3.103.4.3 as amended by Appendix Q of the *New York City Building Code*.}

Informational Note: *Examples of a releasing service fire alarm system include pre-action and clean air agent systems.*

SECTION 760.3

Section 760.3 – Revise Section 760.3(F) to read as follows:

(F) Optical Fiber Cables. Where optical fiber cables are utilized for fire alarm circuits, the cables shall be supervised and installed in EMT, IMC or RMC and terminated in equipment listed for fire alarm use. Where installed underground between buildings, optical fiber cables shall be permitted to be installed in non-metallic conduit buried or concrete encased.

Section 760.3 – Revise Section 760.3(L) to read as follows:

(L) DELETED.

Section 760.3 – Revise Section 760.3(M) to read as follows:

(M) DELETED.

Section 760.3 – Revise the Exception to Section 760.3(O) to read as follows:

Exception: DELETED.

SECTION 760.24

Section 760.24 – Revise Section 760.24(B) to read as follows:

(B) Circuit Integrity (CI) Cable. Where permitted to be exposed, Circuit Integrity (CI) cable shall be supported at a distance not exceeding 24 in. (610 mm) Cable supports and fasteners shall be steel.

Informational Note: *For additional information, refer to Sections 760.52(A), 760.130(B)(1), and 760.131(A), as applicable.*

SECTION 760.32

Section 760.32 – Revise the Informational Note in Section 760.32 to read as follows:

Informational Note: An example of a protective device suitable to provide protection is a device tested to the requirements of ANSI/UL 497B, Standard for Protectors for Data Communications and Fire Alarm Circuits.

SECTION 760.33

Section 760.33 – Add a new Section 760.33 to read as follows:

760.33 Fire Alarm System and Equipment Grounding. Fire alarm system and equipment grounding shall be installed in accordance with the following:

(A) Grounding Electrode Conductor. Each service or separately derived system supplying a fire alarm system shall be provided with a separate grounding electrode conductor originating at any point on the building grounding electrode system and sized and installed in accordance with Part III of Article 250.

(B) Equipment Grounding Conductor. Where there are conduits supplying 120V to the fire command center, control unit, or distributed control cabinets, a separate green insulated equipment grounding conductor shall be sized and installed in accordance with Article 250, Table 250.122.

SECTION 760.41

Section 760.41 – Revise Section 760.41 to read as follows:

760.41 NPLFA Circuit Power Source Requirements. The power source for fire alarm circuits shall comply with (A) through (E).

(A) Primary Power Source. All fire alarm circuits shall be provided with a primary power source not exceeding 600 volts nominal supplied by utility company power or isolated plant. The primary power supply to the fire alarm system shall comply with the following:

(1) Primary Power Supply for the Fire Alarm System(s). Where a fire alarm system is installed as required by the *New York City Building Code*, primary power supply shall be connected to the primary power source ahead of all building service disconnecting means so that the building service disconnecting means can be opened without de-energizing the fire alarm supply.

(2) Primary Power Supply for Dedicated Function Fire Alarm System. Primary power supply for Dedicated Function Fire Alarm System shall be permitted to be connected to the power supply through the protected area of such system by means of a connection ahead of the disconnecting means for the power supply to the protected area.

(3) Primary Power Supply for Releasing Fire Alarm System(s). Where the building is not equipped with an automatic or manual fire alarm system power riser, primary power supply for Releasing Fire Alarm System shall be permitted to be connected to the power supply through the protected area of such system by means of a connection ahead of the disconnecting means for the power supply to the protected area.

(4) For Nonrequired (Voluntary) Fire Alarm Systems Primary Power Supply. Primary power supply for nonrequired (voluntary) fire alarm system shall be permitted to be connected to the power supply through the protected area of such system by means of a connection ahead of the disconnecting means for the power supply to the protected area.

Informational Note: *Dedicated Function Fire Alarm System (required and voluntary) and Releasing Fire Alarm System may also use the connected means defined in paragraph (1) where available.*

(B) Secondary Power Source. Where an emergency power system is provided or required to be provided for emergency system loads, the fire alarm circuits shall be connected to the emergency power system. The secondary power supply shall be connected such that all other disconnecting means serving other building emergency loads can be opened without de-energizing the facility fire alarm secondary power supply.

All building fire alarm systems connected to an emergency generator shall be provided with a dedicated transfer switch and be connected ahead of the emergency generator overcurrent protective devices as follows:

(1) 208Y/120 volts systems-by a dedicated fused disconnecting means.

(2) 480Y/277 volts systems-by a dedicated fused disconnecting means on the secondary of the associated transformer.

(C) Battery. Regardless of whether a secondary power source is also provided, each fire alarm system shall be equipped with a storage battery power supply sized to meet the operating power requirements of the system in accordance with (1), (2) or (3) below and shall automatically connect to and operate the fire alarm system upon failure of the primary or secondary power supply or sources.

