AGENDA

NEC Code-Making Panel 7 (NEC P07)
NFPA 70 Second Draft Meeting (Annual 2025)

October 21 - 23, 2024
8:00 a.m. – 5:00 p.m. (PT)

Torrance Marriott Redondo Beach, CA

1. **Call to order.** Kelly Lamp.
2. **Introductions.** See committee roster attached.
3. **Chair Report.** Kelly Lamp.
4. **Staff liaison report/presentation.** Chris Coache.
5. **Previous meeting minutes.** January 2024, Charleston, SC. See attached.
6. **NFPA 70 Second Draft.**
   a. **Review of Public Comments.** See attached.
      i. **Task group report(s).**
   b. **Extract updates (if applicable)**
7. **Other Business.**
8. **Future meetings.**
9. **Adjournment.**

Address List No Phone

09/27/2024
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NEC-P07

Code-Making Panel 7

National Electrical Code®

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Code-Making Panel 7

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Code-Making Panel 7

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MINUTES

NFPA NEC Code-Making Panel 7
NFPA 70 First Draft Meeting (Annual 2025)

January 21-23, 2024
8:00 AM – 5:00 PM (ET)

Charleston, SC

1. **Call to order.** Kelly Lamp, chair, called the meeting to order at 8:00 AM on 1/21/2024.
2. **Introductions.** Attendees introduced themselves and identified their affiliation and NFPA staff took attendance.
3. **Chair report.** Kelly Lamp welcomed attendees and provided an overview of the meeting.
4. **Staff liaison report.** Nicole Cassels provided an overview of the standards development process and the revision cycle schedule.
   a. No members declared that they had been retained to represent the interest of an entity that would be classified in an interest category different from their own with respect to a specific issue or issues that were being addressed by the committee.
5. **Previous meeting minutes.** The minutes from October 21 Second Draft virtual meeting were approved without revision.
6. **NFPA 70 First Draft.**
   a. **Review of Public Inputs.** The Technical Committee reviewed the Public Inputs and developed First Revisions and Committee Inputs as necessary. These will be available in the First Draft Report at www.nfpa.org/70.
   b. **Task group reports.** The following task groups provided their reports and recommendations.
      i. **CMP-7 Task Group 1**. Dean Hunter, Chair. The task group provided a report and revisions were made. The task group was reconstituted to continue work. See attached.
      ii. **CMP-7 Task Group 2**. Richard Parades, Chair. The task group provided a report and revisions were made. The task group was reconstituted to continue work. See attached.
      iii. **CMP-7 Task Group 3.** Tom Lichtenstein, Chair. The task group provided a report and revisions were made. The task group was reconstituted to continue work. See attached.
   c. **Presentation(s).** The committee heard presentations from the following individuals.

i. **Ground Fault Monitoring Equipment.** Tim Piemonte, Littlefuse. 10 minutes. Presentation attached.

ii. **Electric Self-Propelled Vehicle Power Transfer System.** Thomas Domitrovich, Eaton. 7 minutes. Presentation attached.

iii. **Charging of Electric Boats and Ground-Fault Coordination.** Gary Loftis, Maffett/Loftis Engineering. 8 minutes. Presentation attached.

iv. **Proposed Reorganization of NEC®.** Dean Hunter and Robert Osborne and Alan Manche. 20 minutes. Presentation attached.

d. **New task groups.** The following task groups were appointed to work subsequent to the meeting:

i. **TG on PI-1776.** Chair: Dean Hunter. Members: Ryan Hyer. Scope: PI-1776 and CI-8794.

7. Other Business.

a. **Committee Input for 551.32 and 551.47(s).** David Mihalick. Files attached.

b. **Committee Input for 555.33.** Dean Hunter.

8. Future meetings. The next committee meeting will be October 14-26/2024. A meeting notification will be posted at www.nfpa.org/70next when the meeting is scheduled.

9. Adjournment. The meeting was adjourned at 5:30 PM on 1/23/24.

Attendees

Committee Members:

✓	**Kelly Lamp**	Chair	NECA
✓	**Steven Antonson**	Principal	NFPA Electrical Inspection Section
✓	**John Cowans**	Principal	NEMA
✓	**Wade Elliott**	Principal	National Association of RV Parks & Campgrounds
✓	**Adam Gilbert**	Principal	Intertek Testing Services
✓	**Jacob Grap**	Principal	IEC, Inc.
✓	**Harley Hartman**	Principal	IEEE-IAS/PES JTCC
✓	**Dean Hunter**	Principal	IAEI
✓	**Ryan Hyer**	Principal	Testing Engineers International
✓	**Thomas Lichtenstein**	Principal	UL Solutions
✓	**Gary Loftis**	Principal	American Boat & Yacht Council, Inc.
	Brian Majerowicz	Principal	Electric Light & Power Group/EEI

✓	**David Mihalick**	Principal	Thor Industries Inc.
	Doug Mulvaney	Principal	Kampgrounds of America Inc.
✓	**Richard Parades**	Principal	IBEW
✓	**Paul Reis**	Principal	The Aluminum Association, Inc.
✓	**Curt Richardson**	Principal	Recreation Vehicle Industry Association
✓	**Paul Seff**	Principal	Eaton Corporation
	Michael Zieman	Principal	Manufactured Housing Institute
	Mark Cook	Voting Alternate	ASABE
✓	**Ryan Bergen**	Alternate	Kampgrounds of America
	Byron Carroll	Alternate	National Association of RV Parks & Campground
✓	**Clay Carroll**	Alternate	IEC, Inc.
✓	**Gerald Dix**	Alternate	IBEW
✓	**Cari Hedberg**	Alternate	IAEI
	Randy Kummer	Alternate	The Aluminum Association, Inc.
✓	**Robert Osborne**	Alternate	UL Solutions
✓	**Phillip Ostrow**	Alternate	NECA
✓	**Bryan Ritchie**	Alternate	Recreation Vehicle Industry Association
✓	**Tim Schalbach**	Alternate	Thor Industries Inc.
✓	**David Smith**	Alternate	Eaton Corporation
✓	**Nicole Cassells**	Staff	NFPA
✓	**Patrick Foley**	Staff	NFPA

Guests:

1. Bryan Holland — NEMA
2. Tim Piemonte — Littlefuse
3. Thomas Domitrovich — Eaton
4. Larry Ayer — IEC, Inc.
5. Brian Deacy — Atkore
6. Mark Pollock — Littlefuse
7. Jonathan Potter — Legrand
8. Tim McClintock — NFPA Staff

Total number in attendance: 35

2026 NEC® TG-1 Global Public Input Task Group Report

01/19/2024

CMP #	**7**		
TG#	**1**		
TG Chair	**Dean Hunter**		
TG Members			
Article/Section	**Public Input #**	**PI Report Page #**	**TG Recommendation & Statement**
	3085		Resolve- All CMP-7 Articles comply with Style manual Section 2.1.10

Article/Section	Public Input #	PI Report Page #	TG Recommendation & Statement
555.1	**1583**		**FR included in TG-1 FR-1** **Deletion of "commercial and noncommercial"**
555.3	**3086**		**FR- TG1-** **Move 555.3 to new Section 555.9 to comply with parallel numbering format required in the NEC Style Manual Section 2.2 for Numbering Conventions.**
555.33 Title	**4287**		**FR TG1-** **Insert "AC only" in front of "Receptacles"** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" as applicable per the Correlating Committee DC Task Group.**

Article/Section	Public Input #	PI Report Page #	TG Recommendation & Statement
682.3	**3086**		**FR-TG1-** **Delete 682.3 Other Articles and move text to 628.13** **Insert "If the water is subject to boat traffic, the wiring shall comply with 555.34(B)." as the second sentence of 682.13 charging statement.**

			Moved text from 682.3 to 682.13 and deleted 682.3 to comply with parallel numbering format required in the NEC Style Manual Section 2.2 for Numbering Conventions.

2026 NEC® TG-2 Global Public Input Task Group Report

01/19/2024

CMP #	7		
TG#	2		
TG Chair	Rich Paredes		
TG Members			
Article/Section	**Public Input #**	**PI Report Page #**	**TG Recommendation & Statement**
	3085		Resolve- All CMP-7 Articles comply with Style manual Section 2.1.10

550.10(C)	**4287**		**FR TG2-** **Insert "AC only" after 125/250 volts. (For the plug.)** **Insert "AC only" after 125/250-volt. (For the receptacle.)** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**
Article/Section	**Public Input #**	**PI Report Page #**	**TG Recommendation & Statement**
550.11 **550.11(B)** **550.11(C)**	**4050** **4287**		**FR TG2-** **In the title and paragraph replace "Branch Circuit Protective Equipment" with "Branch-Circuit Overcurrent Protective Devices"** **In the title and replace "Branch Circuit Protective Equipment" with "Branch-Circuit Overcurrent Protective Devices"** **And in the second paragraph replace "branch-circuit overcurrent devices" with "Branch-Circuit Overcurrent Protective Devices"** **Statement: The terms "Branch-Circuit Protective Equipment" and "branch circuit overcurrent devices" were revised to "Branch Circuit Overcurrent Protective Devices" to be consistent with the defined term.** **FR TG2-** **Insert "AC only" after 240-volt**

550.11(D)			**Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.** **FR TG2-** **Insert "AC only" after 120/240-volt.** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**
550.12	**4287**		**FR TG2-** **Insert second sentence "Applicable to AC circuits only."** **Clearly identified requirements which are not applicable to DC circuits by incorporating "Applicable to AC circuits only" per the Correlating Committee DC Task Group.**
550.13	**4287**		**FR TG2-** **In the title, insert "AC only" before receptacle.** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**
550.16(A)(2)	**4287**		**FR TG2-** **Insert "AC only" after 120/240 volt** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**
550.18	**4287**		**FR TG2-** **Insert "AC only" after 120/240 volt** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**
550.25	**4287**		**FR TG2-** **Insert "AC only" after 120-volt** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**
550.30	**4287**		**FR TG2-** **Insert "AC only" after volts**

			Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.
550.31	**4287**		**FR TG2-** **Insert "AC only" after volts** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**
550.32(G)	**4287**		**FR TG2-** **Insert "AC only" after 125/250 volts** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**

Article/Section	**Public Input #**	**PI Report Page #**	**TG Recommendation & Statement**
551.3	**3086**		**FR TG2-** **Move 551.3 to 551.5 to comply with parallel numbering format required in the NEC Style Manual Section 2.2 for Numbering Conventions.**
551.4(B)	**4287**		**FR TG2-** **Insert "AC only" in front of the last "systems".** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**

Article/Section	Public Input #	PI Report Page #	TG Recommendation & Statement
551.31	4287		FR TG2- In the title- Insert "AC Only' after "multiple" and revise "source" to "sources" Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.
551.31(A) and 551.31(C)	4050		FR TG2- Replace "Overcurrent Protective Device" with "Branch-Circuit Overcurrent Protective Device" The term "Overcurrent Protective Device" was revised to "Branch Circuit Overcurrent Protective Device" to be consistent with the defined term.
551 Part IV Title	4287		FR TG2- Insert "AC only" after 120/240-volt Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.
551.40 Title	4287		FR TG2- Insert "AC only" after 120/240-volt Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.
551.43(A)	4050		FR TG2- Replace "Branch Circuit Overcurrent Devices" with "Branch-Circuit Overcurrent Protective Devices"

551.47(Q)(1) **And** **551.47(S)(1)**			**The term "branch circuit overcurrent devices" were revised to "Branch Circuit Overcurrent Protective Devices" to be consistent with the defined term.** **FR TG2-** **Replace "Overcurrent Protective Device" with "Branch-Circuit Overcurrent Protective Device"** **The term "Overcurrent Protective Device" was revised to "Branch Circuit Overcurrent Protective Device" to be consistent with the defined term.**
551.71 Title	**4287**		**FR TG2-** **Insert "AC Only" in front of "Type"** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**
551.72 Title	**4287**		**FR TG2-** **Insert "AC Only" in front of "Distribution"** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**
551.73(A)	**4287**		**FR TG2-** **Insert "AC only" in front of "electrical service"** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**
551.77 (F)	**4287**		**FR TG2-** **Insert "AC only" after "volt"** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**

551.81 Title	**4287**		**FR TG2-** **Insert "AC only" in front of "receptacle"** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**

