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#### 2023 NEC revisions

##### **Article 100 Definitions**

- 1) Accessible (as applied to wiring methods)
- 2) Attachment Fitting, Weight Supporting (WSAF)
- 3) Branch circuit, motor
- 4) Class 4 circuit
- 5) Cord set
- 6) Energized, Likely to become energized
- 7) Fault-managed power
- 8) Multioutlet assembly
- 9) MEC- Occupiable Space
- 10) Panelboard, enclosed
- 11) Pool, permanently installed...
- 12) Pool, storable...
- 13) Power supply cord
- 14) Receptacle, Weight Supporting Ceiling (WSCR)
- 15) Separately derived system
- 16) Servicing
- 17) Short circuit

##### **Article 110 General Requirements**

- 18) 110.3(B)+ informational note for QR codes
- 19) 110.8 Wiring Methods
- 20) 110.9 Interrupting Rating
- 21) 110.12 Mechanical Execution of Work
- 22) 110.14(A) Terminals
- 23) 110.16(B) Arc Flash Warning Label
- 24) 110.17 Servicing/Maintenance of Equipment
- 25) 110.20 Reconditioned Equipment
- 26) 110.21(A)(2) Marking Reconditioned Equipment
- 27) 110.21(B) Hazard Markings
- 28) 110.26 Working Spaces and open equipment doors
- 29) 110.26(A)(6) Grade, Floor, or Working Platform
- 30) 110.26(C)(3) Personnel Doors open 90 degrees minimum
- 31) 110.26(E) Service Equipment Dedicated Space

##### **Article 200 Grounded Conductor**

- 32) 200.6(D) Grounded Conductors of Different Systems

##### **Article 210 Branch Circuits**

- 33) 210.1 Scope includes up to 1000VAC, 1500VDC
- 34) 210.2 Reconditioned equipment (relocated from 210.15)
- 35) 210.5(C)(1) Branch Circuits Conductor Identification
- 36) 210.8 Listed Class A GFCI protection
- 37) MEC exception and Rule 11

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- 38) 210.8 Measurements (window deleted)
- 39) 210.8(A)(6) GFCI protection in dwelling unit kitchens
- 40) 210.8(A)(7) GFCI protection near sinks with food/beverage prep area
- 41) 210.8(A) exceptions 2,3, and 4
- 42) 210.8(B)(3) GFCI protection in beverage preparation areas
- 43) 210.8(B)(4) GFCI protection for buffet areas
- 44) 210.8(B)(7) GFCI protection for cord-and-plug-connected appliances
- 45) 210.8(B)(13) GFCI protection for aquariums...
- 46) 210.8(B) exception 1 applies to more than outdoors or rooftops now
- 47) 210.8(B) exception 3 includes cord-and-plug connected appliances too
- 48) 210.8(B) exception 4 includes cord-and-plug connected equipment in industrial laboratories
- 49) 210.8(D) GFCI protection for specific appliances
- 50) 210.8(F) GFCI protection for outdoor outlets
- 51) 210.11(C)(4) Garage Branch circuits
- 52) 210.12 AFCI Protection
- 53) 210.12(B) AFCI protection for dwelling unit 10-amp circuits
- 54) 210.12(B) exception 2
- 55) 210.12(C) AFCI protection for dormitories
- 56) 210.12(D) AFCI protection for other occupancies
- 57) 210.12(D)(3) AFCI protection for sleeping quarters
- 58) 210.13 GFPE increased from 600V to 1000V
- 59) 210.17(3) now includes assisted living facilities
- 60) 210.18 Now recognizes 10-amp branch circuits
- 61) 210.19 increased from 600V to 1000VAC, 1500VDC
- 62) 210.23(A) 10-amp branch circuits
- 63) Table 210.24 now includes 10-amp branch circuits
- 64) 210.52(A)(2)(1) wall space at stationary appliances excluded
- 65) MEC 210.52(C) countertop receptacle outlets
- 66) 210.52(C)(1) countertop receptacle outlets
- 67) 210.52(C)(2) Island and peninsular countertops receptacles now optional
- 68) 210.52(C)(3) Countertop receptacle outlet location
- 69) 210.62 Show window receptacle outlets
- 70) 210.63(B)(2) Receptacle outlet for equipment
- 71) 210.70 Battery powered lighting control
- 72) 210.70(A)(1) lighting for laundry area
- 73) 210.70(A)(2)(2) exterior lighting outlets
- 74) 210.70(A)(2)(2) exception for bulkhead lighting