(1) With Voice Communications Capability. Supervisory operation for 24 hours followed by full load operation for 6 hours for systems with voice communications capability.

Informational Note: *A 45-minute period of voice and alarm operation at the maximum connected load shall be considered equivalent to 6 hours of total system operation.*

(2) Without Voice Communications Capability. Supervisory operation for 24 hours followed by full load operation for 15 minutes for systems without voice communications capability.

(3) DFS and RFAS. Supervisory operation for 24 hours followed by full load operation for 15 minutes.

(D) Arrangement of Power Sources. 1 source of power shall be connected to the fire alarm system at all times. The primary and secondary power sources shall be arranged and controlled by an automatic transfer switch dedicated to the fire alarm system such that the secondary source will be automatically connected to the fire alarm system should the primary power source fail. The following conditions shall be met where applicable:

(1) Intermediary devices between the fire alarm system power supply and the power source, other than fused disconnect switches, transformers and automatic transfer switches are prohibited. Such disconnect switches, transformers, and automatic transfer switches shall supply only the fire alarm system and other systems specifically permitted by applicable New York City rules and regulations.

(2) The primary and secondary power source shall each be provided with a means of disconnecting from the fire alarm system. Each disconnecting means shall consist of a fused disconnect switch, locked in the ON position. The key shall be kept on premises and made accessible only to authorized personnel. Such disconnect shall be painted red and permanently identified as a fire alarm circuit and labeled as to system/location served.

(3) The fire alarm system fused disconnect switch on the transformer secondary side shall comply with the requirements of the primary and secondary power source fused disconnect switches pursuant to Article 240.

(4) For buildings served at up to 300 volts to ground, the service voltage shall be transformed to 208/120 volts and a fire alarm fused disconnect, provided within a circuit length of 10 feet (3 m), shall be connected at the transformer secondary on the 208/120 volt side.

(5) Approved disconnecting means assembly, such as fusible panel boards with compact branch fused disconnects or fusible switches, with selectively coordinated overcurrent protection device shall be provided where multiple circuits are required to support the fire alarm system and related auxiliaries.

(E) Branch Circuit. An individual branch circuit shall be required for the supply of the power source. The location of the branch circuit overcurrent protective device shall be permanently identified. The circuit disconnecting means shall have red identification, shall be accessible only to qualified personnel, shall not contain any splices, and shall be identified as "FIRE ALARM CIRCUIT". This branch circuit shall not be supplied through ground-fault circuit interrupter or arc-fault circuit interrupters. Where splicing is necessary, a listed method utilizing irreversible mechanical wire termination shall be permitted. The fire alarm branch-circuit disconnecting means shall be permitted to be secured in the ON position.

SECTION 760.43

Section 760.43 – Revise Section 760.43 to read as follows:

760.43 NPLFA Circuit Overcurrent Protection. Overcurrent protection for conductors 14 AWG and larger shall be provided in accordance with the conductor ampacity without applying the ampacity adjustment and correction factors of 310.15 to the ampacity calculation.

Exception: This section does not apply to other articles of this Code that permit or require other overcurrent protection.

SECTION 760.46

Section 760.46 – Revise Section 760.46 to read as follows:

760.46 NPLFA Circuit Wiring. Installation of non-power limited fire alarm feeders and branch circuits shall be in accordance with applicable portions of 110.3(B), 300.7, 300.11, 300.15, 300.17, 300.19(B) and other appropriate articles of Chapter 3 using raceway methods described in Articles 342, 344, and 358, or use Type MI Cable in

accordance with Article 332. For the last 3 ft (914 mm) of NPLFA branch circuit, a Flexible Metallic Conduit (FMC) or Liquidtight Flexible Metallic Conduit (LFMC) shall be permitted.

Exception No. 1: As provided in 760.48 through 760.52.

Exception No. 2: This section does not apply where other articles of this Code require other methods.

Exception No. 3: Where other articles of this code require other wiring to be used, a listed electrical protective system with minimum 2-hour fire rating shall be permitted.

SECTION 760.48

Section 760.48 – Revise Section 760.48(A) to read as follows:

760.48 Conductors of Different Circuits in Same Cable, Enclosure, or Raceway.

(A) NPLFA Circuits. Non-power limited fire alarm circuit conductors shall not be permitted to occupy the same cable, enclosure, or raceway with circuit conductors of other systems.

Section 760.48 – Revise Section 760.48(B) to read as follows:

(B) Fire Alarm with Power-Supply Circuits. Power supply and fire alarm circuit conductors shall be permitted in the same enclosure only where connected to the same equipment.

SECTION 760.49

Section 760.49 – Revise Section 760.49 to read as follows:

(A) Sizes and Use. Only copper conductors size 14 AWG and larger shall be permitted to be used as NPLFA circuit conductors.

(B) Insulation. Insulation on conductors shall be suitable for 600 volts, 90 C, and shall comply with Article 310. Conductors shall be Type THHN, THWN/THHN, TFFN, TFN, FEP, RHH, RHW2, XHH, XHHW, MI, or listed electrical protective systems. Application of conductor ampacity shall be in accordance with 110.14 for terminal device ratings.