Article/Section	**Public Input #**	**PI Report Page #**	**TG Recommendation & Statement**
552 Part IV Title	**4287**		**FR TG2-** **Insert "AC only" after 120/240-volt** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**
552.42(A)	**4050**		**FR TG2-** **Replace "Branch Circuit Overcurrent Devices" with "Branch-Circuit Overcurrent Protective Devices"** **The term "branch circuit overcurrent devices" were revised to "Branch Circuit Overcurrent Protective Devices" to be consistent with the defined term.**

Article/Section	***Public Input #***	***PI Report Page #***	**TG Recommendation & Statement**
552.48(P)(1) and 552.48(Q)(1)	**4050**		**FR TG2-** **Replace "Overcurrent Protective Device" with "Branch-Circuit Overcurrent Protective Device"** **The term "Overcurrent Protective Device" was revised to "Branch Circuit Overcurrent Protective Device" to be consistent with the defined term.**
552.60(A) Title	**4287**		**FR TG2-** **Insert "AC only" after 120/240-volts** **Clearly identified requirements which are not applicable to DC circuits by incorporating "AC Only" terminology as applicable per the Correlating Committee DC Task Group.**

2026 NEC® Public Input Task Group Report (Final)

CMP #	**7**
TG#	**1**
TG Chair	**Dean Hunter - E**
TG Members	**Ryan Hyer – RT, Gary D. Loftis – U, Clifford Norton – IM, Gerald D. Dix – L, Randy D. Kummer – M, John Cowans – M, Ryan Bergen – U, Bryan Ritchie – M, David Smith – M, Steven Antonson – E**

Article/Section	Public Input #	PI Report Page #	TG Action
100	**3910**	**164**	**Resolve**
Code Language	**Equipment Leakage Current Interrupter (ELCI).** A residual current device (RCD) which detects equipment ground fault leakage current and disconnects all current carrying conductors from the supply source at a preset trip threshold.		
Statement	The proposed definition is not necessary. The overcurrent preset trip thresholds for GFPE protection according to UL 1053, Standard for Ground-Fault Sensing and Relaying Equipment, which is consistent with the committee actions that were based on the *In-Water Shock Hazard Mitigation Strategies* (October 2008) and the *Assessment of Hazardous Voltage/Current in Marinas, Boatyards and Floating Buildings* (November 2014). The upstream and downstream nuisance tripping concerns will be addressed through coordination of the electrical system which is proposed via PI 4066 (555.35).		

Article/Section	Public Input #	PI Report Page #	TG Action
100	**3912**		**Resolve**
Code Language	**Residual Current Device (RCD).** A device that disconnects a circuit whenever the supply current is not equal to the return current within predetermined limits.		
Statement	The proposed definition is not necessary. The overcurrent preset trip thresholds for GFPE protection according to UL 1053, Standard for Ground-Fault Sensing and Relaying Equipment, which is consistent with the committee actions that were based on the *In-Water Shock Hazard Mitigation Strategies* (October 2008) and the *Assessment of Hazardous Voltage/Current in Marinas, Boatyards and Floating Buildings* (November 2014). The upstream and downstream nuisance tripping concerns will be addressed through coordination of the electrical system which is proposed via PI 4066 (555.35).		

Article/Section	Public Input #	PI report Page #	TG Action
555 (Scope)	**1487,1583,2240**		**First Revision (1)**
Code Language	Remove commercial and non-commercial from the scope.		
Statement	The removal of “commercial and non-commercial” from the title adds clarity. The technical committee does not have purview over the Article 555 Scope as stated in the 2023 NEC Style Manual section 2.1.4.4. The approval of article scope statements shall be the responsibility of the National Electrical Code Correlating Committee.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
100	**722**	**169**	**Resolve**
Code Language	**Shore Power.** The electrical equipment required to power a floating vessel or other vehicle including, but not limited to, the receptacle and cords. (555) (CMP-7)		
Statement	The committee agrees that the term “shore power” should only be associated with marinas which are addressed in Article 555. Technically, the term “shore” is very specific to a body of water. Electrical receptacles that are used for other installations are generally referred to as power outlets or site supply equipment.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
New Article Number	**3774 3778**	**1 -682 310**	**CI**
Code Language	**Chapter XX Installations Associated with Bodies of Water** XX10 Swimming Pools, Fountains, and Similar Installations (Article 680) XX12 Natural and Artificially Made Bodies of Water (Article 682) XX14 Marinas, Boatyards, Floating Buildings, and Commercial and Noncommercial Docking Facilities (Article 555)		
Statement	Enforcement and system design work is performed by many industry stakeholder groups which includes electrical inspectors, consulting engineers, building officials and fire officials. By grouping "bodies of water" in one Chapter, it would encourage a more robust layout that will enhance usability for the next several decades and beyond. In addition, the grouping of the Articles would help with correlation of similar requirements.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
100	4434	175	Resolve
Code Language	**Equipment Ground-Fault Protective Device (EGFPD).** A device intended for the detection of sensitive ground-fault currents, when the selectable ground-fault pick-up level is 6mA or up to 100mA, and interrupts a faulted circuit in accordance to the time intervals established by a Class A device. Informational Note: See UL Category FTTE, Equipment Ground-Fault Protective Devices, for further information. This product category is listed according to requirements in UL 1053, Standard for Ground-Fault Sensing and Relaying Equipment, and UL 943, Standard for Ground-Fault Circuit Interrupters.		
Statement	The proposed definition is not necessary. The overcurrent preset trip thresholds for GFPE protection according to UL 1053, Standard for Ground-Fault Sensing and Relaying Equipment, which is consistent with the committee actions that were based on the *In-Water Shock Hazard Mitigation Strategies* (October 2008) and the *Assessment of Hazardous Voltage/Current in Marinas, Boatyards and Floating Buildings* (November 2014). The upstream and downstream nuisance tripping concerns will be addressed through the coordination of the electrical system which is proposed via PI 4066 (555.35).		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
100	4440	176	Resolve
Code Language	**Grounding Monitor/Interrupter (GM/I).** A device intended to monitor equipment grounding conductor continuity, that functions to prevent energization of a circuit under conditions where the grounding is not available and causes the circuit to be interrupted where the equipment grounding is lost or compromised during operation. Informational Note: See UL 943C, Outline of Investigation for Special Purpose Ground-Fault Circuit Interrupters, for information on Grounding Monitor/Interrupters.		
Statement	The proposed definition is not necessary. The overcurrent preset trip thresholds for GFPE protection according to UL 1053, Standard for Ground-Fault Sensing and Relaying Equipment, which is consistent with the committee actions that were based on the *In-Water Shock Hazard Mitigation Strategies* (October 2008) and the *Assessment of Hazardous Voltage/Current in Marinas, Boatyards and Floating Buildings* (November 2014). The upstream and downstream nuisance tripping		

	concerns will be addressed through the coordination of the electrical system which is proposed via PI 4066 (555.35).

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
555.1 **Informational Note No. 3.**		**N/A**	**First Revision (2)**
Code Language	~~**Informational Note No. 3:** Text that is followed by a reference in brackets has been extracted from *NFPA 303-2016, Fire Protection Standard for Marinas and Boatyards, and NFPA 307-2016, Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves.* Only editorial changes were made to the extracted text to make it consistent with this Code.~~		
Statement	The language regarding extracts is no longer necessary due to the relocation of the definitions in the 2023 NEC. The information regarding extracts is covered under the Scope of Article 100.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
555.6	**2767**	**329**	**First Revision (3)**
Code Language	**555.6 Load Calculations for Service and Feeder Conductors.** General lighting and other loads shall be calculated in accordance with ~~Part III of~~ Article 220, <u>Part III</u>, and, in addition, the demand factors set forth in 220.120 shall be permitted for each service and/or feeder circuit supplying receptacles that provide shore power for boats.		
Statement	The text is revised to comply with the NEC Style Manual Section 4.1.4, regarding the use of Parts. The article number shall precede the part number.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
555.35(E) NEW	**4066**	**342**	**First Revision (4)**
Code Language	**<u>555.35 (E) Coordination.</u>** <u>All GFPE protection devices shall be coordinated.</u>		
Statement	Coordination of electrical system(s) is important to ensure the operation and functionality of the marina. This requirement that all GFPE devices be coordinated		

	will ensure that devices upstream of a fault continue to operate, so as to not interrupt power of the entire marina electrical system.

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
555.35(F) NEW	4435	343	First Revision (5)
Code Language	**555.35 (F) Performance Testing.** The GFPE protection system shall be performance tested by an approved method when first installed on site. This testing shall be conducted by a qualified person(s) in accordance with the manufacturer's instructions. A written record of this testing shall be made and shall be available to the authority having jurisdiction.		
Statement	To reduce potential electrical shock hazards, the GFPE protective equipment used in marina environments shall be tested by a qualified individual to ensure compliance with 555.35(A), and to verify that the marina branch circuits and feeders are properly coordinated.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
555.35	4007, 4008	353	First Revision (6)
Code Language	**555.35 Ground-Fault Protection of Equipment (GFPE) and Ground-Fault Circuit Interrupter.** For other than floating buildings, ground-fault protection for docking facilities and piers shall be provided in accordance with 555.35(A) through (D).		
Statement	Many times, pier structures can be built and located in boatyards and marinas or can be extensions from the docking infrastructure. For enforceability, this requirement would apply to piers that may not be covered by Article 682 which only applies to the installations of electrical wiring in and adjacent to natural and artificially made bodies of water.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
555.35(A)			First Revision (7)
Code Language	**555.35(A) Feeder.** Listed GFPE, rated not more than 100 milliamperes, shall be provided for feeders installed on docking facilities and piers. ~~Coordination with downstream GFPE shall be permitted at the feeder overcurrent protective device.~~		

Statement	Many times, pier structures can be built and located in boatyards and marinas or can be extensions from the docking infrastructure. For enforceability, this requirement would apply to piers that may not be covered by Article 682 which only applies to the installations of electrical wiring in and adjacent to natural and artificially made bodies of water. The statement regarding coordination is deleted as it will be addressed in the new section 555.35(D). See statement for PI4007 and PI4008.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
(NEW Part IV)	**4430**	**361**	**Resolve**
Code Language	**Part IV Electric Vessels**		
Statement	The proposed language to add a new Part IV is incomplete and lacks technical substantiation. During the comment stage, consider reviewing the language being introduced in a new article for an Electric Self-Propelled Vehicle Power Transfer System. If the new language is added to the NEC and meets the submitters intent, a new section in Article 555 could provide a reference to the new article or applicable section.		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.13	**3258** **2235** **2077** **1476** **3924**	**317** **316** **315** **314** **318**	**First Revision (8)**
Code Language	**555.13 Bonding of Non-Current-Carrying Metal Parts.** All metal parts in contact with the water, all metal piping, and all non-current-carrying metal parts that are likely to become energized shall be connected to one of the following: (1) The branch circuit or feeder equipment grounding conductor (2) The grounding bus in an enclosed panelboard using copper conductors; insulated, covered, or bare; not smaller than 8 AWG. Connections to bonded parts shall be made in accordance with 250.8.		

Statement	PI 3258: The revisions to the text improve clarity and usability in accordance with 2.1.8.3 of the NEC Style Manual. PI 2235: Including “of the wire type” is already addressed under wiring methods in section 555.34(A)(1). PI 2077: Included the term “enclosed panelboard” to be consistent with the new definition added to Article 100 during the 2023 NEC cycle. PI 1476: The bonding connection can be terminated in any enclosed panelboard that supplies the docking facility. Stating that it must be located in the nearest enclosed panelboard does not add clarity. PI 3924: Removed the term “solid”. The committee agrees that premature failures can happen when solid conductors and terminations are exposed at docking facilities that are subjected to tidal fluctuations and/or wave movement.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.14	**3257**	**319**	**First Revision (9)**

Code Language

555.14 Equipotential Planes and Bonding of Equipotential Planes.

~~An equipotential plane shall be installed where required in this section to mitigate step and touch voltages at electrical equipment. The parts specified in this section shall be bonded together and to the electrical grounding system. The bonding conductor shall be solid copper conductors; insulated, covered, or bare; not smaller than 8 AWG.~~

~~(A)Areas Requiring Equipotential Planes.~~ Equipotential planes shall be installed adjacent to all outdoor service equipment or disconnecting means that control equipment in or on water where the following conditions exist:

(1) Where the system voltage exceeds 250 volts to ground

(2) Where the equipment is located within 3 m (10 ft) of the body of water.

