

Chapter 23.30 LOCAL AMENDMENTS TO THE NATIONAL ELECTRICAL CODE 2020 EDITION¹

23.30.010 Local Amendments to the National Electrical Code 2020 Edition.

The amendments to the 2020 edition of the National Electrical Code are listed here by section. The last digits of the number after the title and chapter digits are the article, section and subsection of the National Electrical Code to which the amendment refers, i.e., 23.30.210.23(D) refers to article 210, section 23 and subsection (D) of the National Electrical Code, 2020 Edition.

Informational Note: For further information on other Building Codes, Policies and Handouts that may affect electrical installation requirements go to the Municipality of Anchorage, Building Safety Website at: www.muni.org/departments/ocpd/development/bsd.

(AO No. 2023-44, § 1, 5-9-23)

23.30.020 Certificate of Fitness—Right to Inspection.

Municipal electrical inspectors may contact any electrical worker performing work for which a certificate of fitness is required by AS 18.62.070 and request the person to exhibit their certificate of fitness or trainee certificate of fitness. The inspector may immediately serve upon that person a notice to cease any further work in that occupation until the person has demonstrated possession of the required certificate.

(AO No. 2023-44, § 1, 5-9-23)

23.30.100 Definitions.

Add the following definition to article 100: Kitchen.

Add the following sentence at the end of the definition: Microwaves that are not fastened in place do not constitute permanent provision for cooking.

(AO No. 2023-44, § 1, 5-9-23)

23.30.110.21(A)(1) General.

Add to end of paragraph:

Equipment shall be marked with clear direction on any specific required replacement components (e.g., type of time delay fuses or GFCI protection).

(AO No. 2023-44, § 1, 5-9-23)

¹AO No. 2023-43, § 1, effective May 9, 2023, repealed the former Ch. 23.30, §§ 23.30.10—23.30.702.5, and enacted a new Ch. 23.30 as set out herein. The former Ch. 23.30 pertained to Local Amendments to the National Electrical Code 2017 Edition and derived from AO No. 2020-85, § 1, 10-27-20.

23.30.210.8(B) Other Than Dwelling Units.

Replace first paragraph with:

All 125-volt through 250-volt receptacles supplied by single phase branch circuits rated 150 volts or less to ground, 50 amperes or less and all receptacles supplied by three-phase branch circuits rated 150 volts or less to ground, 30 amperes or less installed in the locations specified in 210.8(B)(12) shall have ground-fault circuit-interrupter protection for personnel.

Delete the paragraph (8) in its entirety and replace with the following text:

- (8) Garages, accessory buildings, service bays, Group F, M and S open areas of less than 5,000 square feet that include overhead doors where vehicles could be stored, and similar areas other than vehicle exhibition halls and showrooms.

(AO No. 2023-44, § 1, 5-9-23)

23.30.210.12(A) Arc-Fault Circuit-Interrupter Protection (Dwelling Units).

(A) Dwelling Units.

Delete items (3) and (4).

Replace exception with:

Exception: AFCI protection shall not be required where an individual branch circuit supplies the following:

- A fire alarm system installed in accordance with 760.41(B) or 760.121(B).
- A dedicated appliance on a single rated receptacle yoke.

Branch circuits shall be installed in RMC, IMC, EMT, or steel-sheathed cable, Type AC or Type MC, meeting the requirements of 250.118, with metal outlet and junction boxes. All circuits using this exception shall be clearly identified in the panel they originate from.

(AO No. 2023-44, § 1, 5-9-23)

23.30.210.23 Permissible Loads, Multiple-Outlet Branch Circuits (Outlets Per Circuit).

Add subsection (E) as follows:

- (E) Outlets Per Circuit. In dwelling units, no more than (15) outlets are allowed on one branch circuit. All smoke detectors on a circuit may be counted as a total of one outlet. Appliance circuits are limited to six (6) duplex receptacles per circuit.

Exception: Fixed lighting circuits designed to meet the appropriate sections of the code.

(AO No. 2023-44, § 1, 5-9-23)

23.30.210.52 Dwelling Unit Receptacle Outlets.

(C)(2) Island and Peninsular Countertops and Work Surfaces.