#### **Article 215 Feeders**

- 75) 215.1 Scope includes up to 1000VAC, 1500VDC
- 76) 215.2(B) Grounded conductor no smaller than EGC
- 77) 215.10 GFPE increased from 600V to 1000V
- 78) 215.15 Barriers
- 79) 215.18 Surge protection

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#### **Article 220 Load Calculations**

- 80) Article 220 reorganized
- 81) 220.1 Parts VI and VII added
- 82) 220.5(C) Floor area for dwellings now includes garages and unused areas
- 83) 220.41 dwelling occupancy feeder/service lighting loads
- 84) 220.42(A) Non-dwelling lighting loads
- 85) 220.45 lighting demand factors
- 86) 220.50 for motor and air conditioning loads
- 87) 220.53(5) Demands not applicable to electric vehicle chargers
- 88) 220.57 EVSE load
- 89) 220.60 noncoincidental load clarifications
- 90) 220.70 Energy Management Systems
- 91) Part VI 220.110 receptacle load for health care facilities
- 92) Part VII 220.120 receptacle loads for marinas

#### **Article 225 Outside Branch Circuits and Feeders**

- 93) 225.41 Emergency Disconnects

#### **Article 230 Services**

- 94) 230.7 Handholes and underground boxes added
- 95) 230.30(B) TC-ER cable added
- 96) 230.67 Surge Protection for other than dwelling units
- 97) 230.71(B) 2-6 Service Disconnects
- 98) 230.85 Emergency Disconnects

#### **Article 240 Overcurrent Protection**

- 99) 240.2 Reconditioned equipment
- 100) 240.4(B) Adjustable Trip Settings added
- 101) 240.4(D)(3) 14 AWG copper-clad aluminum added
- 102) 240.4(H) Reference to 310.12 added
- 103) 240.7 Listed Branch Circuit overcurrent devices
- 104) 240.11 Selective Coordination
- 105) 240.24(E) Showering facilities added

#### **Article 250 Grounding and Bonding**

- 106) 250.6(A)+(B) Objectionable Current from Bonding
- 107) 250.6(C) Currents not Considered Objectionable
- 108) 250.24(D)(2) Grounded Conductors in Parallel
- 109) 250.68(C)(1) 5ft. Measured Along the Water Piping
- 110) 250.70(A) GEC Connections to Electrode streamlined
- 111) 250.94(A) Intersystem Bonding Termination Device
- 112) 250.94(B) Busbar Bonding Means
- 113) 250.104(D)(1) Ex. 1+2 Bonding to Water Pipe Clarified
- 114) 250.104(D)(2) Ex. 1+2 Bonding to Building Steel Clarified
- 115) 250.104(D)(3) Bonding Common GEC to Water Piping
- 116) 250.109 Covers and Extensions of Metal Enclosures

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- 117) 250.118(A)(6)(f) an EGC is Required for Stainless Steel LFMC
- 118) 250.119(A)+(B) Identification of Wire-Type Equipment Grounding Conductors
- 119) 250.130(C) Provisions for grounding of replacement switches added
- 120) 250.140(B) Grounding frames of ranges and dryers. See MEC
- 121) 250.148(A) Revisions made to clarify EGC connections in boxes

#### **Article 300 Wiring Methods and Materials**

- 122) 300.2(A) Voltage Limitations Revised
- 123) 300.3(C)(1) 1500 volts DC added
- 124) 300.4(E) Ex. 2 added for roofs with concrete slabs
- 125) 300.4(G) Bushing must be installed prior to conductor installation
- 126) Table 300.5 circuits up to 1500 volts DC added
- 127) Table 300.5 EMT added to Column 3
- 128) 300.6 Enclosures clarified
- 129) 300.6(A) Field-cut threads clarified
- 130) 300.11(C)(2) Class 3 circuits added
- 131) 300.14 The 6" of "free" conductor can included splices!
- 132) 300.15 Revised to clarify where boxes are required
- 133) 300.17 "Cables" added to this section
- 134) 300.25 an exception was added for exit signs
- 135) 300.26 Remote-Control and Signaling Circuit Classifications