(A) Equipotential Plane Construction

The equipotential plane shall ~~include all metallic enclosures and controls that are likely to become energized and are accessible to personnel. The equipotential plane shall~~ encompass the area around the outdoor service equipment and shall extend from the area directly below the equipment out not less than 900 mm (36 in.) in all directions from which a person would be able to stand and come in contact with the equipment. Bonding to equipotential planes shall be provided as specified in 555.14(A)(1) or (A)(2) and shall be attached to metallic enclosures that are likely to become

	energized with a solid copper, insulated, covered, or bare, and not smaller than 8 AWG. (1) Structural Reinforcing Steel. Unencapsulated structural reinforcing steel bonded together by steel tie wires or the equivalent. (2) Copper Grid. Copper grid where the following requirements are met: (a) Be constructed of minimum 8 AWG bare solid copper conductors bonded to each other at all points of crossing in accordance with 250.8 or other approved means (b) Be arranged in a 300 mm (12 in.) by 300 mm (12 in.) network of conductors in a uniformly spaced perpendicular grid pattern with a tolerance of 100 mm (4 in.) (c) Only listed splicing devices or exothermic welding are used. (B) Areas Not Requiring Equipotential Planes. Equipotential planes shall not be required for the controlled utilization equipment on the docking facility or floating building supplied by the service equipment or disconnecting means.
Statement	The changes incorporate similar equipotential bonding requirements from section 680.26 for consistency. Additional text provides detail on how the equipotential plane is to be constructed and bonded to the electrical system. For correlation, section 682.33 was revised to match the section 555.14 requirements.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.15	**1123**	**321**	**Resolve**
Code Language	**555.15 Replacement of Equipment.** When modifications or replacements of electrical enclosures, devices, or wiring methods are necessary on a docking facility, they shall be required to comply with the requirements of this Code, and the installation shall require an inspection of the circuit. Existing equipment that has been damaged shall be identified, documented, and repaired by a qualified person to the minimum requirements of ~~the edition of this Code to which it was originally installed~~ this code. Informational Note: NFPA 303-2021, Fire Protection Standard for Marinas and Boatyards, is a resource for guiding the electrical inspection of a marina.		
Statement	The language addresses electrical equipment that is being modified or replaced. The modified or replaced equipment must be installed per the current edition of the code. However, the requirement for the remainder of the branch circuit or feeder to be inspected and serviced under their originally installed code, if necessary, is to reduce		

	the likelihood that other parts of an existing installation could contribute to electric shock drowning events.

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
555.15	**1774** **362** **1913** **548**	**338** **340** **323** **325**	**First Revision (10)**
Code Language	**555.15 Servicing and Replacement of Equipment.** When modifications or replacements of electrical enclosures, devices, or wiring methods are necessary ~~on a docking facility~~, they shall be required to comply with the requirements of this Code, and the installation shall require an inspection of the circuit. Existing equipment that has been damaged shall be serviced or replaced in accordance with 555.15(A) or (B) **(A) Servicing** Equipment that has been damaged shall be ~~identified~~ recognized, documented, and ~~repaired~~ serviced by a qualified person to meet or exceed the ~~minimum~~ requirements of the edition of ~~this Code~~ the code to which it was originally installed. **(B) Replacement** Equipment that has been damaged beyond servicing shall be documented and replaced by a qualified person. Informational Note: NFPA 303-2021, Fire Protection Standard for Marinas and Boatyards, is a resource for guiding the electrical inspection of a marina		
Statement	The section is separated into two first level subdivisions to facilitate understanding and usability in accordance with NFPA Style Manual section 3.5.1.2. (A) Servicing was added to the text as it is a defined in Article 100 and better describes the installation. The (B) section addresses replacement equipment and provides guidance for when equipment is damaged beyond servicing. Removed “on a docking facility” to clarify that the requirements apply to piers and floating buildings. Changed to the word “recognized” because the term “identified” is defined in Article 100.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
555.30(A) and (B)	**1586** **4188** **4190**	**326** **328** **329**	**First Revision (11)**

Code Language	**555.30 Electrical Equipment and Connections.** **(A) General.** **(1) Location.** All electrical components within electrical equipment (excluding wiring methods) and connections not intended for operation while submerged shall be located at least 305 mm (12 in.) above the deck of a fixed or floating structure, but not below the electrical datum plane. **(2) Wiring Connectors.** Conductor splices, within junction boxes identified for wet locations, utilizing sealed wire connector systems listed and identified for submersion shall be required for floating structures where located above the waterline but below the electrical datum plane. **(B) Replacements.** **(1) Location.** Replacement electrical connections shall be located at least 305 mm (12 in.) above the deck of a floating or fixed structure. **(2) Wiring Connectors.** Conductor splices, within junction boxes identified for wet locations, utilizing sealed wire connector systems listed and identified for submersion shall be required where located above the waterline but below the electrical datum plane.
Statement	Revised the language to clarify that components and terminations "within electrical equipment" are required to be at least 12" above the deck – not the entire electrical equipment enclosure. In addition, changed (A) and (B) into a list item format to facilitate understanding and usability in accordance with NFPA Style Manual section 3.5.1.2.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.34(B)(2)	**2768**	**330**	**First Revision (12)**
Code Language	**555.34(B)(2) Outdoor Branch Circuits and Feeders.** Multiple feeders and branch circuits shall be permitted and clearances for overhead branch-circuit and feeder wiring in locations of the boatyard other than those described in 555.34(B)(1) shall be located not less than 5.49 m (18 ft) above grade. Only ~~Part I of~~ Article 225 ~~shall,~~ Part I shall apply to marina installations.		
Statement	The text is revised to comply with the NEC Style Manual Section 4.1.4, regarding the use of Parts. The article number shall precede the part number.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
555.35	**1587** **3920** **3913** **3915** **3937**	**331** **345** **339** **340** **359**	**First Revision (13)**

Code Language

555.35 Ground-Fault Protection of Equipment (GFPE) and Ground-Fault Circuit Interrupter.

~~For other than floating buildings,~~ ~~g~~Ground-fault protection for docking facilities shall be provided in accordance with 555.35(A) through (~~D~~F)

(A) Feeder.
Listed GFPE, rated not more than 100 milliamperes, shall be provided for feeders installed on docking facilities. Coordination with downstream GFPE shall be permitted at the feeder overcurrent protective device.

Exception No. 1: ~~Transformer secondary~~ The load side conductors of ~~a~~ separately derived systems and circuits supplying ground-fault monitoring equipment that do not exceed 3 m (10 ft) and are installed in a raceway shall be permitted to be installed without ground-fault protection. This exception shall also apply to the supply terminals of the equipment supplied by the transformer secondary conductors.

Exception No. 2: Feeders for fire pumps shall be permitted to utilize ground fault monitoring without disconnecting power to the fire pump. The ground fault monitor alarm shall notify upon ground faults exceeding 100mA. The alarm shall be audible and visual. The alarm shall be located where it can be monitored by qualified personnel.

(**B) Branch-Circuits.**

(1) Receptacles Providing Shore Power.

Listed GFPE, rated not more than 30 milliamperes, shall be provided for receptacles installed in accordance with 555.33(A).

(2) Outlets for Other than Shore Power.

Outlets supplied by branch circuits not exceeding 150 volts to ground and 60 amperes, single phase, and 150 volts or less to ground, 100 amperes or less, three phase, shall be provided with GFCI protection for personnel.

Exception to (B): Low-voltage circuits not requiring grounding, not exceeding the low-voltage contact limit and supplied by listed transformers or power supplies that comply with 680.23(A)(2) shall be permitted to be installed without ground-fault protection.

	(C) Boat Hoists. GFCI protection for personnel shall be provided for outlets not exceeding 240 volts that supply a boat hoist installed at docking facilities. GFCI protected receptacles for other than shore power shall be permitted to supply boat hoists. **(D) Leakage Current Measurement Device.** Where more than three receptacles supply shore power to boats, a listed leakage current measurement device for use in marina applications shall be available and be used to determine leakage current from each boat that will utilize shore power. The listing requirement for the leakage current measurement device for use in marina applications shall become effective January 1, 2026. Informational Note No. 1: Leakage current measurement will provide the capability to determine when an individual boat has defective wiring or other problems contributing to hazardous voltage and current. The use of a test device will allow the facility operator to identify a boat that is creating problems. In some cases, a single boat could cause an upstream GFPE device protecting a feeder to operate even though multiple boats are supplied from the same feeder. The use of a test device will help the facility operator prevent a particular boat from contributing to hazardous voltage and current in the marina area. Informational Note No. 2: An annual test of each boat with the leakage current measurement device is a prudent step toward determining if a boat has defective wiring that could be contributing hazardous voltage and current. Where the leakage current measurement device reveals that a boat is contributing hazardous voltage and current, repairs should be made to the boat before it is permitted to utilize shore power. Exception: Where the shore power equipment includes a leakage indicator and leakage alarm, a separate leakage test device shall not be required.
Statement	PI 1587: The revision created by TIA 1660 recognizes the difficulty of providing GFPE protection on sources that provide power to docking facilities. Removing the language does not reduce the safety of the electrical system. PI 3913: In the event of a ground-fault event at a marina dock, the GFPE equipment could potentially be de-energized, thereby not protecting the remainder of the feeders supply dock distribution. The exception ensures that the GFPE system remains functional during and after ground fault events. PI 3915: The new language includes other separately derived systems, as opposed to only recognizing transformers, such as battery inverters, generators, etc., where GFPE is not required when conditions are met. PI 3920: “For other than floating buildings” was removed for clarity. The wording was not needed as floating building are covered in Part III of the article.

	PI 3937: As written, 555.35(A) requires the fire pump feeder to have ground-fault protection of equipment. For life safety concerns, it would not be desirable to remove power in a GFPE event; however, monitoring would be acceptable to confirm that leakage current from the fire pump not contributing to an electrical shock drowning (ESD) event.

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
555.35	**4403**	**333,334,335**	**Resolve**

Code Language

555.35 Equipment Ground-Fault ~~Protection of Equipment (GFPE)~~ Protective Device (EGFPD), Grounding Monitor/Interrupter (GM/I) and Ground-Fault Circuit Interrupter.

For other than floating buildings, ground-fault protection for docking facilities shall be provided in accordance with 555.35(A) through (D)**(A) Feeder.**
Listed ~~GFPE~~EGFPD, rated not more than 100 milliamperes, shall be provided for feeders installed on docking facilities. ~~Coordination with downstream GFPE shall be permitted at the feeder overcurrent protective device.~~ Feeders, rated 100 amperes and less, providing power to outlets for other than shore power shall also be provided with a listed GM/I. Coordination with downstream EGFPDs shall be permitted.

Exception: Transformer secondary conductors of a separately derived system that do not exceed 3 m (10 ft) and are installed in a raceway shall be permitted to be installed without ground-fault protection. This exception shall also apply to the supply terminals of the equipment supplied by the transformer secondary conductors.

(**B) Branch-Circuits.**

(1) Receptacles Providing Shore Power.

Listed ~~GFPE~~EGFPD, rated not more than 30 milliamperes, shall be provided for receptacles installed in accordance with 555.33(A).

(2) Outlets for Other than Shore Power.

Outlets supplied by branch circuits not exceeding 150 volts to ground and 60 amperes, single phase, and 150 volts or less to ground, 100 amperes or less, three phase, shall be provided with GFCI protection for personnel.

Exception to (B): Low-voltage circuits not requiring grounding, not exceeding the low-voltage contact limit and supplied by listed transformers or power supplies that comply with 680.23(A)(2) shall be permitted to be installed without ground-fault protection.

(C) Boat Hoists.