Replace 2020 NEC text with the following:

Receptacles outlets shall comply with 210.52(C) and the following:

-
- Peninsula receptacle outlet spacing shall be based on linear measurements. Linear measurements shall begin at the connected perpendicular wall. Any island or peninsular countertop with a backsplash shall have receptacle spacing in accordance with 210.52(C)(1).
 - The first 4 linear feet of peninsular countertop shall be permitted to be served by a receptacle outlet on the connected perpendicular wall.
 - An additional receptacle shall be required for each additional 4 linear feet of peninsular countertop or fraction thereof.
 - A peninsular countertop with a linear dimension greater than 4 feet shall require a receptacle outlet within 2 feet of the end. Additional required receptacle outlets shall be permitted to be located as determined by the designer, installer, or owner.
 - Islands shall require (1) receptacle outlet for each 4 linear feet of countertop or fraction thereof.
 - Receptacles serving island and peninsular countertop work surfaces shall be located in accordance with 210.52(C)(3).

Add subsection (J) as follows:

- (J) Parking Spaces. For each dwelling unit and mobile home, there shall be at least one (1) exterior GFCI protected duplex outlet on a separate 20-ampere circuit adjacent to required on-site parking locations.
- Exception: For multi-family dwellings, eight-plex and larger where indoor parking is provided, the required number of exterior duplex receptacles may be reduced by the number of indoor heated parking locations.*

Add subsection (K) as follows:

- (K) Under-Floor Crawl Spaces. A receptacle shall be provided in each unconnected space; the receptacle shall be located adjacent to a sump when one is provided. This receptacle shall be a GFCI protected duplex outlet.

Add subsection (L) as follows:

- (L) Electric Vehicle (EV) Charging Provisions at Detached One- and Two-Family Dwellings and Townhouses. Provisions for (1) EV charger shall be installed at each dwelling unit. EV charging provisions shall comply with the following:

Electrical Rough:

- A conduit or cable wiring method terminated in a junction box with cover, adequate for a 50A minimum circuit shall be installed.
- The enclosure where the circuit originates shall have an adequate space for a 2-pole breaker.
- The EV charging outlet provision shall be in a garage or adjacent to outdoor parking if the dwelling unit does not have a garage.

Electrical System Capacity:

- Panels, feeders, and services less than 200A shall have capacity calculated according to NEC Art. 220 to serve an additional 9.6KW load at the time of construction.
- The additional load capacity required by this section shall not require the installation of panel, feeder, or service larger than 200A.
- Panels, feeders, and services supplying EV chargers, not installed at the time of dwelling unit construction shall have capacity verified at the time of charger installation. Load calculation per NEC Art. 200 or KW demand history per NEC 220.87 shall be used to verify capacity.

-
- An EV charging circuit supplied from a dedicated breaker in service equipment shall not require a feeder supplying the entire load associated with an individual dwelling unit to be larger than required by 310.12(B).

(AO No. 2023-44, § 1, 5-9-23)

23.30.210.63(B)(2) Indoor Equipment Requiring Dedicated Equipment Spaces.

Replace the text with the following:

Where equipment, other than service equipment, requires dedicated equipment space as specified in 110.26(E), the required receptacle outlet shall be located within the same room or area as the electrical equipment.

(AO No. 2023-44, § 1, 5-9-23)

23.30.210.65(A) General.

Add "or training" after the "meeting" in the first paragraph.

(AO No. 2023-44, § 1, 5-9-23)

23.30.210.65(B)(2) Floor Outlets.

Delete the paragraph in its entirety.

(AO No. 2023-44, § 1, 5-9-23)

23.30.225.32 Location.

Add the following text at the end of the paragraph:

Where the disconnect is located inside a commercial building an exterior mounted remote device shall be provided to actuate the interior disconnecting means. The control device shall meet the same requirements of NEC 230.71(A)(3).

(AO No. 2023-44, § 1, 5-9-23)

23.30.230.1 Scope.

Add the following sentence:

The service installation shall also conform to the current written electric service requirements of the utility serving the area.

(AO No. 2023-44, § 1, 5-9-23)

23.30.230.2(E) Identification.

Add the following text at the end of the paragraph:

Identification of the switching mechanism to be 8"x8" minimum with 1" minimum white lettering on red background and permanently affixed to enclosure or adjacent when too large for enclosure.