(C) Conductor Materials. Conductors shall be solid copper up to size 10 AWG. Stranded copper conductors shall be used for sizes 8 AWG and larger.

SECTION 760.51

Section 760.51 – Revise Section 760.51 to read as follows:

(A) NPLFA Circuits. Where only non–power-limited fire alarm circuit conductors are in a raceway, the number of conductors shall be determined in accordance with 300.17. The ampacity adjustment factors given in 310.15(C)(1) shall apply if such conductors carry continuous load in excess of 10 percent of the ampacity of each conductor.

(B) DELETED.

(C) DELETED.

SECTION 760.52

Section 760.52 – Add a new Section 760.52 to read as follows:

760.52 NPLFA Mechanical Execution of Work. Installation shall comply with the following:

(A) Mechanical Rooms, Elevator Rooms, Garages and Loading Docks. All wiring installed up to 3 ft (2.4 m) above the finished floor in garages, loading docks, mechanical rooms, and elevator rooms shall meet the installation requirements of Article 344. All wiring installed over 8 ft (2.4 m) above the finished floor shall meet the installation

requirements of Articles 332, 342, 344, or 358. Where flexibility is required after installation, Flexible Metallic Conduit (FMC) or Liquidtight Flexible Metallic Conduit (LFMC) shall be permitted up to 36" at the last termination.

Exception No. 1: For mechanical rooms and elevator rooms having a floor area of less than 900 square feet (83.6 square meters), installation pursuant to Articles 332, 342, 344, or 358 is permitted without height limitation.

Exception No. 2: Where pathway survivability is required, a listed electrical protective system with minimum 2-hour fire rating shall be permitted.

(B) Installation. Installation of raceways, boxes, enclosures, cabinets, and wiring shall conform to the following requirements:

(1) Covers of boxes, enclosures, and cabinets shall be painted red and permanently identified as to use.

(2) Penetrations through rated walls, ceilings, and floors shall be fire stopped.

(3) Raceways or wiring shall not penetrate the top of any control equipment cabinet or enclosure.

(4) Raceways shall not be installed in stairs enclosures unless they are serving the stairways.

Informational Note: *Refer to Chapter 10 of the New York City Building Code for raceway requirements allowed in stairs enclosures.*

SECTION 760.53

Section 760.53 – Revise Section 760.53 to read as follows:

760.53 DELETED.

SECTION 760.121

Section 760.121 - Revise Section 760.121(B) to read as follows:

(B) Branch Circuit. For power source requirements, refer to 760.41.

SECTION 760.124

Section 760.124 – Revise the Informational Note in Section 760.124 to read as follows:

Informational Note: *DELETED.*

SECTION 760.127

Section 760.127 – Revise the Exception in Section 760.127 to read as follows:

Exception: DELETED.

SECTION 760.130

Section 760.130 – Revise Section 760.130 to read as follows:

(A) NPLFA Wiring Methods and Materials. Installation shall be in accordance with 760.46, and conductors shall be solid or stranded copper.

Exception: The ampacity adjustment factors given in 310.15(B)(3)(a) shall not apply.

(B) PLFA Wiring Methods and Materials. Power-limited fire alarm conductors and cables described in 760.179 shall be installed as detailed in 760.130(B)(1), (B)(2), or (B)(3) of this section and 300.7. Devices shall be installed in accordance with 110.3(B), 300.11(A) and 300.15 with all wiring supported from the building structure independently.

(1) In Raceways, Exposed on Ceilings or Sidewalls, or Fished in Concealed Spaces. In raceways or exposed above 8 ft (2.4 m) on the surface of ceiling and sidewalls, or fished 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 supported at a maximum of 5 ft (1.5 m) spacing and installed in such a way that maximum protection against physical damage is afforded by building construction. Where located within 8 ft (2.4 m) of the floor, cables shall be installed in raceway as per Article 342, 344, 358 or 386. Where flexibility is required after installation, Flexible Metallic Conduit (FMC) or Liquidtight Flexible Metallic Conduit (LFMC) shall be permitted up to 36 inches (915 mm) at the last termination.

(2) Passing Through a Floor or Wall. Cables shall be installed in metal raceways where passing through a floor or wall to a height of 8 ft (2.4 m) above the floor, unless adequate protection can be afforded by building construction such as detailed in 760.130(B)(1) or unless an equivalent solid guard is provided.

Informational Note: *Protection by building construction includes, but is not limited to, raised floors, shafts, telephone and communications equipment rooms and closets, and rooms used exclusively for fire alarm equipment.*

(3) In Hoistways. Cables shall be installed in rigid metal conduit, intermediate metal conduit, or electrical metallic tubing, where installed in hoistways.

Exception: As provided for in 620.21 for elevators and similar equipment.