	GFCI protection for personnel shall be provided for outlets not exceeding 240 volts that supply a boat hoist installed at docking facilities. GFCI protected receptacles for other than shore power shall be permitted to supply boat hoists **(D) Leakage Current Measurement Device.** Where more than three receptacles supply shore power to boats, a listed leakage current measurement device for use in marina applications shall be available and be used to determine leakage current from each boat that will utilize shore power. The listing requirement for the leakage current measurement device for use in marina applications shall become effective January 1, 2026. Informational Note No. 1: Leakage current measurement will provide the capability to determine when an individual boat has defective wiring or other problems contributing to hazardous voltage and current. The use of a test device will allow the facility operator to identify a boat that is creating problems. In some cases, a single boat could cause an upstream Listed ~~GFPE~~ EGFPD device protecting a feeder to operate even though multiple boats are supplied from the same feeder. The use of a test device will help the facility operator prevent a particular boat from contributing to hazardous voltage and current in the marina area. Informational Note No. 2: An annual test of each boat with the leakage current measurement device is a prudent step toward determining if a boat has defective wiring that could be contributing hazardous voltage and current. Where the leakage current measurement device reveals that a boat is contributing hazardous voltage and current, repairs should be made to the boat before it is permitted to utilize shore power. Exception: Where the shore power equipment includes a leakage indicator and leakage alarm, a separate leakage test device shall not be required.
Statement	See statement and action taken on PI 4434 and 4440.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.35	**4439**	**336,337**	**Resolve**
Code Language	**555.35 ~~Ground-Fault Protection of Equipment (GFPE)~~ Equipment Leakage Current Interrupter (ELCI) and Ground-Fault Circuit Interrupter.** For other than floating buildings, ground-fault protection for docking facilities shall be provided in accordance with 555.35(A) through (D) **(A) Feeder.** Listed ~~GFPE~~ ELCI, rated not more than 100 milliamperes, shall be provided for feeders installed on docking facilities. Coordination with downstream ~~GFPE~~ ELCI shall be permitted at the feeder overcurrent protective device.		

	Exception: Transformer secondary conductors of a separately derived system that do not exceed 3 m (10 ft) and are installed in a raceway shall be permitted to be installed without ground-fault protection. This exception shall also apply to the supply terminals of the equipment supplied by the transformer secondary conductors. (**B) Branch-Circuits.** (1) Receptacles Providing Shore Power. Listed ~~GFPE~~ ELCI, rated not more than 30 milliamperes, shall be provided for receptacles installed in accordance with 555.33(A). (2) Outlets for Other than Shore Power. Outlets supplied by branch circuits not exceeding 150 volts to ground and 60 amperes, single phase, and 150 volts or less to ground, 100 amperes or less, three phase, shall be provided with ~~GFCI~~ ELCI protection for personnel. Exception to (B): Low-voltage circuits not requiring grounding, not exceeding the low-voltage contact limit and supplied by listed transformers or power supplies that comply with 680.23(A)(2) shall be permitted to be installed without ground-fault protection. **(C) Boat Hoists.** GFCI protection for personnel shall be provided for outlets not exceeding 240 volts that supply a boat hoist installed at docking facilities. GFCI protected receptacles for other than shore power shall be permitted to supply boat hoists. **(D) Leakage Current Measurement Device.** Where more than three receptacles supply shore power to boats, a listed leakage current measurement device for use in marina applications shall be available and be used to determine leakage current from each boat that will utilize shore power. The listing requirement for the leakage current measurement device for use in marina applications shall become effective January 1, 2026. Informational Note No. 1: Leakage current measurement will provide the capability to determine when an individual boat has defective wiring or other problems contributing to hazardous voltage and current. The use of a test device will allow the facility operator to identify a boat that is creating problems. In some cases, a single boat could cause an upstream ~~GFPE~~ ELCI device protecting a feeder to operate even though multiple boats are supplied from the same feeder. The use of a test device will help the facility operator prevent a particular boat from contributing to hazardous voltage and current in the marina area. Informational Note No. 2: An annual test of each boat with the leakage current measurement device is a prudent step toward determining if a boat has defective wiring that could be contributing hazardous voltage and current. Where the leakage current measurement device reveals that a boat is contributing hazardous voltage and

	current, repairs should be made to the boat before it is permitted to utilize shore power. Exception: Where the shore power equipment includes a leakage indicator and leakage alarm, a separate leakage test device shall not be required.
Statement	See statement and action taken on PI 3910 and 3912.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.35	**3922**	**348**	**Resolve**
Code Language	**555.35** For other than floating buildings, ground-fault protection ~~for docking facilities~~ shall be provided in accordance with 555.35(A) through (D)		
Statement	The removal of "for docking facilities" would mandate that the GFPE requirements be extended to other buildings that are not associated or located at the water's edge. No technical substantiation has been provided to expand the GFPE protection requirements.		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.35(D)	**3161**	**344**	**Resolve**
Code Language	~~**(D) Leakage Current Measurement Device.**~~ ~~Where more than three receptacles supply shore power to boats, a listed leakage current measurement device for use in marina applications shall be available and be used to determine leakage current from each boat that will utilize shore power. The listing requirement for the leakage current measurement device for use in marina applications shall become effective January 1, 2026.~~ ~~Informational Note No. 1: Leakage current measurement will provide the capability to determine when an individual boat has defective wiring or other problems contributing to hazardous voltage and current. The use of a test device will allow the facility operator to identify a boat that is creating problems. In some cases, a single boat could cause an upstream GFPE device protecting a feeder to operate even though multiple boats are supplied from the same feeder. The use of a test device will help the facility operator prevent a particular boat from contributing to hazardous voltage and current in the marina area.~~ ~~Informational Note No. 2: An annual test of each boat with the leakage current measurement device is a prudent step toward determining if a boat has defective wiring that could be contributing hazardous voltage and current. Where the leakage~~		

	~~current measurement device reveals that a boat is contributing hazardous voltage and current, repairs should be made to the boat before it is permitted to utilize shore power.~~ ~~Exception: Where the shore power equipment includes a leakage indicator and leakage alarm, a separate leakage test device shall not be required.~~
Statement	GFPE protection at marinas was implemented less than a decade ago. In many cases, as marinas add additional slips, the existing infrastructure may not provide GFPE protection for their vessels. A leakage current measurement device provides additional protection to help recognize vessels that could contribute to electric shock drowning events in older marinas.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.35(D)	**3172**	**346**	**Resolve**
Code Language	**555.36(D) Leakage Current Measurement Device.** Where more than three receptacles supply shore power to boats, a listed leakage current measurement device for use in marina applications shall be available and be used to determine leakage current from each boat that will utilize shore power. The listing requirement for the leakage current measurement device for use in marina applications shall become effective January 1, 2026. Informational Note No. 1: Leakage current measurement will provide the capability to determine when an individual boat has defective wiring or other problems contributing to hazardous voltage and current. The use of a test device will allow the facility operator to identify a boat that is creating problems. In some cases, a single boat could cause an upstream GFPE device protecting a feeder to operate even though multiple boats are supplied from the same feeder. The use of a test device will help the facility operator prevent a particular boat from contributing to hazardous voltage and current in the marina area. Informational Note No. 2: An annual test of each boat with the leakage current measurement device is a prudent step toward determining if a boat has defective wiring that could be contributing hazardous voltage and current. Where the leakage current measurement device reveals that a boat is contributing hazardous voltage and current, repairs should be made to the boat before it is permitted to utilize shore power. Exception: Where the shore power equipment includes a leakage indicator and leakage alarm, or GFPE equipment as required in section 555.35, a separate leakage test device shall not be required.		

Statement	GFPE protection at marinas was implemented less than a decade ago. In many cases, as marinas add additional slips, the existing infrastructure may not provide GFPE protection for their vessels. A leakage current measurement device provides additional protection to help recognize vessels in older marinas that could contribute to electric shock drowning events.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.36(C)	**4192**	**349**	**First Revision (14)**
Code Language	**555.36(C) Emergency Electrical Disconnect.** A marina power outlet shall have an emergency electrical disconnect that complies with the following: (1) Marking. Each marina power outlet or enclosure that provides shore power to boats shall be provided with a listed emergency shutoff device or electrical disconnect that is clearly marked "Emergency Shutoff" in accordance with 110.22(A). (2) Location. The emergency shutoff device or electrical disconnect shall be within sight of the marina power outlet or other enclosure that provides shore power to boats, readily accessible, externally operable, manually resettable, and listed for use in wet locations. (3) Type. The emergency shutoff device or electrical disconnect shall de-energize the power supply to all circuits supplied by the marina power outlet(s) or enclosure(s) that provide shore power to boats. A circuit breaker handle shall not be used for this purpose.		
Statement	A list item format helps facilitate understanding and usability for Code users and is consistent with section 3.5.1.2 of the NFPA Style Manual.		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.37(A)	**2403**	**350**	**Resolve**
Code Language	**555.37(A) Equipment to Be Connected to Equipment Grounding Conductor.** The following items shall be connected to an insulated equipment grounding conductor of the wire-type run with the circuit conductors in the same raceway, cable, or trench: (1) Metal boxes, metal cabinets, and all other metal enclosures (2) Metal frames of utilization equipment (3) Grounding terminals of grounding-type receptacles		

Statement	This requirement does not add clarity and would be redundant. The requirement for the equipment grounding conductor to be insulated and of the wire- type is covered in section 555.37(B).

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.37(C)	**2078**	**351**	**First Revision (15)**
Code Language	**555.37(C) Feeder Equipment Grounding Conductor.** Where a feeder supplies a remote <u>enclosed</u> panelboard or other distribution equipment, an insulated equipment grounding conductor shall extend from a grounding terminal in the service to a grounding terminal and busbar in the remote <u>enclosed</u> panelboard or other distribution equipment.		
Statement	Included the term “enclosed panelboard” to be consistent with the new definition added to Article 100 during the 2023 NEC cycle.		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.38(A)	**2509**	**352**	**Resolve**
Code Language	**555.38(A) General.** ~~All luminaires and retrofit kits shall be listed and identified for use in their intended environment.~~ <u>Luminaires and their supply connections shall be secured to structural elements of the marina to limit damage from watercraft and prevent entanglement of and interaction with sea life.</u>		
Statement	The repeating of requirements in specific occupancy articles is not prohibited and adds significant clarity and usability for the users of these Articles who aren't as familiar with Chapters 1 through 4. In section 4.1.1 of the NEC Style Manual, it is stated that committees shall always be mindful of the structure of the document as specified in 90.3 when contemplating the inclusion of a reference to another requirement.		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.5	**3925**	**311**	**Resolve**

Code Language	**555.5 Maximum Voltage.** Pier power distribution systems shall not exceed 250 volts phase to phase. Pier power distribution systems, where qualified personnel ~~service~~ install the equipment under engineering supervision, shall be permitted to exceed 250 volts but these systems shall not exceed 600 volts.
Statement	See the panel action taken on PI 3927. Each jurisdiction that enforces the NEC dictates the qualifications of the installer.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.5	**3927**	**312**	**First Revision (16)**
Code Language	**555.5 Maximum Voltage** Pier power distribution systems shall not exceed 600 volts phase to phase.		
Statement	Deleted the language “not to exceed 250 volts phase to phase” and replaced the text with the higher voltage threshold which is consistent with distribution systems at docking facilities and piers. The change to allow the higher voltage system or threshold is also due to a new section that will require engineering design and documentation for all distribution systems regardless of voltage up to 600 volts phase to phase.		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.9 (New)			**First Revision (17)**
Code Language	**555.9 Engineered Design.** Documentation of the electrical portion of the electrical design of the pier distribution system shall be stamped and provided upon request of the AHJ. The independent engineer shall be a licensed professional electrical engineer retained by the system owner or installer.		
Statement	Engineering design and documentation should be required for all electrical distribution systems at a pier regardless of the voltage threshold up to 600 volts phase to phase (555.5). Due to the potential electrical shock hazards at docking facilities and piers on lower voltage distribution systems, engineering design and documentation will ensure that electric shock drowning (ESD) incidents are minimized. Documented cases of ESD predominately occur on lower voltage distribution systems.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
555.51	4010	354	Resolve
Code Language	**555.51 Feeder Conductors.** Each ~~floating building~~ pier shall be supplied by a single set of feeder conductors from its service equipment. Exception: Where the ~~floating building~~ pier has multiple occupancy, each occupant shall be permitted to be supplied by a single set of feeder conductors extended from the occupant's service equipment to the occupant's panelboard.		
Statement	Removal of the term "floating building" does not add clarity. The term pier was added to the feeder GFPE protection requirements covered in Part II, in section 555.35 and 555.35(A).		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
555.52(A)	4011	355	Resolve
Code Language	**555.52(A) Flexibility.** Flexibility of the wiring system shall be maintained between ~~floating buildings~~ piers and the supply conductors. All wiring shall be installed so that motion of the water surface and changes in the water level will not result in unsafe conditions		
Statement	Removal of the term "floating building" does not add clarity. The term pier was added to the feeder GFPE protection requirements covered in Part II, in section 555.35 and 555.35(A).		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
555.52(B)	4012	356	Resolve
Code Language	**555.52(B) Wiring Methods.** Liquidtight flexible metal conduit or liquidtight flexible nonmetallic conduit with approved fittings shall be permitted for feeders and where flexible connections are required for services. Extra-hard usage portable power cable listed for both wet locations and sunlight resistance shall be permitted for a feeder to a ~~floating building~~ pier where flexibility is required. Other raceways suitable for the location shall be permitted to be installed where flexibility is not required.		