(AO No. 2023-44, § 1, 5-9-23)

23.30.230.32 Protection Against Damage.

Add the following paragraph:

Physical protection of underground service laterals for residential services of 200 amperes and less shall consist of not more than nine feet of liquid tight flexible metal conduit.

(AO No. 2023-44, § 1, 5-9-23)

23.30.230.70(A)(1) Readily Accessible Location.

Add the following paragraph:

The service disconnecting means for commercial facilities shall be lockable per 110.25 and operable from the exterior of the building if the service disconnect is within the building. A fire pump service disconnect is not required to be operable from the exterior of the building.

(AO No. 2023-44, § 1, 5-9-23)

23.30.230.70(A)(3) Remote Control.

Replace subsection (3) with:

- (3) Remote Control. Where a remote-control device(s) is used to actuate the service disconnecting means, the service disconnecting means shall be located in accordance with section 230.70(A)(1). The control device shall meet the requirements of the electrical utility.

Service disconnection by use of shunt trip device is acceptable. The shunt trip switch may be either the safety switch type or a switch inside an enclosure.

Safety switch: Shall be suitable for the environment and be lockable in either the "on" or "off" position. Interlock contacts may be used to provide correct handle location. The "off" position must disconnect the power.

Inside an enclosure: the shunt switch must be placed within an enclosure suitable for the environment and the hinged cover. The enclosure shall be large enough for the required sign to be mounted on it. The enclosure must have a padlock hasp with the padlock accessible for removal with bolt cutters by emergency responders. No hardened steel shackles are permitted. Shackle diameter shall not exceed 5/16". The shunt trip switch shall be a maintained contact with "off" and "on" clearly identified. The "off" position must disconnect the power.

(AO No. 2023-44, § 1, 5-9-23)

23.30.230.71(B) Two to Six Service Disconnecting Means.

Add

- (5) combination multimeter panels with individual disconnects on multi-tenant and multi-dwelling structures.

(AO No. 2023-44, § 1, 5-9-23)

23.30.250.53(D)(2) Grounding Electrode System Installation (Metal Underground Water Pipe - Supplemental Electrode Required).

Delete the exception.

(AO No. 2023-44, § 1, 5-9-23)

23.30.250.68(C) Grounding Electrode Conductor and Bonding Jumper Connection to Grounding Electrodes (Grounding Electrode Connections).

Delete the exception under location (1).

(AO No. 2023-44, § 1, 5-9-23)

23.30.250.118 Types of Equipment Grounding Conductors.

Delete items (2) through (14) and replace with:

- (2) The copper sheath of mineral insulated, metal-sheathed cable Type MI.
- (3) Metal enclosures of busways listed for grounding.
- (4) Armor of Type AC cable as provided in 320.108.
- (5) Type MC cable that provides an effective ground-fault current path in accordance with one or more of the following:
 - a. It contains an insulated or uninsulated equipment grounding conductor in compliance with 250.118(1).
 - b. The combined metallic sheath and uninsulated equipment grounding/bonding conductor of inter-locked metal tape-type MC cable that is listed and identified as an equipment grounding conductor.
 - c. The metallic-sheath and equipment grounding conductors of the smooth or corrugated tube-type MC cable that is listed and identified as an equipment grounding conductor.
- (6) Cable trays as permitted in 392.10 and 392.60.

(AO No. 2023-44, § 1, 5-9-23)

23.30.250.122(B) Increase in Size.

Add the following to the end of the paragraph:

Increase in size shall not be required for circuits less than 100 feet in length. Circuits 100 amps or less may use the 60 degree C column for determining smallest conductor size with sufficient ampacity in accordance with section 110.14. Rounding up shall not be considered as the smallest conductor size with sufficient ampacity.

(AO No. 2023-44, § 1, 5-9-23)

23.30.300.4(I) Protection Against Physical Damage (Roofs).

Add subsection (I) as follows:

- (I) Roofs. Raceways run on the surface of a roof or subject to damage from snow, ice, or foot traffic, shall be rigid metal or intermediate metal conduit only, and supported per NEC 344.30 and 342.30.