(4) Terminations and Splices. Terminations and splices shall be made in listed fittings, boxes, enclosures, fire alarm devices, or utilization equipment. Splices shall be limited to locations where the conditions of installation require the use of splices. Splices and terminations in riser cables are prohibited except where made in fire alarm equipment terminal cabinets. Mechanical connections shall be listed in accordance with UL 486A - 486C or if soldered, conductors shall first be joined so as to be mechanically and electrically secure prior to soldering. Temperature rating of completed splices shall be equal to or exceed the temperature rating of the highest rated conductor.

(5) Physical Protection. Where a Smoke Control System is provided, all wiring, regardless of voltage, shall be installed in raceways.

Informational Note: *For additional information on Smoke Control System wiring requirements, refer to Chapter 9 of the New York City Building Code.*

SECTION 760.131

Section 760.131 – Add a new Section 760.131 to read as follows:

760.131 PLFA Mechanical Execution of Work. Installation shall conform to the following requirements:

(A) Mechanical Rooms, Elevator Rooms, Garages and Loading Docks. All wiring installed up to 8 ft (2.4 m) above the finished floor in garages, loading docks, mechanical rooms, and elevator rooms shall meet the installation requirements of Article 344. Wiring installed above 8 ft (2.4 m) above finished floor shall meet the installation requirement of Articles 342, 344, and 358, or use Type MI Cable in accordance with Article 332. Where flexibility is required after installation, Flexible Metallic Conduit (FMC) or Liquidtight Flexible Metallic Conduit (LFMC) shall be permitted up to 36 inches (915 mm) at the last termination.

Exception: For mechanical rooms and elevator rooms having a floor area of less than 900 square feet (83.6 square meters), installation pursuant to Articles 332, 342, 344, or 358 is permitted without height limitation.

(B) Releasing Fire Alarm Systems. Suppression systems activated by automatic fire detection and using fire alarm cables shall be installed pursuant to Articles 332, 342, 344, or 358. Such systems shall include, but not be limited to, pre-action sprinkler, deluge sprinkler, water mist, clean air agent, Halon, range hood, CO2, and dry chemicals."

(C) Installation. Installation of raceways, boxes, enclosures, cabinets, and wiring shall conform to the following requirements:

(1) Covers of boxes, enclosures, and cabinets shall be painted red and permanently identified as to use.

(2) Penetrations through rated walls, ceilings, and floors shall be firestopped.

(3) Raceways or wiring shall not penetrate the top of any control equipment cabinet or enclosure.

(4) Raceways shall not be installed in stair enclosures unless they are serving the stairways.

Informational Note: *For allowed raceways that are serving stairs enclosures, refer to Section 1023.5 of the New York City Building Code.*

(5) Cables shall be secured by cable ties, straps, or similar fittings designed and installed so as not to damage cables. Such fittings shall be secured in place at intervals not exceeding 5 ft (1.5 m) on center and within 1 ft (300 mm) of associated cabinet, enclosure, or box.

SECTION 760.135

Section 760.135 – Revise Section 760.135(B) to read as follows:

(B) Ducts Specifically Fabricated for Environmental Air. The following cables shall be permitted in ducts specifically fabricated for environmental air as described in 300.22 (B), if they are directly associated with the air distribution system:

(1) Types FPLP "NYC Certified Fire Alarm Cable" and FPLP-CI cables in lengths as short as practicable to perform the required function

(2) Types FPLP "NYC Certified Fire Alarm Cable" and FPLP-CI installed in raceways that are installed in compliance with 300.22(B)

Informational Note: *For information on fire protection of wiring installed in fabricated ducts, see 4.3.4.1 and 4.3.11.3.3 of NFPA 90A-2018, Standard for the Installation of Air-Conditioning and Ventilating Systems.*

Section 760.135 – Revise Section 760.135(C) to read as follows:

(C) Other Spaces Used for Environmental Air (Plenums). The following cables shall be permitted in other spaces used for environmental air as described in 300.22(C):

(1) Type FPLP "NYC Certified Fire Alarm Cable".

(2) Type FPLP "NYC Certified Fire Alarm Cable" installed in plenum communications raceways.

(3) Types FPLP "NYC Certified Fire Alarm Cable" and FPLP-CI cables supported by open metallic cable trays or cable tray systems.

(4) Types FPLP "NYC Certified Fire Alarm Cable" installed in raceways that are installed in compliance with 300.22(C).

(5) Types FPLP "NYC Certified Fire Alarm Cable" supported by solid bottom metal cable trays with solid metal covers in other spaces used for environmental air (plenums) as described in 300.22(C).

(6) Types FPLP "NYC Certified Fire Alarm Cable" installed in plenum communications raceways, riser communications raceways, or general-purpose communications raceways supported by solid bottom metal cable trays with solid metal covers in other spaces used for environmental air (plenums) as described in 300.22(C).