Statement	Removal of the term “floating building” does not add clarity. The term pier was added to the feeder GFPE protection requirements covered in Part II, in section 555.35 and 555.35(A).

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.53	**4013**	**357**	**Resolve**
Code Language	**555.53 Ground-Fault Protection.** The main overcurrent protective device that feeds the ~~floating building~~ pier shall have ground-fault protection not exceeding 100 mA. Ground-fault protection of each individual branch or feeder circuit shall be permitted as a suitable alternative. Outdoor outlets, shore power outlets, and boat hoists located at ~~floating buildings~~ piers shall comply with 555.35(B) and (C).		
Statement	Removal of the term “floating building” does not add clarity. The term pier was added to the feeder GFPE protection requirements covered in Part II, in section 555.35 and 555.35(A).		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.54	**4015**	**360**	**Resolve**
Code Language	**555.54 Grounding.** Grounding at ~~floating buildings~~ piers shall comply with 555.54(A) through (D).		
Statement	Removal of the term “floating building” does not add clarity. The term pier was added to the feeder GFPE protection requirements covered in Part II, in section 555.35 and 555.35(A).		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.54(A)	**2079**	**358**	**First Revision (18)**
Code Language	**555.54(A) Grounding of Electrical and Nonelectrical Parts.** Grounding of both electrical and nonelectrical parts in a floating building shall be through connection to a grounding bus in the building enclosed panelboard.		

Statement	Included the term “enclosed panelboard” to be consistent with the new definition added to Article 100 during the 2023 NEC cycle.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
555.54(A)	**4021**	**359**	**Resolve**
Code Language	**555.54(A) Grounding of Electrical and Nonelectrical Parts.** Grounding of both electrical and nonelectrical parts in a ~~floating building~~ pier shall be through connection to a grounding bus in the building panelboard.		
Statement	Removal of the term “floating building” does not add clarity. The term pier was added to the feeder GFPE protection requirements covered in Part II, in section 555.35 and 555.35(A).		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
682.33(C)(1)	**2415**		**Resolve**
Code Language	**682.33(C)(1) Bonded Parts.** The parts specified in 682.33(C)(1) through(C)(3) shall be bonded together and to the electrical grounding system. Bonding conductors shall be solid copper, insulated, covered or bare, and not smaller than 8 AWG. Connections shall be made by exothermic welding or by listed pressure connectors or clamps that are labeled as being suitable for the purpose and are of stainless steel, brass, copper, or copper alloy. Electrical connections using dissimilar metals that are exposed to damp, wet, or corrosive conditions shall be environmentally sealed (as air-tight and water-tight) against the effects of corrosion or otherwise protected using materials listed for the purpose.		
Statement	Electrical termination requirements are covered by section 110.14. The terminations within an enclosed panelboard should be addressed in their appropriate standards. Regarding the interior of enclosures, table 110.28 states that an enclosure NEMA rating is for selecting enclosures used in a specific location, however, these enclosures are not intended to protect against conditions such as condensation, icing, corrosion, or contamination that may occur within the enclosure. In an article 555 application, it would be difficult to enforce this requirement.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
682.33			First Revision (19)

Code Language

682.33 Equipotential Planes and Bonding of Equipotential Planes.

~~An equipotential plane shall be installed where required in this section to mitigate step and touch voltages at electrical equipment. The parts specified in this section shall be bonded together and to the electrical grounding system. The bonding conductor shall be solid copper conductors; insulated, covered, or bare; not smaller than 8 AWG.~~

~~(A)Areas Requiring Equipotential Planes.~~ Equipotential planes shall be installed adjacent to all outdoor service equipment or disconnecting means that control equipment in or on water where the following conditions exist:

(1) Where the system voltage exceeds 250 volts to ground

(2) Where the equipment is located within 3 m (10 ft) of the body of water.

(A) Equipotential Plane Construction

The equipotential plane shall ~~include all metallic enclosures and controls that are likely to become energized and are accessible to personnel. The equipotential plane shall~~ encompass the area around the outdoor service equipment and shall extend from the area directly below the equipment out not less than 900 mm (36 in.) in all directions from which a person would be able to stand and come in contact with the equipment. Bonding to equipotential planes shall be provided as specified in 555.14(A)(1) or (A)(2) and shall be attached to metallic enclosures that are likely to become energized with a solid copper, insulated, covered, or bare, and not smaller than 8 AWG.

(1) Structural Reinforcing Steel. Unencapsulated structural reinforcing steel bonded together by steel tie wires or the equivalent.

(2) Copper Grid. Copper grid where the following requirements are met:

(a) Be constructed of minimum 8 AWG bare solid copper conductors bonded to each other at all points of crossing in accordance with 250.8 or other approved means

(b) Be arranged in a 300 mm (12 in.) by 300 mm (12 in.) network of conductors in a uniformly spaced perpendicular grid pattern with a tolerance of 100 mm (4 in.)

(c) Only listed splicing devices or exothermic welding are used.

Statement

The changes incorporate similar equipotential bonding requirements from section 680.26 for consistency. Additional text provides detail on how the equipotential plane is to be constructed and bonded to the electrical system. For correlation, section 682.33 was revised to match the section 555.14 requirements.

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
Article 100 **Equipotential Plane**	**3033** **1800**		**First Revision (20)**
Code Language	~~**Equipotential Plane.**~~ ~~Conductive parts bonded together to reduce voltage gradients in a designated area. (682) (CMP-17)~~		
Statement	This definition was deleted to comply with the NEC Style Manual Section 2.1.2.7 regarding multiple definitions for the same term.		

PI 1774, 362, 1913, 548

555.15 Servicing and Replacement of Equipment.

Servicing or replacement of electrical enclosures, devices, or wiring methods shall be done in accordance with 555.15(A) or (B).

(A) Servicing

Equipment that has been damaged shall be documented and serviced by a qualified person to the edition of the code to which it was originally installed.

(B) Replacement

When replacement of equipment is necessary, it shall be documented and replaced by a qualified person to the requirements of this Code, and the installation shall require an inspection of the circuit. Any servicing necessary to address issues discovered during the inspection shall be done in accordance with 555.15(A).

STATEMENT:

Equipment that is replaced must be installed per the current edition of the code. However, the requirement for the remainder of the branch circuit or feeder to be inspected and serviced under their originally installed code, if necessary, is to reduce the likelihood that other parts of an existing installation could contribute to electrical hazards.

REVISION: FR 8315

PI 3924: Premature failures can result when solid conductors and terminations are exposed at docking facilities that are subjected to tidal fluctuations and/or wave movement. Removed the word “solid” to allow other wiring methods to be used.

2026 NEC® Public Input Task Group Report

CMP #	**7**
TG#	**2**
TG Chair	**Richard Paredes**
TG Members	**Ryan Bergen -U, Wade Elliott – U, Jacab Gray – IM, Curt Richardson – M, Harley H. Hartman – U, Cari Dee Helberg – E, Robert D. Osborne – RT, Tim Schlabach-M**

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
550	**1776**	**228**	**RESOLVE**
Code Language	Public input 1776 wants 550 rewritten for clarity and usability. see word doc and PI		
Statement	The proposed reorganization of the current text does not add clarity.		

Article/Section	Public Input #	PI Report Page #	TG Action
Definition	**721**	**373**	**RESOLVE**
Code Language	Recreational Vehicle (RV) (Camping Trailer) (Motor Home) (Travel Trailer) (Truck Camper). A vehicle or slide-in camper that is primarily designed as temporary living quarters for recreational, camping, or seasonal use; has its own motive power or is mounted on or towed by another vehicle; is regulated by the National Highway Traffic Safety Administration as a vehicle or vehicle equipment; does not require a special highway use permit for operation on the highways; and can be easily transported and set up on a daily basis by an individual. Excludes vehicles (such as camper vans, plug-in electric vehicles, and aircraft which have the power source of their on-board 120/240-volt receptacles inverted exclusively from the vehicle's battery charging system) which cannot connect its on-board receptacles directly with the utility grid. [1192:3.3.52] (551) (CMP-7) Informational Note: See NFPA 1192, Standard on Recreational Vehicles, Informative Annex A, for product types and definitions for motor homes and towable recreational vehicles		
Statement	Within the 49 CFR 571.3 the definition of a motorhome is defined below. A camper van is defined within the Annex of the NFPA and cannot be excluded. The submitter's example of a Ford F-150 Lightning would not be regulated by NHTSA as an RV. Motor home means a multipurpose passenger vehicle with motive power that is designed to provide temporary residential accommodations, as evidenced by the presence of at least four of the following facilities: Cooking; refrigeration or ice box;		

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	self-contained toilet; heating and/or air conditioning; a potable water supply system including a faucet and a sink; and a separate 110–125-volt electrical power supply and/or propane.

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Article/Section	Public Input #	PI report Page #	TG Action
Definition	**2560**	**168**	**RESOLVE**
Code Language	Recreational Vehicle Park. Any parcel or tract of land under the control of any person, organization, or governmental entity wherein ~~two or~~ one or more recreational vehicle, recreational park trailer, and/or other camping sites are offered for use by the public or members of an organization for overnight stays. (551)		
Statement	The existing definition is consistent with the NFPA Standard for Recreational Vehicle Parks and Campgrounds, NFPA 1194. The intent is for requirements to align with this NFPA Standard, which references the NEC.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
Definition	**1210** **2283**	**171** **172**	**RESOLVE**
Code Language	Voltage, Low. (Low Voltage). An electromotive force rated ~~24 volts~~ less than 50 volts, nominal, ~~or less.~~		
Statement	**The term low voltage may apply in different contexts as they relate to systems and equipment addressed throughout the scope of the NEC. These different contexts are reflected in different standards and in the nature of the requirements within the NEC.** **This proposal should be reviewed by Panel 1 to determine the impact on other areas of the Code and the actions taken by other CMPs that received similar proposals. The use of the term Low voltage may differ throughout the Code. This includes Articles 110, 411, 490, 517, 551, 552 and to some degree, 830, all of which are beyond the scope of CMP 7.**		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
Definition	**2283**	**172**	**RESOLVE**

	1210	**171**	
Code Language	~~Voltage, Low. (Low Voltage). An electromotive force rated 24 volts, nominal, or less.~~		
Statement	The term low voltage may apply in different contexts as they relate to systems and equipment addressed throughout the scope of the NEC. These different contexts are reflected in different standards and in the nature of the requirements within the NEC. This proposal should be reviewed by Panel 1 to determine the impact on other areas of the Code and the actions taken by other CMPs that received similar proposals. The use of the term Low voltage may differ throughout the Code. This includes Articles 110, 411, 490, 517, 551, 552 and to some degree, 830, all of which are beyond the scope of CMP 7.		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
Definition	**584**	**173**	**RESOLVE**
Code Language	**Definitions (100): Feeder.... to Feeder Asse... Feeder.** All circuit conductors between the service equipment, the source of a separately derived system, or other power supply source and the final branch-circuit overcurrent device. (CMP-10) Feeder Assembly. The overhead or under-chassis feeder conductors, including the equipment grounding conductor, together with the necessary fittings and equipment; or the power-supply cord assembly for a mobile home, recreational vehicle, or park trailer, identified for the delivery of energy from the source of electrical supply to the panelboard within the mobile home, recreational vehicle, or park trailer. (CMP-7) Any parallel feeder to panels, more than one conductor per phase, should be solid color conductors		
Statement	The revision would result in a requirement in the definition for “Feeder Assembly”. Clause 2.1.2.5 of the NEC Style Manual specifies that definitions shall not contain requirements.		