(AO No. 2023-44, § 1, 5-9-23)

23.30.300.5 Underground Installations (Separation from Other Systems).

Add subsection (L) as follows:

- (L) Separation from Other Systems. When direct buried cables or conductors cross or are installed parallel to sewers, water lines, gas or other fuel lines, steam lines, communication and utility electric cables or conductors, a minimum 12-inch radial separation shall be maintained.

(AO No. 2023-44, § 1, 5-9-23)

23.30.300.24 Cold Temperature Installations.

Add section 300.24 as follows:

300.24 Cold Temperature Installations. Thermoplastic type insulated wires or cables, or non-metallic tubing shall not be installed when ambient temperatures are less than 20° F.

(AO No. 2023-44, § 1, 5-9-23)

23.30.314.27(C) Boxes at Ceiling-Suspended (Paddle) Fan Outlets.

Replace the text in the second paragraph with the following:

A minimum of one outlet box of any mounted in the ceilings of bedrooms, living rooms, family rooms, dens, sunrooms, and dining rooms of dwelling occupancies in a location more than 4 feet from adjacent walls and acceptable for the installation of a ceiling-suspended (paddle) fan shall comply with one of the following:

(AO No. 2023-44, § 1, 5-9-23)

23.30.330.40 Boxes and Fittings.

Add section 330.40 as follows:

330.40 Boxes and Fittings. An insulated bushing shall be provided between the conductors and the outer metal sheath and must be visible for inspection.

(AO No. 2023-44, § 1, 5-9-23)

23.30.334.10 Uses Permitted.

Replace permitted uses (2) and (3) with the following:

- (2) Multi-family dwellings of Type III, IV and V construction having wood-wall-stud framing.

-
- (3) AFCI protected branch circuits in Group R-1, R-2, R-3, R-4 and I-1 occupancies of Type III, IV or V construction having wood-wall-stud framing. Cables shall be concealed in walls, floors, or ceilings that provide a thermal barrier of material that has at least 15-minute finish rating as identified in listings of fire-rated assemblies.

(AO No. 2023-44, § 1, 5-9-23)

23.30.334.104 Conductors.

Replace section 334.104 with:

334.104. Conductors. The insulated power conductors shall be sizes 14 AWG through 2 AWG with copper conductors or sizes 10 AWG through 2 AWG with aluminum or copper-clad aluminum conductors. Conductors supplying receptacles shall be minimum size 12 AWG copper conductors or sizes 10 AWG with aluminum or copper-clad aluminum conductors. The communication conductors shall comply with Part V of Article 800.

(AO No. 2023-44, § 1, 5-9-23)

23.30.410.17 Other Closet or Storage Spaces.

Add section 410.17 as follows:

410.17 Other Closet or Storage Spaces. Luminaires shall meet the location requirements for clothes closets or be of a totally enclosed fluorescent or LED type.

(AO No. 2023-44, § 1, 5-9-23)

23.30.445.18(A) Disconnecting Means.

Add the following sentence to the end of the paragraph:

Generator disconnecting means shall conform to the requirements of sections 23.30.230.70(A)(1) and 23.30.230.70(A)(3).

(AO No. 2023-44, § 1, 5-9-23)

23.30.445.18(B)(3) Emergency Shutdown of Prime Mover.

Add the following text:

3. Emergency shutdown for commercial generator facilities that are not located immediately adjacent to the exterior power service equipment or feeder disconnect(s), a lockable emergency shutdown shall be located adjacent to the exterior disconnecting means. Each generator shut down shall be labeled denoting the system supplied. The emergency shutdown for the generator shall not be in the same enclosure as the utility power or other shutdown operators.

(AO No. 2023-44, § 1, 5-9-23)

23.30.510 Hazardous (Classified) Locations.

Add the following informational note:

Informational Note: The requirement for elevation of ignition source in the International Mechanical Code 304.3 and the International Fuel Gas Code does not constitute a hazardous classification in accordance with this code. The requirement for elevation of ignition source may apply to both classified and unclassified areas. The requirement reads as follows:

IMC 304.3:

Elevation of ignition source. Equipment and appliances having an ignition source and located in hazardous locations and public garages, private garages, repair garages, automotive motor fuel-dispensing facilities and parking garages shall be elevated such that the source of ignition is not less than 18 inches above the floor surface on which the equipment or appliance rests.