Section 760.135 – Revise Section 760.135(D) to read as follows:

(D) Risers — Cables in Vertical Runs. Type FPLP "NYC Certified Fire Alarm Cable" shall be permitted in vertical runs penetrating 1 or more floors and in vertical runs in a shaft:

Informational Note: *See 300.21 for firestop requirements for floor penetrations.*

Section 760.135 – Revise Section 760.135(E) to read as follows:

(E) Risers — Cables in Metal Raceways. Type FPLP "NYC Certified Fire Alarm Cable" shall be permitted in metal raceways in a riser having firestops at each floor:

Informational Note: *See 300.21 for firestop requirements for floor penetrations.*

Section 760.135 – Revise Section 760.135(F) to read as follows:

(F) Risers — Cables in Fireproof Shafts. Type FPLP "NYC Certified Fire Alarm Cable" shall be permitted to be installed in fireproof riser shafts having firestops at each floor.

Informational Note: *See 300.21 for firestop requirements for floor penetrations.*

Section 760.135 – Revise Section 760.135(G) to read as follows:

(G) Risers — One- and Two-Family Dwellings. Type FPLP "NYC Certified Fire Alarm Cables" shall be permitted in one- and two-family dwellings.

Section 760.135 – Revise Section 760.135(H) to read as follows:

(H) Other Building Locations. Type FPLP "NYC Certified Fire Alarm Cable" shall be permitted to be installed in building locations other than the locations covered in 770.113(B) through (H).

SECTION 760.136

Section 760.136 – Revise Section 760.136(D)(2) to read as follows:

(2) The circuit conductors operate at 150 volts or less to ground and also comply with 1 of the following:

a. The fire alarm power-limited circuits are installed using Type FPLP "NYC Certified Fire Alarm Cable" provided these power-limited cable conductors extending beyond the jacket are separated by a minimum of 0.25 in. (6 mm) or by a nonconductive sleeve or nonconductive barrier from all other conductors.

b. DELETED.

Section 760.136 – Revise Section 760.136(F) to read as follows:

(F) In Hoistways. In hoistways, power-limited fire alarm circuit conductors shall be installed in rigid metal conduit, intermediate metal conduit, or electrical metallic tubing. For elevators or similar equipment, these conductors shall be permitted to be installed as provided in 620.21.

Section 760.136 – Revise Section 760.136(G)(1) to read as follows:

(1) Either (a) all of the electric light, power, Class 1, nonpower-limited fire alarm, and medium-power network powered broadband communications circuit conductors or (b) all of the power-limited fire alarm circuit conductors are in a raceway or metal-sheathed or metal-clad cables.

SECTION 760.139

Section 760.139 – Revise Section 760.139 to read as follows:

760.139 DELETED.

SECTION 760.142

Section 760.142 – Revise Section 760.142 to read as follows:

760.142 Conductor Size. Conductors shall not be smaller than 18 AWG in size.

SECTION 760.154

Section 760.154 – Revise Section 760.154 to read as follows:

760.154 DELETED.

SECTION 760.176

Section 760.176 – Revise Section 760.176(G) to read as follows:

(G) NPLFA Cable Markings. Non-power-limited fire alarm circuit cables shall be permitted to be marked with a maximum usage voltage rating of 150 volts. Cables that are listed for circuit integrity shall be identified with the suffix "CI" as defined in 760.176(F).

SECTION 760.179

Section 760.179 – Revise Section 760.179(B) to read as follows:

(B) Conductor Size. The size of conductors in single or multi-conductor cables shall not be smaller than 18 AWG.

Section 760.179 – Revise Section 760.179(D) to read as follows:

(D) Type FPLP. Type FPLP power-limited fire alarm plenum cable shall be listed as being suitable for use in ducts, plenums, and other space used for environmental air and shall also be listed as having adequate fire-resistant and low smoke–producing characteristics. Type FPLP power-limited fire alarm cable shall be listed with the following additional requirements:

(1) Type FPLP only; minimum insulation thickness 15 mils; minimum temperature 150 C.

(2) Red colored jacket overall; minimum thickness 25 mils.

(3) Cable shall bear additional description "ALSO CLASSIFIED FOR USE AS FIRE ALARM CABLE IN NEW YORK CITY," and shall be legible without removing jacket.

Informational Note: *1 method of defining a cable that is low-smoke producing cable and fire-resistant cable is that the cable exhibits a maximum peak optical density of 0.50 or less, an average optical density of 0.15 or less, and a maximum flame spread distance of 5 ft (1.52 m) or less when tested in accordance with NFPA 262-2019, Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces.*

Section 760.179 – Revise Section 760.179(E) to read as follows:

(E) DELETED.

Section 760.179(F) – Revise Section 760.179(F) to read as follows:

(F) DELETED.

Section 760.179 – Revise Section 760.179(G) to read as follows:

(G) Fire Alarm Circuit Integrity (CI) Cable or Electrical Circuit Protective System. Cables that are used for survivability of critical circuits under fire conditions shall meet either 760.179(G)(1) or (G)(2).