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Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
New Definition	**3233**	**174**	**FIRST REVISION 1**
Code Language	TITLE OF NEW CONTENT Electrical Management System (EMS) A device intended to monitor the electrical supply and systems of a recreational vehicle for potential dangerous conditions and disconnect electrical conductors if detected. (CMP-7) Informational Note: Electrical Management		

	Systems (EMS) can be contained and integral to other recreational vehicle power distribution equipment such as inverters, transfer switches, and panelboards
Statement	Accept the definition of Electrical Management System

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Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
New section after 550.1	**2798**	**227**	**FIRST REVISION 2**
Code Language	550.2 Listing Requirements All electrical materials, devices, appliances, fittings, and other equipment shall be listed and labeled by a qualified testing agency and shall be connected in an approved manner when installed.		
Statement	CMP 7 agrees with correlating committee recommendation. 2.2.1 of the NEC Style Manual, the section for "Listing Requirements" is renamed and relocated from 550.4(C) to Section 550.2.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
550.1 **Informational note**	**1767**	**373**	**FIRST REVISION 3**
Code Language	Informational Note: See ~~NFPA 501-2017, Standard on Manufactured Housing , and Part 3280, Manufactured~~ 24 CFR Part 3280, Manufactured Home Construction and Safety Standards, of the Federal Department of Housing and Urban Development for additional information on manufactured housing.		
Statement	NFPA 501 has been withdrawn as of April 13, 2022. For ease in locating the Manufactured Home Construction and Safety Standards, the most complete reference on this is 24 CFR Part 3280; therefore, a reference to this CFR is added as a replacement to NFPA 501.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
550.10(B)	**239**	**230**	**RESOLVE**

Code Language	B) Power-Supply Cord. If the mobile home has a power-supply cord, it shall be permanently attached to the panelboard enclosure , or to a junction box permanently connected to the panelboard enclosure , ~~with with~~ the free end terminating in an attachment plug cap. Cords with adapters and pigtail ends, extension cords, and similar items shall not be attached to, or shipped with, a mobile home. A suitable clamp or the equivalent shall be provided at the panelboard enclosure knockout to afford strain relief for the cord to prevent strain from being transmitted to the terminals when the power-supply cord is handled in its intended manner. The cord shall be a listed type with four conductors, one of which shall be identified by a continuous green color or a continuous green color with one or more yellow stripes for use as the equipment grounding conductor.
Statement	The term panelboard is valid for these sections and warrants no additional change in language. substantiation statement does not provide sufficient reason to make a change.

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
550.10(I)	**1511**	**231**	**FIRST REVISION 4**

Code Language	(I) Mast Weatherhead or Raceway. Where the calculated load exceeds 50 amperes or where a permanent feeder is used, the supply shall be by means of either of the following: (1) One mast weatherhead installation, installed in accordance with Part II of Article 230, containing four continuous, insulated, color-coded feeder conductors, one of which shall be an equipment grounding conductor ~~(2) A rigid metal conduit, intermediate metal conduit, rigid polyvinyl chloride conduit, or other raceways identified for the location,~~ (3) raceway from the disconnecting means in the mobile home to the underside of the mobile home, with provisions for the attachment to a suitable junction box or fitting to the raceway on the underside of the mobile home [with or without conductors as in 550.10(I)(1)] shall be one fo the following: (a)Rigid Metal Conduit . (b) Intermediate Metal Conduit. (c) Rigid Polyvinyl Chloride Conduit. (d) other raceways identified for the location ~~The manufacturer shall provide written installation instructions stating the proper feeder conductor sizes for the raceway and the size of the junction box to be used.~~
Statement	The approved raceways are rearranged into a list for improved usability.

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Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
550.12(D)	**1153**	**232**	**RESOLVE**
Code Language	(D) General Appliances. (Including furnace, water heater, range, and central or room air conditioner, etc.). There shall be one or more circuits of adequate rating in accordance with the following: Informational Note: See Article 440, Parts I through VI for central air conditioning. (1) The ampere rating of fixed appliances shall be not over 50 percent of the circuit rating if lighting outlets (receptacles, other than kitchen, dining area, and laundry, considered as lighting outlets) are on the same circuit. (2) For fixed appliances on a circuit without lighting outlets, the sum of rated amperes shall not exceed the branch-circuit rating. Motor loads or continuous loads shall not exceed 80 percent of the branch-circuit rating. (3) **(3)** The rating of a single cord-and-plug-connected appliance on a circuit having no other outlets shall not exceed 80 percent of the circuit rating. (4) The rating of a range branch circuit shall be based on the range demand as specified for ranges in 550.18(B)(5). **(4)** The rating of a range branch circuit shall be based on the range demand as specified for ranges in 550.18(B)(5)		
Statement	4.1.4 References to a Part Within an Article. Except for Article 100, references shall not be made to an entire article. References to parts within articles shall be permitted. This is an informational note and not under this rule		

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Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
550.13(B)	**2519**	**233**	**FIRST REVISION 5**
Code Language	(B) Ground-Fault Circuit Interrupters (GFCI). Ground-fault circuit-interrupter protection shall be provided as required in 210.8(A). ~~In addition, in the following areas within a mobile or manufactured home, GFCI protection is limited to 125-volt, 15- and 20-ampere receptacles or outlets: Compartments accessible from outside the unit Bathrooms, including receptacles in luminaires Kitchens, where receptacles are installed to serve countertop surfaces Sinks, where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the sink~~		
Statement	Mobile and Manufactured Homes include the same electric shock risks as other dwelling units. Requirements in 210.8(A), which applies generally to “Dwelling Units” should apply to installations covered by Part II of Article 550.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
550.15(F)	**1509**	**234**	**RESOLVE**
Code Language	F) Raceways. ~~(1) Approved~~ raceway methods: (a) Rigid nonmetallic conduit. (b) Electrical nonmetallic tubing. (c) Electrical metallic tubing. (d) Surface Metal Raceways. (e) Surface nonmatallic Raceways (f) Rigid Metallic Conduit. (g) intermediate Metal Conduit. (2) Where rigid metal conduit or intermediate metal conduit is terminated at an enclosure with a locknut and bushing connection, two locknuts shall be provided, one inside and one outside of the enclosure. ~~Rigid nonmetallic conduit, electrical nonmetallic tubing, or surface raceway shall be permitted.~~ (3) All cut ends of conduit and tubing shall be reamed or otherwise finished to remove rough edges		
Statement	Does not improve clarity and this change could create confusion.		
Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
550.15(I)	**2330**	**373**	**RESOLVE**
Code Language	Boxes, Fittings, and Cabinets. Boxes, fittings, and cabinets shall be securely fastened in place and shall be supported from a structural member of the home, either directly or by using a substantial brace. (add clarifying language regarding substantial brace) Exception: Snap-in-type boxes. Boxes provided with special wall or ceiling brackets and wiring devices with integral enclosures that securely fasten to walls or ceilings and are identified for the use shall be permitted without support from a structural member or brace. The testing and approval shall include the wall and ceiling construction systems for which the boxes and devices are intended to be used.		
Statement	Clause 4.3.4.1(c) of the Regulations Governing the Development of NFPA Standards requires a Public Input to include: "Proposed text of the Public Input, including the wording to be added, revised (and how revised), or deleted. The changes shall be		

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	indicated through the use of underlines for new text and strikethroughs for deleted text." This Public Input does not meet this requirement.

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
550.16(C)(4)	**2414**	**238**	**RESOLVE**
Code Language	(4) Metallic Roof and Exterior Coverings. Any metallic roof and exterior covering shall be considered bonded if the following conditions are met: (1) The metal panels overlap one another and are securely attached to the wood or metal frame parts by metallic fasteners. (2) The lower panel of the metallic exterior covering is secured by metallic fasteners at a cross member of the chassis by two metal straps per mobile home unit or section at opposite ends. The bonding strap material shall be a minimum of 100 mm (4 in.) in width of material equivalent to the skin or a material of equal or better electrical conductivity. The straps shall be fastened with paint-penetrating fittings such as screws and environmentally sealed (as air-tight and water-tight) starwashers or equivalent.		
Statement	The proposed change could limit approved wiring methods and create unintentional design restrictions.		

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Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
550.18	**1508**	**239**	**RESOLVE**
Code Language	550.18 Calculations. The following method shall be employed in calculating the supply-cord and distribution panelboard load for each feeder assembly for each mobile home in lieu of the procedure shown in Article 220 and shall be based on a 3-wire, 120/240-volt supply with 120-volt loads balanced. between the two ungrounded conductors of the 3-wire system. Informational Note: See Informative Annex D, Example D11, for an illustration of the application of this calculation. (A) Lighting, Small-Appliance, and Laundry Load. (1) Lighting Volt-Amperes. Length times width of mobile home floor (outside dimensions) times 33 volt-amperes/m2 (3 VA/ft2) ~~— for example, length × width × 3 = lighting volt-amperes.~~		

	(2) Small-Appliance Volt-Amperes. Number of circuits times 1500 volt-amperes for each 20-ampere appliance receptacle circuit ~~—for example, number of circuits × 1500 = small-appliance volt-amperes. circuit~~ (3) Laundry Area Circuit Volt-Amperes. 1500 volt-amperes. (4) Total Volt-Amperes. Lighting volt-amperes plus small-appliance volt-amperes plus laundry area volt-amperes equals total volt-amperes. (5) Net Volt-Amperes. First 3000 total volt-amperes at 100 percent plus remainder at 35 percent equals volt-amperes to be divided by 240 volts to obtain current (amperes) per leg
Statement	Informational note is already here.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
550.18 **Excluding any sub sections**	**1158**	**242**	**FIRST REVISION 6**
Code Language	The following method shall be employed in calculating the supply-cord and distribution panelboard load for each feeder assembly for each mobile home in lieu of the procedure shown in Article 220 ~~and~~ , Parts I through IV, and shall be based on a 3-wire, 120/240-volt supply with 120-volt loads balanced between the two ungrounded conductors of the 3-wire system		
Statement	4.1.4 References to a Part Within an Article. Except for Article 100, references shall not be made to an entire article. References to parts within articles shall be permitted.		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
550.32	**2044**	**243**	**RESOLVE**
Code Language	550.32 Service Equipment. (A) Mobile Home Service Equipment. The mobile home service equipment shall not be mounted in or on the mobile home. The service equipment shall be rated not less than that required in accordance with 550.32(C), ~~mounted in a readily accessible outdoor location, and within sight from the mobile~~		

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	~~home it serves.~~ The mobile home service disconnect shall be permitted to be used as the emergency disconnect in accordance with 230.85. (E) Replacement Home. When existing service equipment is reconnected to a replacement mobile or manufactured home, the service shall be provided with a surge protective device in accordance with 230.67. (F) Additional Receptacles. Receptacles located outside a mobile or manufactured home shall be provided with ground-fault circuit-interrupter protection as specified by 210.8(A). Where receptacles provide power to a mobile or manufactured home in accordance with 550.10, ground-fault circuit-interrupter protection shall not be required. (~~F~~ G) Mounting Height. Outdoor mobile home disconnecting means shall be installed so the bottom of the enclosure containing the disconnecting means is not less than 600 mm (2 ft) above finished grade or working platform. The disconnecting means shall be installed so that the center of the grip of the operating handle, when in the highest position, is not more than 2.0 m (6 ft 7 in.) above the finished grade or working platform. (~~G~~ H) Marking. Where a 125/250-volt receptacle is used in mobile home service equipment, the service equipment shall be marked as follows: TURN DISCONNECTING SWITCH OR CIRCUIT BREAKER OFF BEFORE INSERTING OR REMOVING PLUG. PLUG MUST BE FULLY INSERTED OR REMOVED. The marking shall be located on the service equipment adjacent to the receptacle outlet.
Statement	Deleting the terms outdoor and within sight for reasons of safety. Adding surge arresters for reconnected mobile of manufactured homes would be difficult to enforce.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
550.32(A)	**2043**	**247**	**RESOLVE**
Code Language	(A) Mobile Home Service Equipment. The mobile home service equipment shall not be mounted in or on the mobile home. The service equipment shall be rated not less than that required in accordance with 550.32(C), ~~mounted in a readily accessible outdoor location, and within sight from the mobile home it serves.~~ The installation of the service equipment shall comply with Part I through Part VII of Article 230 . The mobile home service disconnect shall be permitted to be used as the emergency disconnect in accordance with 230.85.		
Statement	Disagrees with deleting the terms outdoor and within sight for reasons of safety.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
550.32(B)	**1159** **2763**	**248** **250**	**FIRST REVISION 7**
Code Language	(B) Manufactured Home Service Equipment. The manufactured home service equipment shall be permitted to be installed in or on a manufactured home, provided that all of the following conditions are met: (1) The manufacturer shall include in its written installation instructions information indicating that the home shall be secured in place by an anchoring system or installed on and secured to a permanent foundation. (2) The installation of the service shall comply ~~with Part I through Part VII of Article 230~~ with Article 230, Parts I through IV . (3) Means shall be provided for the connection of a grounding electrode conductor to the service equipment and routing it outside the structure. (4) Bonding and grounding of the service shall be in accordance with Article 250, Part I through Part V ~~of Article 250 .~~ (5) The manufacturer shall include in its written installation instructions one method of grounding the service equipment at the installation site. The instructions shall clearly state that other methods of grounding are found in Article 250, Parts I through V . (6) The minimum size grounding electrode conductor shall be specified in the instructions. (7) A warning label shall be mounted on or adjacent to the service equipment. The label shall meet the requirements in 110.21(B) and shall state the following: WARNING DO NOT PROVIDE ELECTRICAL POWER UNTIL THE GROUNDING ELECTRODE(S) IS INSTALLED AND CONNECTED (SEE INSTALLATION INSTRUCTIONS). Where the service equipment is not installed in or on the unit, the installation shall comply with the other requirements of this section		
Statement	Section 4.1.4 of the 2020 NEC® Style Manual prohibits references to an entire article, with the exception of Article 100.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
550.32 (B)	**2763** **1159**	**250** **248**	**FIRST REVISION 7**
Code Language	(B) Manufactured Home Service Equipment. The manufactured home service equipment shall be permitted to be installed in or on a manufactured home, provided that all of the following conditions are met:		