#### **Article 305 for Over 1000VAC, 1500VDC (new)**

- 136) Table 305.15(A) EMT added to Column 2

#### **Article 310 Conductors for General Wiring**

- 137) 310.3(B) addresses Copper-Clad aluminum conductors

#### **Article 312 Cabinets, Cutout Boxes, and Meter Socket Enclosures**

- 138) 312.10 Screws and Fasteners addressed
- 139) 312.102 Doors or Covers Required

#### **Article 314 Boxes, Conduit Bodies, and Handholes**

- 140) 314.5 Screws and Fasteners addressed
- 141) 314.16(B)(6) Terminal Block Fill volume
- 142) 314.23(H)(1) Strain Relief Device (cord grip) must be listed
- 143) 314.24(B)(4) Minimum ½" Clearance for wires entering rear of box opposite equipment
- 144) 314.24(C) Clearances for Side Knockouts
- 145) 314.27(C)(2) Revised to clarify access to structural framing must be through the box
- 146) 314.29 Devices in boxes must be accessible too

#### **Article 320 Armored Cable**

- 147) 320.23 AC Cable in accessible attics- "joists" revised for clarity
- 148) 320.30(A) AC cable connectors are considered support

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**Article 330 Metal Clad Cable**

- 149) 330.30(A) MC cable connectors are considered support

**Article 334 Nonmetallic Sheathed Cable**

- 150) 334.10(2) NM Cables permitted in detached garages of multifamily dwellings
- 151) 334.15(B)+(C) Raceway sleeve for NM cable must have a protective bushing
- 152) 334.19 NM sheath must extend ¼” minimum beyond cable clamp  
(previously only required by 314.27(C)(2) for boxes)
- 153) 334.24 Bends in flat NM cables addressed
- 154) 334.40(B) Devices of Insulating Material. “Repair wiring” deleted. Concealed OK
- 155) 334.80 3<sup>rd</sup>. paragraph. 310.14(A)(2) exception no longer applicable!

**Article 336 Power and Control Cable**

- 156) 336.10(12) Type TC-ER permitted for services

**Article 338 Service Entrance Cable**

- 157) 338.24 Bends in flat SE cable addressed

**Article 344 Rigid Metal Conduit**

- 158) 344.10(B)(1)+(2) RMC in direct burial applications
- 159) 344.24(B) Bends in run
- 160) 344.28 Threading of PVC-coated RMC addressed
- 161) 344.30(A) exception: RMC unsecured where fished

**Article 348 Flexible Metal Conduit**

- 162) 348.24(B) Bends in run
- 163) 348.60 Clarifications to Grounding and Bonding requirements

**Article 350 Liquidtight Flexible Metal Conduit**

- 164) 350.2 LFMC Not permitted to be reconditioned
- 165) 350.24(B) Bends in run
- 166) 350.60 Clarifications to Grounding and Bonding Requirements

**Article 352 PVC Conduit**

- 167) 352.10(B) PVC Conduit permitted to be encased in concrete
- 168) 352.10(K) PVC conduit exposed to physical damage
- 169) 352.24(B) Bends in run
- 170) 352.44(B) Expansion fittings for earth movement

**Article 356 LFNC**

- 171) 356.10(8) LFNC permitted in severely corrosive environment

**Article 358 Electrical Metallic Tubing**

- 172) 358.10(A)(1) EMT permitted for direct burial
- 173) 358.10(A)(4) EMT permitted for manufactured wiring system
- 174) 358.24(B) Bends in run

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- 175) 358.30(A) Securing/supporting revised list format for clarity

**Article 362 Electrical Nonmetallic Tubing**

- 176) 362.2 ENT not permitted to be reconditioned
- 177) 362.10(2) Combustible or noncombustible construction permitted
- 178) 362.10(2) exception: Approved fire protection system required

**Article 369 Insulated Bus Pipe/Tubular Covered Conductors (new)**

- 179) 396.1 Scope
- 180) 396.6 Listing required

**Article 371 Flexible Bus Systems (new)**

- 181) 371.1 Scope
- 182) 371.6 Listing required

**Article 404 Switches**

- 183) 404.1 Scope does not include wireless switches. See informational note
- 184) 404.2(C) Snaking a cable in later is no longer permitted!
- 185) 404.14(D) Snap switches terminals
- 186) 404.16 Reconditioned equipment
- 187) 404.30 Switch enclosures with doors