Informational Note No. 1: *Fire alarm circuit integrity (CI) cable and electrical circuit protective systems may be used for fire alarm circuits to comply with the survivability requirements of NFPA 72-2019, National Fire Alarm and Signaling Code, 12.4.3 and 12.4.4, that the circuit maintain its electrical function during fire conditions for a defined period of time.*

Informational Note No. 2: *1 method of defining circuit integrity (CI) cable or an electrical circuit protective system is by establishing a minimum 2-hour fire-resistive rating for the cable when tested in accordance with ANSI/UL 2196-2017, Standard for Fire Test for Circuit Integrity of Fire-Resistive Power, Instrumentation, Control and Data Cables*

Informational Note No. 3: *UL guide information for electrical circuit protective systems (FHIT) contains information on proper installation requirements for maintaining the fire rating.*

(1) Circuit Integrity (CI) Cables. Circuit integrity (CI) cables specified in 760.179(D) and used for survivability of critical circuits shall have an additional classification using the suffix "CI." Circuit integrity (CI) cables shall only be permitted to be installed in a raceway where specifically listed and marked as part of an electrical circuit protective system as covered in 760.179(G)(2).

(2) Electrical Circuit Protective System. Cables specified in 760.179(D) and (G)(1), which are part of an electrical circuit protective system, shall be identified with the protective system number and hourly rating printed on the outer jacket of the cable and installed in accordance with the listing of the protective system.

Section 760.179 – Revise Section 760.179(H) to read as follows:

(H) DELETED.

Section 760.179 – Revise Section 760.179(I) to read as follows:

(I) Cable Marking. The cable shall be marked in accordance with subsection 760.179(D)(3) and its rating marked as "NYC Certified Fire Alarm Cable". Cables that are listed for circuit integrity shall be identified with the suffix CI as defined in 760.179(G).

Informational Note: *Voltage ratings on cables may be misinterpreted to suggest that the cables may be suitable for Class 1, electric light, and power applications.*

Exception: Voltage markings shall be permitted where the cable has multiple listings and voltage marking is required for 1 or more of the listings.

Section 760.179 – Revise Section 760.179(J) to read as follows:

(J) Insulated Continuous Line-Type Fire Detectors. Insulated continuous line-type fire detectors shall be rated in accordance with 760.179(C), listed as being resistant to the spread of fire in accordance with 760.179(D), marked in accordance with 760.179(I), and the jacket compound shall have a high degree of abrasion resistance.

ARTICLE 770
OPTICAL FIBER CABLES

SECTION 770.2

Section 770.2 - Revise the definition of "Abandoned Optical Fiber Cable" in Section 770.2 to read as follows:

Abandoned Optical Fiber Cable. Installed optical fiber cable that is not terminated at equipment other than a connector and not identified for future use with a tag securely fixed to each end and indicating the location of the opposing end.

SECTION 770.25

Section 770.25 – Revise Section 770.25 to read as follows:

770.25 Abandoned Cables, Power Sources and Other Associated Equipment. The accessible portion of abandoned optical fiber and other cables, power sources, and other associated equipment shall be removed. Where cables are identified for future use with a tag, such tag shall be of sufficient durability to withstand the environment involved. Power sources and other associated equipment tagged for future use shall be de-energized.

SECTION 770.47

Section 770.47- Revise Section 770.47 to read as follows:

770.47 Underground Optical Fiber Cables Entering Buildings. Underground optical fiber cables entering buildings shall comply with 770.47(A) and (B).

(A) Underground Systems with Electric Light, Power or Class 1 Circuit Conductors. Underground conductive optical fiber cables entering buildings with electric light, power, Class 1, or circuit conductors in a raceway, handhole enclosure, or manhole shall be located in a section separated from such conductors by means of brick, concrete, or tile partitions or by means of a suitable barrier.

(B) Direct-Buried Cables and Raceways. Direct-buried conductive optical fiber cables shall be separated by at least 300 mm (12 in.) from conductors of any electric light, power or Class 1 circuit conductors.

Exception No. 1: Direct-buried conductive optical fiber cables shall not be required to be separated by at least 12 in. (300 mm) from electric service conductors where electric service conductors are installed in raceways or have metal cable armor.

Exception No. 2: Direct-buried conductive optical fiber cables shall not be required to be separated by at least 12 in. (300 mm) from electric light or power branch-circuit or feeder conductors, or Class 1 circuit conductors where electric light or power branch-circuit or feeder conductors or Class 1 circuit conductors are installed in a raceway or in metal-sheathed, metal-clad, or Type UF or Type USE cables.

Informational Note: *Utility company installation standards may require more stringent separation clearance for underground communication cables.*

SECTION 770.48

Section 770.48(B)(3) – Revise Item (3) in the list of items in Section 770.48(B) to read as follows:

(3) DELETED.