	(1) The manufacturer shall include in its written installation instructions information indicating that the home shall be secured in place by an anchoring system or installed on and secured to a permanent foundation. (2) The installation of the service shall comply with Article 230, Part I through Part VII ~~of Article 230 .~~ (3) Means shall be provided for the connection of a grounding electrode conductor to the service equipment and routing it outside the structure. (4) Bonding and grounding of the service shall be in accordance with Article 250, Part I through Part V ~~of Article 250 .~~ (5) The manufacturer shall include in its written installation instructions one method of grounding the service equipment at the installation site. The instructions shall clearly state that other methods of grounding are found in Article 250. (6) The minimum size grounding electrode conductor shall be specified in the instructions. (7) A warning label shall be mounted on or adjacent to the service equipment. The label shall meet the requirements in 110.21(B) and shall state the following: WARNING DO NOT PROVIDE ELECTRICAL POWER UNTIL THE GROUNDING ELECTRODE(S) IS INSTALLED AND CONNECTED (SEE INSTALLATION INSTRUCTIONS). Where the service equipment is not installed in or on the unit, the installation shall comply with the other requirements of this section
Statement	Section 4.1.4 of the 2020 NEC® Style Manual prohibits references to an entire article, with the exception of Article 100

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
550.32(E)	**1510**	**252**	**RESOLVE**
Code Language	~~(E) Additional Receptacles.~~ ~~Receptacles located outside a mobile or manufactured home shall be provided with groundfault circuit-interrupter protection as specified by 210.8(A) . Where~~ GFCI Protection. Where receptacles provide power to a mobile or manufactured home in accordance with 550.10, ground-fault circuit-interrupter protection shall not be required		
Statement	CMP 7 recognizes the fact that the Mobile homes, Manufactured home and Mobile home parks provide many areas of vulnerability with regard to shock hazards. Adding the reference to 210.(A) helps code user to identify these locations that require GFCI protection.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
550.33(A)	**1494**	**253**	**RESOLVE**
Code Language	A) Feeder Equipment. The feeder assembly, including the disconnecting means, shall not be mounted in or on the mobile home. A manufactured home feeder disconnecting means shall be permitted to be installed in or on the manufactured home in accordance with the requirements of 550.32(B). The feeder equipment shall be rated not less than that required in 550.32(C), mounted in a readily accessible outdoor location, and within sight from the mobile home or manufactured home it serves. Grounding of the mobile home or manufactured home feeder assembly disconnecting means shall be in accordance with 250.32. Grounding of the required 550.11A mobile home disconnecting means shall be in accordance with 250.32		
Statement	Proposed language would be redundant. The section already references feeder requirements for these installations.		

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Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
550.4	**2797** **2798**	**229** **250**	**FIRST REVISION 8**
Code Language	550.4 General Requirements. (A) In Other Than Mobile Home Parks. Mobile homes installed in other than mobile home parks shall comply with the provisions of this article. (B) Connection to Wiring System. This article shall apply to mobile homes intended for connection to a wiring system rated 120/240 volts, nominal, 3-wire ac, with a grounded neutral conductor. ~~(C) Listed and Labeled. All electrical materials, devices, appliances, fittings, and other equipment shall be listed and labeled by a qualified testing agency and shall be connected in an approved manner when installed.~~		
Statement	CMP 7 agrees with correlating committee recommendation. 2.2.1 of the NEC Style Manual, the section for "Listing Requirements" is renamed and relocated from 550.4(C) to Section 550.2.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.20(B)	**3137**	**255**	**FIRST REVISION 9**
Code Language	(B) Voltage Converters (120-Volt Alternating Current to Low-Voltage Direct Current). The 120-volt ac side of the voltage converter shall be wired in full conformity with the requirements of Parts I, II, and IV of this article for 120-volt electrical systems.		

	Exception: Converters supplied as an integral part of a listed appliance shall not be subject to 551.20(B). All converters and transformers shall be listed for use in recreational vehicles and designed or equipped to provide overtemperature protection. To determine the converter rating, the following percentages shall be applied to the total connected load, ~~including average battery charging rate, of~~ of all 12-volt equipment: The first 20 amperes of load at 100 percent plus The second 20 amperes of load at 50 percent plus All load above 40 amperes at 25 percent Exception: A low-voltage appliance that is controlled by a momentary switch (normally open) that has no means for holding in the closed position or refrigerators with a 120-volt function shall not be considered as a connected load when determining the required converter rating. Momentarily energized appliances shall be limited to those used to prepare the vehicle for occupancy or travel
Statement	The text deleted is outdated technology. Converters (Linear) had a separate charging circuit which is why they were required to have the Average Battery Charging Rate included in converter sizing**.**

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
551.4(C)	**1160**	**254**	**FRIST REVISION 10**
Code Language	C) Labels. Labels required by Article 551 ~~shall~~ this article shall be made of etched, metal-stamped, or embossed brass; stainless steel; plastic laminates not less than 0.13 mm (0.005 in.) thick; or anodized or alclad aluminum not less than 0.5 mm (0.020 in.) thick or the equivalent. Informational Note: See ANSI Z535.4-2011, Product Safety Signs and Labels, for guidance on other label criteria used in the recreational vehicle industry.		
Statement	Section 4.1.4 of the NEC® style manual prohibits referencing an entire article with the exception of Article 100 or where required for context. In this case, simply altering the text to "this article" complies with the style manual requirement without changing the meaning of the current rule.		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
551.40(D)	**3229** **3982**	**256** **257**	**FIRST REVISON 11**
Code Language	D) ~~Loss of Ground Device~~ Electrical Management System (EMS) . Each recreational vehicle shall have a listed ~~grounding monitor interrupter~~ EMS permanently installed ~~between~~ after the feeder assembly connection to the vehicle ~~and before either a transfer switch if installed or the panelboard. This requirement shall become effective~~		

	~~January 1, 2026 .~~ The EMS shall provide protection under the conditions of an open grounded conductor, an open neutral conductor, and the reversal of the ungrounded and grounded conductors in the120V AC system .
Statement	The text deleted is outdated terminology.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
551.40(D)	**3982** **3229**	**257** **256**	**FIRST REVISION 11**
Code Language	D) Loss of Ground Device. Each recreational vehicle shall have a listed ~~grounding monitor interrupter~~ device permanently installed between the feeder assembly connection to the vehicle and before either a transfer switch if installed or the panelboard. This requirement shall become effective January 1, 2026. NOTE: Electrical circuit protective systems shall contain over and under voltage protection, open ground protection, open neutral protection, and reverse polarity.		
Statement	The text deleted is outdated terminology.		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
551.41(C)	**134**	**258**	**RESOLVE**
Code Language	C) ~~Ground-Fault Circuit-Interrupter Protection~~ GFCI Protection . Where provided, each 125-volt, single-phase, 15- or 20-ampere receptacle outlet shall have ~~ground-fault circuit-interrupter protection~~ GFCI protection for personnel in the following locations: (1) Adjacent to a bathroom lavatory (2) Where the receptacles are installed to serve the countertop surfaces and are within 1.8 m (6 ft) of any lavatory or sink Exception No. 1: Receptacles installed for appliances in dedicated spaces, such as **for** disposal, refrigerators, and freezers shall not require ground-fault circuit-interrupter protection. Exception No. 2: Single receptacles for interior connections of expandable room sections shall not require ground-fault circuit-interrupter protection. Exception No. 3: De-energized receptacles that are within 1.8 m (6 ft) of any sink or lavatory due to the retraction of the expandable room section shall not require ground fault circuit-interrupter protection. (3) In the area occupied by a toilet, shower, tub, or any combination thereof (4) On the exterior of the vehicle Exception: Receptacles that are located inside of an access panel that is installed on the exterior of the vehicle to supply power for an installed appliance shall not be required to have ground-fault circuit-interrupter protection.		

	(5) In the special transportation area of a recreational vehicle that is separated from the living area by a wall The receptacle outlet shall be permitted in a listed luminaire. A receptacle outlet shall not be installed in a tub or combination tub–shower compartment.
Statement	The addition of an acronym does not increase clarity and usability.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
551.46(A) Excluding any Sub-Sections	3134	259	**FIRST REVISION 12**
Code Language	The feeder ~~assembly or assemblies shall~~ assembly shall be factory supplied or factory installed and be of one of the types specified herein.		
Statement	RVs are only allowed to have one Feeder Assembly as referenced in 551.44 Power Supply Assembly. Each RV shall have only one of the main power assemblies covered in 551.44(A) through 551.44(D)		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
551.46(C)(4)	**3135**	**260**	**FIRST REVISION 13**
Code Language	(4) Units with 50-Ampere ~~Power Supply~~ Feeder Assembly. Recreational vehicles having a ~~power supply assembly~~ feeder assembly rated 50 amperes as permitted by 551.42(D) shall have a 3-pole, 4-wire grounding-type attachment plug rated 50 amperes, 125/250 volts, conforming to the configuration shown in Figure 551.46(C)(1). Informational Note: See ANSI/NEMA WD 6-2016, Wiring Devices — Dimensional Specifications, Figure 14.50, for complete details of this configuration.		
Statement	Definition for power-supply assembly was changed in the 2023 edition to feeder assembly.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.46(E)	**3136**	**261**	**FIRST REVISION 14**
Code Language	E) Location. The point of entrance of a ~~power-supply~~ feeder assembly shall be located within 4.5 m (15 ft) of the rear, on the left (road) side or at the rear, left of the longitudinal center of the vehicle, within 450 mm (18 in.) of the outside wall. Exception No. 1: A recreational vehicle equipped with only a listed flexible drain system or a side-vent drain system shall be permitted to have the electrical point of entrance located on either side, provided the drain(s) for the plumbing system is (are) located on the same side. Exception No. 2: A recreational vehicle shall be permitted to have the electrical point of entrance located more than 4.5 m (15 ft) from the rear. Where this occurs, the distance beyond the 4.5-m (15-ft) dimension shall be added to the cord's minimum length as specified in 551.46(B). Exception No. 3: Recreational vehicles designed for transporting livestock shall be permitted to have the electrical point of entrance located on either side or the front.		
Statement	Definition for power-supply assembly was changed in the 2023 edition to feeder assembly.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.47(A)	**1161**	**262**	**RESOLVE**
Code Language	A) Wiring Systems. Cables and raceways installed in accordance with ~~Articles 320 , 322 , 330 through 340 , 342 through 362 , 386 , and 388 shall be permitted in accordance with their applicable article~~ their respective articles shall be permitted , except as otherwise specified in this article. An equipment grounding means shall be provided in accordance with 250.118.		
Statement	The articles contained in Chapter 5 are for Special Occupancies. The users of these articles are unique users of the NEC as indicated by the chapter title. Although in opposition to the NEC Style manual, the inclusion of redundant references to other Articles within the Special Occupancies Chapter make the NEC clearer, more usable, and less ambiguous. for these special users which is the goal as stated in the Chapter 1.1 of the NEC Style Manual.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.47(A)	**1775**	**263**	**FIRST REVISION 15**
Code Language	A) Wiring Systems. ~~Cables and raceways installed in accordance with Articles 320, 322, 330 through 340, 342 through 362, 386, and 388 shall be permitted in accordance with their applicable article, except~~ Except as otherwise specified in this article. ~~An equipment grounding means shall be provided ,~~ the wiring methods in 551.47(A)(1) through 551.47(A)(8) shall be permitted to be installed within a recreational vehicle. The wiring method shall include an equipment grounding conductor in accordance with 250.118. ~~(~~1) Type AC (2) Type FC (3) Type MC (4) Type UF (5) Type IMC (6) Type ENT (7) Surface Metal Raceways (8) Surface Nonmetallic Raceways		
Statement	The articles contained in Chapter 5 are for Special Occupancies. The users of these articles are unique users of the NEC as indicated by the chapter title. Although in opposition to the NEC Style manual, the inclusion of redundant references to other Articles within the Special Occupancies Chapter makes the NEC clearer, more usable, and less ambiguous for these special users which is the goal as stated in the Chapter 1.1 of the NEC Style Manual.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.47(N)	**1874**	**264**	**RESOLVE**
Code Language	(N) Moisture or Physical Damage. Wiring shall be protected in accordance with the following: (1) Where outdoor or under-chassis line-voltage (120 volts, nominal, or higher) wiring is exposed, it shall be protected by a conduit or raceway identified for use in wet locations. The conductors shall be listed for use in wet locations. (2) Where wiring is exposed to physical damage, it shall be protected by a raceway.		
Statement	The proposed change does not add clarity or usability to the code.		