**Article 406 Receptacles, Cord Connectors, and Attachment Plugs**

- 188) 406.3(D) Receptacle terminals
- 189) 406.4(D)(5) TR receptacles not required for replacement CO/ALR receptacle
- 190) 406.4(D)(8) GFPE for replacement receptacles
- 191) 406.4(G) Protection for Floor Receptacles
- 192) 406.6(D) Faceplates with night light or USB charger
- 193) 406.9(A) Hinged covers must open 90 degrees (or slightly less)
- 194) 406.9(B)(2) WR receptacles required in wet locations regardless of voltage/amperage
- 195) 406.9(C) Revisions to receptacles in bathtub and shower zones
- 196) 406.12 TR receptacles required in more occupancies

**Article 408 Panelboards, Switchboards, and Switchgear**

- 197) 408.4(B) Marked to indicate physical location of source
- 198) 408.43 Face-down panelboards are not permitted either!

**Article 410 Luminaires, Lampholders and Lamps**

- 199) 410.2 Ballasts, LED drivers and Lamps not permitted to be reconditioned either
- 200) 410.10(D)(1) Paddle fans with light kits excluded from zone (see 422.18(B))
- 201) 410.10(F)+exception: Luminaires under roof decking
- 202) 410.184 GFCI and SPGFCI protection for horticultural lighting equipment
- 203) Part XVII, 410.197 added for Germicidal Irradiation Luminaires

**Article 422 Appliances**

- 204) 422.16(B)(2)(4) Bushing/grommet or smoothed edge for trash compactor cord

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205) 422.16(B)(2)(5) smoothed edge permitted for dishwasher cord

**Article 426 Fixed Electric Deicing and Snow Melting Equipment**

206) 426.28 GFPE trip settings per manufacturer specs

**Article 430 Motors and Motor Controllers**

207) 430.83(F) Motor Controller Short-Circuit Ratings

208) 430.113 Multiple Energy Sources

**Article 440 Air-Conditioning and Refrigeration Equipment**

209) 440.8 AC equipment near bathtubs and showers

210) 440.11 Disconnecting means readily accessible to unqualified people

211) 440.14 Disconnecting means must comply with 110.26(A)

**Article 445 Generators**

212) 445.18(A) Location of disconnecting means

213) 445.19(B) Remote Emergency Shutdown

214) 445.19(C) Emergency Shutdown for 1+2 Family Dwellings

**Article 450 Transformers**

215) 450.43(C) Vault Doors Must Open at Least 90 Degrees

**Article 480 Stationary Standby Batteries**

216) 480.1 Scope only covers batteries greater than 1kWh capacity

**Article 512 Cannabis Oil Equipment (new)**

217) 512.1 Scope

**Article 517 Health Care Facilities**

218) 517.6 Reconditioning of Patient Care-Related Equipment

219) 517.13 Wiring Serving ~~to~~ Patient Care Spaces

220) 517.14 Panelboard Bonding exception added

221) 517.30(B)(4) Battery Systems now Considered ESS

222) 517.30(B)(5) Healthcare Microgrid added

**Article 518 Assembly occupancies**

223) 518.2(A)(5) Casinos and Gaming Facilities added

**Article 520 Theaters and Performance areas**

224) 520.62(A) Portable power distribution now required to be listed

**Article 547 Agricultural Buildings**

225) 547.26 Nonmetallic cable restrictions added. See informational note

226) 547.44(B) Bonding of equipotential planes clarified

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**Article 550 Mobile Homes, Mobile Home Parks, Manufactured Bldgs.**

- 227) 550.32(A) Service disconnect can also serve as emergency disconnect
- 228) 550.33(A) Feder disconnect location

**Article 551 Recreational Vehicles and RV Parks**

- 229) 551.3 Electrical Datum Plane Distances
- 230) 551.77(D) RV Site Electrical Equipment Above Datum Plane

**Article 555 Marinas, Boatyards, Docking Facilities**

- 231) 555.4 Service Equipment Location
- 232) 555.15 Replacement of Equipment
- 233) 555.36(C) Emergency Disconnect/Shut off device
- 234) 555.38 Luminaires