IMC 304.3 MOA Amendment added to text:

Rooms and spaces that are not part of the living space of a dwelling unit shall include but not be limited to utility, storage, mud, laundry, toilet, and bathing rooms. Group F, M and S occupancies with open spaces less than 5,000 square feet that include overhead doors providing access to vehicles and equipment containing combustible fuel shall comply with this section. Communicating spaces separated by a door are not considered part of this space.

(AO No. 2023-44, § 1, 5-9-23)

Replace Table 23.30.511.3(C) Table with the following:

Table 511.3(C) Extent of Classified Locations for Major and Minor Repair Garages with Heavier-Than-Air Fuel

Location	Class I		Extent of Classified Location
	Division (Group D)	Zone (Group IIA)	
Repair garage, major (Where Class I liquids or gaseous fuels are transferred or dispensed*)	1	1	Entire space within any pit, below grade work area, or subfloor work area that is not ventilated.
	2	2	Entire space within any pit, below grade work area, or subfloor work area that is provided with ventilation of at least 1 ft ³ /min/ft ² of floor area, with suction taken from a point within 12 in. of floor level.
	2	2	Up to 18 in. above floor level of the room.
	2	2	Within 3 ft. of any fill or dispensing point, extending in all directions.

Created: 2024-07-17 17:22:09 [EST]

(Supp. No. Ma 84)

Specific areas adjacent to classified locations	Unclassified	Unclassified	Areas adjacent to classified locations where flammable vapors are not likely to be released, such as stock rooms, switchboard rooms, and other similar locations, where designed with positive air pressure or where effectively cut off by walls or partitions. Doorways shall be by means of a vestibule providing a two-door separation.
Repair garage, minor (Where Class I liquids or gaseous fuels are not transferred or dispensed*)	2	2	Entire space within any pit, below grade work area, or subfloor work area that is not ventilated.
	2	2	Up to 18 in. above floor level, extending 3 ft. horizontally in all directions from opening to any pit, below grade work area, or subfloor work area that is not ventilated.
	Unclassified	Unclassified	Entire space within any pit, below grade work area, or subfloor work area that is provided with ventilation of at least 1 ft ³ /min/ft ² of floor area, with suction taken from a point within 12 in. of floor level.
Specific areas adjacent to classified locations	Unclassified	Unclassified	Areas adjacent to classified locations where flammable vapors are not likely to be released, such as stock rooms, switchboard rooms, and other similar locations, where designed with positive air pressure, or where effectively cut off

			by walls or partitions. Doorways shall be by means of a vestibule providing a two-door separation.
Repair garage, major (Where Class I liquids or gaseous fuels are transferred or dispensed*)	2	2	Entire space within any pit, below grade work area, or subfloor work area that is not ventilated.
	Unclassified	Unclassified	
Specific areas adjacent to classified locations	Unclassified	Unclassified	Areas adjacent to classified locations where flammable vapors are not likely to be released, such as stock rooms, switchboard rooms, and other similar locations, where designed with positive air pressure, or where effectively cut off by walls or partitions. Doorways shall be by means of a vestibule providing a two-door separation.
*Includes draining of Class I liquids from vehicles.			
¹ Includes fuels such as hydrogen and natural gas, but not LPG.			
² For hydrogen (lighter than air) Group B, or natural gas Group D.			
³ For hydrogen (lighter than air) Group IIC or IIB+H ₂ , or natural gas Group IIA.			

(AO No. 2023-44, § 1, 5-9-23)

23.30.511.3(E)(1) Specific Areas Adjacent to Classified Locations.

Replace subsection (1) with:

- (1) Specific Areas Adjacent to Classified Locations. Areas adjacent to classified locations in which flammable vapors are not likely to be released such as offices, stock rooms, switchboard rooms, and other similar locations shall be unclassified where any of the following parameters apply:
 - a) Adjacent areas less than 300 square feet and mechanically ventilated at a rate of four or more air changes per hour.
 - b) Adjacent areas designed with positive air pressure.