SECTION 770.100

Section 770.100(B)(3)(2) – Revise Section 770.100(B)(3)(2) to read as follows:

(2) If the building or structure served has no grounding means, as described in 770.100(B)(2) or (B)(3)(1), to any one of the individual grounding electrodes described in 250.52(A)(7) and (A)(8) or to a ground rod or pipe not less than 5 ft (1.5 m) in length and ½ in. (12.7 mm) in diameter, driven, where practicable, into permanently damp earth and separated from lightning protection system conductors as covered in 800.53 and at least 6 ft (1.8 m) from electrodes of other systems. Steam, hot water pipes, or lightning protection system conductors shall not be employed as electrodes for non-current-carrying metallic members.

SECTION 770.133

Section 770.133(A) – Revise Section 770.133(A) to read as follows:

(A) In Cable Trays and Raceways. Conductive optical fiber cables contained in an armored or metal-clad-type sheath and nonconductive optical fiber cables shall be permitted to occupy the same cable tray or raceway with conductors for electric light, power, Class 1, Type ITC, or medium-power network-powered broadband communications circuits operating at 1000 volts or less. Conductive optical fiber cables without an armored or metal-clad-type sheath shall not be permitted to occupy the same cable tray or raceway with conductors for electric light, power, Class 1, Type ITC, or medium-power network-powered broadband communications circuits, unless all of the conductors of electric light, power, Class 1, and medium-power network-powered broadband communications circuits are separated from all of the optical fiber cables by a permanent barrier or listed divider.

Section 770.133(B)(2) – Revise Section 770.133(B)(2) to read as follows:

(2) The conductors for electric light, power, Class 1, Type ITC, or medium-power network-powered broadband communications circuits operate at 1000 volts or less.

Section 770.133(C)(2) – Revise item (2) in the list of items in Section 770.133(C) to read as follows:

(2) DELETED.

Section 770.133(E) – Add a new Section 770.133(E) to read as follows:

(E) Electrical Equipment Rooms. Fiber optic circuits and equipment shall not be installed in Electrical Equipment Rooms unless otherwise permitted in this code.

Exception No 1: Optical fiber cables and equipment used for fire alarm systems, control, and monitoring of electrical equipment or associated components shall be permitted.

Exception No 2: Antenna and associated cabling intended for emergency life-safety use shall be permitted.

CHAPTER 8

COMMUNICATIONS SYSTEMS

ARTICLE 800
GENERAL REQUIREMENTS FOR COMMUNICATIONS SYSTEMS

SECTION 800.24

Section 800.24 – Revise the opening paragraph in Section 800.24 to read as follows:

800.24 Mechanical Execution of Work. Circuits and equipment shall be installed in a neat and workmanlike manner. Cables installed exposed on the surface of ceilings and sidewalls shall be supported by approved non-combustible straps, staples, cable ties, hangers, or similar fittings and related installation accessories designed and installed so as not to damage the cables. The installation shall also conform to 300.4 and 300.11. Nonmetallic cable ties and other nonmetallic cable accessories used to secure and support cables in other spaces used for environmental air (plenums) shall be listed as having low smoke and heat release properties in accordance with 805.170(C).

Section 800.24 – Add a new Informational Note in Section 800.24 to read as follows:

Informational Note No. 4: *Exposed wiring should be securely held in place to avoid entanglement of fire response personnel during fire conditions.*

SECTION 800.25

Section 800.25 – Revise Section 800.25 to read as follows:

800.25 Abandoned Cables, Power Sources & Other Associated Equipment. The accessible portion of abandoned cables, power sources, and other associated equipment shall be removed. Power sources and other special equipment tagged for future use shall be de-energized. Where cables are identified for future use with a tag, such tag shall be of sufficient durability to withstand the environment involved.

SECTION 800.110

Section 800.110(C)(1) – Revise Section 800.110(C)(1) to read as follows:

(1) Horizontal Support. Cable routing assemblies shall be supported where run horizontally at intervals not to exceed 3 ft (900 mm) and at each end or joint, unless listed for other support intervals. In no case shall the distance between supports exceed 10 ft(3 m). In corridors and exits, the distance between supports shall not exceed 3 ft (900 mm) regardless of listing.

Section 800.110(D) – Revise Section 800.110(D) to read as follows:

(D) Cable Trays. Wires, cables, and communications raceways shall be permitted to be installed in metal cable tray. Listed nonmetallic cable tray systems may be used as permitted in Section 392.10(D). Ladder cable trays shall be permitted to support cable routing assemblies.

SECTION 800.113

Section 800.113 -Add an “Informational Note No. 1” and “Informational Note No. 2” after the opening paragraph to read as follows:

Informational Note No. 1: *Refer to Article 760 for Fire Alarm wiring requirements.*

Informational Note No. 2: *For Auxiliary Radio Communication System installation, refer to New York City Building Code, Reference Standards, and New York City Fire Code.*

ARTICLE 805
COMMUNICATIONS CIRCUITS

SECTION 805.133

Section 805.133 – Revise the opening paragraph in Section 805.133 to read as follows:

805.133 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 805.133(A) through 805.133(C).