**Article 600 Electric Signs**

- 235) 600.5(A) exception 2 added

**Article 620 Elevators, Dumbwaiters, Escalators**

- 236) 620.22(A) Car lights, receptacles, ventilation overcurrent device location

**Article 625 Electric Vehicle Power Transfer System**

- 237) 625.43 Disconnecting Means
- 238) 625.49 Island Mode

**Article 630 Electric Welders**

- 239) 630.8 GFCI protection for receptacles near welders

**Article 680 Swimming Pools and Fountains**

- 240) 680.5(A) GFCI and SPGFCI Protection
- 241) 680.5(B) Class A GFCI requirements
- 242) 680.5(C) SPGFCI requirements
- 243) 680.10(B) Swimming Pool Heat Pumps
- 244) 680.12(A) Equipment Room Drainage Requirements
- 245) 680.12(B) Equipment Room Receptacles
- 246) 680.14(A) Aluminum conduit and tubing prohibited
- 247) 680.14(B) Equipment in Corrosive Environment
- 248) 680.21(C) Ground-Fault Protection of Motors
- 249) 680.21(D) Replacement Pool Pump Motor
- 250) 680.22(A)(4) Ground-Fault Protection of Receptacles
- 251) 680.23(B)(2) Wiring from forming shell to junction box
- 252) Former Section 680.25 Feeders Deleted. See 680.14
- 253) 680.26(A) Performance of Equipotential Bonding
- 254) 680.32 Storable pool GFCI and SPGFCI protection
- 255) 680.41(B) Location of Equipment Near Spas/Hot Tubs
- 256) 680.43(A)(2) Ground-Fault Protection of receptacles



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- 257) 680.43(A)(3) Spa/Hot Tub Receptacle
- 258) 680.44(A) GFCI or SPGFCI for spa/hot tub outlet
- 259) 680.44(C) Gas-Fired Water Heaters
- 260) 680.50(B) Location of equipment near fountains
- 261) 680.54(C) Splash pad bonding
- 262) 680.58 GFCI and SPGFCI protection for receptacles adjacent to fountain
- 263) 680.59 GFCI and SPGFCI for non-submersible fountain pumps
- 264) 680.74(A) exception 3 added
- 265) MEC 680.74(A)

#### **Article 690 Solar PV Systems**

- 266) 690.4(G) PV equipment floating on water
- 267) 690.12 exception 2 added

#### **Article 695 Fire Pumps**

- 268) 695.1(B)(4) Water pumps in 1- and 2-family dwellings excluded

#### **Article 700 Emergency Systems**

- 269) 700.3(F)(6) Connection point for temporary generator
- 270) 700.2(F)(7) Label identifying voltage, amperage and short-circuit current rating
- 271) 700.4(C) Parallel operation
- 272) 700.5(D) Redundant transfer equipment

#### **Article 702 Optional Standby Systems**

- 273) 702.12(B) Flanged inlet located outdoors for portable generator connection

#### **Article 705 Interconnected Electric Power Production Sources**

- 274) 705.11(D) Service disconnecting means
- 275) 705.20 Source disconnecting means

#### **Article 722 Cables for Power-Limited Circuits (new)**

- 276) 722.1 Scope

#### **Article 724 Class 1 Circuits (new) formerly part of Article 725**

- 277) 724.1 Scope

#### **Article 725 Class 2 and Class 3 Power-Limited Circuits**

- 278) 725.1 Scope

#### **Article 726 Class 4 Fault-Managed Power Systems**

- 279) 726.1 Scope
- 280) 726.121 Power Source for Class 4 Circuits
- 281) 726.121(A) Fault Management (see UL 1400-1)

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**Article 750 Energy Management Systems**

282) 750.6 Listing requirements

**Article 760 Fire Alarm Systems**

283) 760.24(A) reference to 300.11 added (previously did not apply to PLFA circuits since 760.130(B) only referenced 300.11(A) while 760.46 referenced 300.11 for NPLFA circuits)

284) 760.33 SPD on supply side of Fire Alarm Control Panel

285) 760.136(G) PLFA circuits permitted with other circuits

**Chapter 9 Table 1**

286) Note 4 revised to excluded connectors from 24" measurement