Created: 2024-07-17 17:22:09 [EST]

(Supp. No. Ma 84)

-
- c) Adjacent areas effectively cutoff by walls or partitions. Doorways shall be by means of a vestibule providing a two-door separation.

(AO No. 2023-44, § 1, 5-9-23)

23.30.513.3(D) Areas Suitably Cut Off and Ventilated.

Replace subsection (D) with:

- (D) Areas Suitably Cut Off and Ventilated. Areas adjacent to classified locations in which flammable liquids or vapors are not likely to be released such as offices, stock rooms, electrical control rooms, and other similar locations shall be unclassified where designed with positive air pressure and effectively cut off by walls. Doorways shall be by means of a vestibule providing a two-door separation.

(AO No. 2023-44, § 1, 5-9-23)

23.30.517.10(B) Not Covered.

- (3) Areas used exclusively for any of the following purposes:

Delete c) and d).

(AO No. 2023-44, § 1, 5-9-23)

230.30.517.13(A) Wiring Method.

Add exception to (A):

Exception: shall not apply to Patient Care - Support (category 4) Space

(AO No. 2023-44, § 1, 5-9-23)

23.30.620.22 Branch Circuits for Car Lights, Receptacle(s), Ventilation, Heating and Air-Conditioning.

Add the following to (A) Car Light Source:

If the elevator is powered by a generator these circuits shall also be fed by the generator.

(AO No. 2023-44, § 1, 5-9-23)

23.20.620.23 Branch Circuits for Machine Room or Control Room/Machinery Space or Control Space Lighting and Receptacle(s).

Add the following paragraph to (A) Separate Branch Circuits:

The separate circuits shall be one or more lighting circuits and one or more receptacle circuits that are separated from each other and from building circuits but may be comingled between machine room, control room, machine space, control space, hoist way and pit.

If the elevator is powered by a generator these circuits shall also be fed by the generator.

(AO No. 2023-44, § 1, 5-9-23)

23.30.620.24 Branch Circuit for Hoist way Pit Lighting and Receptacles.

Add the following to (A) Separate Branch Circuits:

The separate circuits shall be one or more lighting circuits and one or more receptacle circuits that are separated from each other and from building circuits but may be comingled between machine room, control room, machine space, control space, hoist way and pit.

If the elevator is powered by a generator, then these circuits shall also be fed by the generator.

(AO No. 2023-44, § 1, 5-9-23)

23.30.620.51(D) Identification and Signs.

Replace item (1) with the following:

- (1) Identification. The disconnecting means shall be provided with a sign to identify the location of the supply side overcurrent protective device. Where there is more than one driving machine or motor controller in a machine room, machine space, control room or control space the disconnecting means shall be numbered to correspond to the identifying number of the driving machine they control.

(AO No. 2023-44, § 1, 5-9-23)

23.30.620.71 Guarding Equipment.

Add the following to (A) Motor controllers:

Unless specifically addressed in the adopted elevator code (ASME A17.1), motor controllers that are recessed mounted in a wall with less than 1¼ inch clearance between the back of the cabinet and the inside surface of the wall sheathing shall be protected by 1/16inch thick steel plate, or equivalent. This plate is in addition the cabinet construction.

(AO No. 2023-44, § 1, 5-9-23)

23.30.700.19 Multiwire Branch Circuits.

Add the following exception:

Exception: Existing installations on multiwire branch circuits where retrofit kits, unit equipment or same type replacements are installed, or no more than 6 new luminaires with associated branch wiring are added to each existing circuit.

(AO No. 2023-44, § 1, 5-9-23)

23.30.702.5 Transfer Equipment.

Add the following subsection:

(F) Dwelling Unit Manual Transfer Switches.

Manual transfer equipment for portable generator use at dwelling units shall comply with items 1 or 2 below.

1. Feeder switching applications require installation of a listed, 3-pole transfer switch. The feeder neutral shall be switched or unswitched as required by the generator configuration. The transfer switch shall be labeled to match the generator configuration as required by 702.7(C). The service disconnect shall be labeled per 702.7(B) if applicable.
2. Single circuit switching applications require installation of listed, single-circuit transfer switches. Single circuit transfer switches shall not require provision to switch the neutral conductor.

(AO No. 2023-44, § 1, 5-9-23)