Section 805.133(C) – Add a new Section 805.133(C) to read as follows:

(C) Electrical Equipment Rooms. Communications equipment and cabling shall not be installed in Electrical Equipment Rooms.

Exception No. 1: Communications equipment and cabling for control and monitoring of electrical equipment or associated components, or both, shall be permitted.

Exception No. 2: Antenna and associated cabling intended for emergency life-safety use shall be permitted.

ARTICLE 820
COMMUNITY ANTENNA TELEVISION AND RADIO DISTRIBUTION SYSTEMS

SECTION 820.2

Section 820.2 – Revise Section 820.2 to read as follows:

820.2. DELETED.

SECTION 820.133

Section 820.133(A)(1)(b) – Revise Section 820.133(A)(1)(b) to read as follows:

(b) *Electric Light, Power, Class 1, and Medium-Power Network-Powered Broadband Communications Circuits.* Coaxial cable shall not be placed in any raceway, compartment, outlet box, junction box, or other enclosures with conductors of electric light, power, Class 1, or medium-power network-powered broadband communications circuits.

Exception No. 1: Coaxial cable shall be permitted to be placed in any raceway, compartment, outlet box, junction box, or other enclosures with conductors of electric light, power, Class 1, or medium-power network-powered broadband communications circuits where all of the conductors of electric light, power, Class 1, and medium-power network-powered broadband communications circuits are separated from all of the coaxial cables by a permanent barrier or listed divider.

Exception No. 2: Coaxial cable shall be permitted to be placed in outlet boxes, junction boxes, or similar fittings or compartments with power conductors where such conductors are introduced solely for power supply to the coaxial cable system distribution equipment. The power circuit conductors shall be routed within the enclosure to maintain a minimum 1/4 in. (6 mm) separation from coaxial cables.

Section 820.133(A)(2) – Revise Section 820.133(A)(2) to read as follows:

(2) Other Applications. Coaxial cable shall be separated at least 2 in. (50 mm) from conductors of any electric light, power, Class 1, or medium-power network-powered broadband communications circuits.

Exception No. 1: Separation shall not be required where either (1) all of the conductors of electric light, power, Class 1, and medium-power network-powered broadband communications circuits are in a raceway, or in metal-sheathed, metal-clad, nonmetallic-sheathed, Type AC or Type UF cables, or (2) all of the coaxial cables are encased in a raceway.

Exception No. 2: Separation shall not be required where the coaxial cables are permanently separated from the conductors of electric light, power, Class 1, and medium-power network-powered broadband communications circuits by a continuous and firmly fixed nonconductor, such as porcelain tubes or flexible tubing, in addition to the insulation on the wire.

Section 820.133(C) – Add a new Section 820.133(C) to read as follows:

(C) Electrical Equipment Rooms. Television and radio equipment and cabling shall not be installed in Electrical Equipment Rooms unless otherwise permitted in this code.

ARTICLE 830
NETWORK-POWERED BROADBAND COMMUNICATIONS SYSTEMS

SECTION 830.133

Section 830.133(A)(1)(e) – Revise the opening paragraph of Section 830.133(A)(1)(e) to read as follows:

(e) *Electric Light, Power, Class 1, Non-Powered Broadband Communications Circuit Cables.* Network-powered broadband communications cable shall not be placed in any raceway, cable tray, compartment, outlet box, junction box, or similar fittings with conductors of electric light, power, or Class 1 circuit cables.

Section 830.133(A)(1)(e) – Revise "Exception No. 1" in Section 830.133(A)(1)(e) to read as follows:

Exception No. 1: Where all of the conductors of electric light, power, Class 1 circuits are separated from all of the network-powered broadband communications cables by a permanent barrier or listed divider.

Section 830.133(A)(2) – Revise Section 830.133(A)(2) to read as follows:

(2) Other Applications. Network-powered broadband communications cable shall be separated at least 2 in.50 mm) from conductors of any electric light, power, and Class 1 circuits.

Exception No. 1: Separation shall not be required where: (1) all of the conductors of electric light, power, and Class 1 circuits are in a raceway, or in metal-sheathed, metal-clad, nonmetallic-sheathed, Type AC, or Type UF cables, or (2) all of the network-powered broadband communications cables are encased in a raceway.

Exception No. 2: Separation shall not be required where the network-powered broadband communications cables are permanently separated from the conductors of electric light, power, and Class 1 circuits by a continuous and firmly fixed nonconductor, such as porcelain tubes or flexible tubing, in addition to the insulation on the wire.

Section 830.133(C) – Add a new Section 830.133(C) to read as follows:

(C) Electrical Equipment Rooms. Broadband communications equipment and cabling shall not be installed in Electrical Equipment Rooms.

Exception No. 1: Broadband communication equipment and cabling for control and monitoring of electrical equipment or associated components, or both, shall be permitted.

Exception No. 2: Broadband communication equipment intended for emergency life-safety use shall be permitted.