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Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.47(P)(1)	**2746**	**265**	**RESOLVE**
Code Language	(1) Cord-and-Plug-Connected. Cord-and-plug connections shall comply with 551.47(P)(1)(a) through (P)(1)(d). (a) That portion of a branch circuit that is installed in an expandable unit shall be permitted to be connected to the portion of the branch circuit in the main body of the vehicle by means of an attachment plug and cord listed for hard usage. The cord and its connections shall comply with Article 400, Part I and Part II, as applicable, ~~of Article 400 and~~ and shall be considered as a permitted use under 400.10. Where the attachment plug and cord are located within the vehicle's interior, use of plastic thermoset or elastomer parallel cord Type SPT-3, SP-3, or SPE shall be permitted. (b) Where the receptacle provided for connection of the cord to the main circuit is located on the outside of the vehicle, it shall be protected with a ground-fault circuit interrupter for personnel and be listed for wet locations. A cord located on the outside of a vehicle shall be identified for outdoor use. (c) Unless removable or stored within the vehicle interior, the cord assembly shall have permanent provisions for protection against corrosion and mechanical damage while the vehicle is in transit. (d) The attachment plug and cord shall be installed so as not to permit exposed live attachment plug pins		
Statement	Editorial change Section 4.1.4 of the 2020 NEC® Style Manual prohibits references to an entire article.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.71(B)	**1549**	**266**	**RESOLVE**
Code Language	B) 30-Ampere. ~~A minimum of 70 percent of all recreational~~ Recreational vehicle sites with electrical supply ~~shall each~~ should each be equipped with a 30-ampere, 125-volt weather-resistant receptacle conforming to Figure 551.46(C)(1). This supply ~~shall be~~ may be permitted to include additional receptacle configurations conforming to 551.81. ~~The remainder of all recreational vehicle sites with electrical supply shall be equipped with one or more of the receptacle configurations conforming to 551.81 .~~		
Statement	This panel disagrees with the submitter's substantiation concerning design considerations and safety requirements. These requirements as written along with the requirements of 551-71(C) to restrict the use of non-listed devices to convert 30 amp receptacles to 20 amp.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.71(B)	**1766**	**267**	**RESOLVE**
Code Language	(B) 30-Ampere. A minimum of 70 percent of all recreational vehicle sites with electrical supply shall each be equipped with a 30-ampere, 125-volt weather-resistant receptacle conforming to Figure 551.46(C)(1). A 50-ampere receptacle to meet the requirements of 551.71(C) is permitted to be included. This supply shall be permitted to include additional receptacle configurations conforming to 551.81. The remainder of all recreational vehicle sites with electrical supply shall be equipped with one or more of the receptacle configurations conforming to 551.81.		
Statement	This subsection concerns 30-amp receptacles. The very next section concerns 50-amp receptacles		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.71(C)	**1550**	**268**	**RESOLVE**
Code Language	(C) 50-Ampere. ~~A minimum of 20 percent of existing and 40 percent of all new~~ New recreational vehicle sites with electrical supply, ~~shall each~~ should each be equipped with a 50-ampere, 125/250-volt weather-resistant receptacle conforming to the configuration as identified in Figure 551.46(C)(1). Every recreational vehicle site equipped with a 50-ampere receptacle ~~shall also~~ should also be equipped with a 30-ampere, 125-volt receptacle conforming to Figure 551.46(C)(1). These electrical supplies ~~shall be~~ may be permitted to include additional receptacles that have configurations in accordance with 551.81. The weather-resistant requirement for 50-ampere, 125/250-volt ~~receptacles shall become effective January 1, 2026. Informational Note: The percentage of 50 ampere sites required by 551.71 could be inadequate for seasonal recreational vehicle sites serving a higher percentage of recreational vehicles with 50-ampere electrical systems. In that type of recreational vehicle park, the percentage of 50-ampere sites could approach 100 percent.~~		
Statement	This panel disagrees with the submitter's substantiation concerning design considerations and safety requirements. These requirements as written along with the requirements of 551-71(B) to restrict the use of non-listed devices to convert 30 amp receptacles to 20 amp, et.al. Further, as a larger percentage of new RV's are 50 amp, this panel is directing newer and/or updated sites contain more 50-amp receptacles to limit the use of 'dogbone' type adapters that combine the 20 & 30 amp receptacles to allow a 50 amp plug to be used at a non 50 amp site pedestal.		

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Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.71(D)	**1551**	**269**	**RESOLVE**
Code Language	(D) Tent Sites. Dedicated tent sites with a 15- or 20-ampere electrical supply shall ~~be permitted to be excluded when determining the percentage of recreational vehicle sites with 30- or 50-ampere receptacles.~~ meet the requirements of 551.71(F)		
Statement	The panel disagrees with the submitter. The subsection as written is an important part of 551.73, Load calculations.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.71(E)	**1552**		**RESOLVE**
Code Language	(E) Additional Receptacles. Additional receptacles meeting 551.71(F) shall be permitted for the connection of electrical equipment outside the recreational vehicle within the recreational vehicle park.		
Statement	Submitter's submission is already covered in 551.71(F)(1).		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.71(F)(2)	**162**	**271**	**RESOLVE**
Code Language	(2) Receptacles Installed in Recreational Vehicle Site Equipment. Ground-fault circuit-interrupter protection shall only be required for 125-volt, single-phase, 15-and 20-ampere receptacles. ~~Informational Note No. 1: Appliances used within the recreational vehicle can create leakage current levels at the supply receptacle(s) that could exceed the limits of a Class A GFCI device.~~ ~~Informational Note No. 2: The definition of Feeder Assembly clarifies that the power supply cord to a recreational vehicle is considered a feeder.~~		
Statement	During development of 2020 and 2023 code the technical panel, coordinating committee and NFPA Board all agreed to the language used to describe the intent of the subsection and the informational note were developed to prevent the misinterpretation brought up in submitter's substantiation.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.72(B)	**2918**	**373**	**RESOLVE**
Code Language	(B) ~~Three~~ Poly -Phase Systems. Feeders from ~~208Y/120 volt, 3~~ poly- phase systems shall be permitted to include two ungrounded conductors and shall include one grounded conductor and one equipment grounding conductor. So far as practicable, the loads shall be equally distributed on the 3 poly - phase system.		
Statement	In this application three phase systems are intended to be limited to systems where the voltage is equal between the grounded and ungrounded conductors.The change proposed by the submitter would imply that you can have a multi-wire feeder where one phase to ground is 208V and the other is 120V to ground which could allow for a dangerous high leg condition.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.72(D)	**1162** **2047**	**273**	**FIRST REVISION 16**
Code Language	(D) Neutral Conductors. Neutral conductors shall be permitted to be reduced in size below the minimum required size of the ungrounded conductors for 240-volt, line-to-line, permanently connected loads only. The neutral conductors shall not be reduced in size below the size of the ungrounded conductors for the site distribution. Informational Note: Due to the long circuit lengths typical in most recreational vehicle parks, feeder conductor sizes found in the ampacity tables ~~of Article 310~~ elsewhere in this Code could be inadequate to maintain the voltage regulation suggested in 215.2(A), Informational Note No. 2. Total circuit voltage drop is a sum of the voltage drops of each serial circuit segment, where the load for each segment is calculated using the load that segment sees and the demand factors shown in Table 551.73(A)		
Statement	Section 4.1.4 of the NEC® Style Manual prohibits referencing an entire article with the exception of Article 100 or where required for context. As such, it is recommended to delete the reference to Article 310 here and actually just point to "ampacity tables found elsewhere in this Code.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.72(D)	**2047** **1162**	**274**	**FIRST REVISION 16**
Code Language	(D) Neutral Conductors. ~~Neutral conductors shall be~~ Feeder and branch circuit neutral conductors installed for recreational vehicle park distribution shall be sized in accordance with 551.72(D)(a) and 551.72(D)(b): (a) Feeders ~~and branch-circuits~~ neutral conductors supplying permanently connected loads, ancillary structures or buildings shall be permitted to be reduced in size ~~below the minimum required size of the ungrounded conductors for 240-volt, line-to-line, permanently connected loads only. The neutral conductors in~~ accordance with 220.61. (b) Feeders and branch-circuits supplying recreational site distribution shall not be reduced in size below smaller than the size of the ungrounded conductors for the site distribution. Informational Note: Due to the long circuit lengths typical in most recreational vehicle parks, feeder conductor sizes found in the ampacity tables of Article 310 could be inadequate to maintain the voltage regulation suggested in 215.2(A) , Informational Note No. 2. Total circuit voltage drop is a sum of the voltage drops of each serial circuit segment, where the load for each segment is calculated using the load that segments sees, and the demand factors shown in Table 551.73(A)		
Statement	Section 4.1.4 of the NEC® Style Manual prohibits referencing an entire article with the exception of Article 100 or where required for context. As such, it is recommended to delete the reference to Article 310 here and actually just point to "ampacity tables found elsewhere in this Code.		

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Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.72(E)	**639**	**276**	**FIRST REVISION 17**
Code Language	~~(E) Connected Devices.~~ ~~The use of listed surge protective devices shall be permitted. Informational Note: Use of multiple autotransformers on the load side of RV pedestals, supplied by a single feeder, can result in increased current on the RV park or campground distribution system~~		
Statement	Permission to use an SPD is not needed, and the Informational Note is referencing unrelated device.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.72(F)	**1553**	**277**	**FIRST REVISION 18**
Code Language	(F) Connection to Recreational Vehicle Site Equipment. Each recreational vehicle shall be powered by only one 30-ampere or one 50-ampere external power supply cord. Informational Note: The requirement in 551.72(F) does not preclude the use of the 15- or 20-ampere receptacle convenience outlet on the recreational vehicle supply equipment when used to supply equipment outside the recreational vehicle .		
Statement	Submitter does not describe the need to prevent supplying equipment inside the RV.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.73	**3113**	**278**	**RESOLVE**
Code Language	~~551.73 Calculated Load.~~ ~~(A) Basis of Calculations.~~ ~~Electrical services and feeders shall be calculated on the basis of not less than all of the following:~~ ~~(1) 12,000 volt-amperes per site equipped with 50-ampere, 208Y/120-volt or 120/240-volt supply facilities~~ ~~(2) 3600 volt-amperes per site equipped with both 20-ampere and 30-ampere supply facilities~~ ~~(3) 2400 volt-amperes per site equipped with only 20-ampere supply facilities~~ ~~(4) 600 volt-amperes per site equipped with only 20-ampere supply facilities that are dedicated to tent sites The demand factors set forth in Table 551.73(A) shall be the minimum allowable demand factors that shall be permitted in calculating load for service and feeders. Where the electrical supply for a recreational vehicle site has more than one receptacle. Where the electrical supply is in a location that serves two recreational vehicles, the equipment. For both sites shall comply with 551.77, and the calculated load shall only be calculated for the two receptacles with the highest rating.~~ ~~(B) Demand Factors.~~ ~~The demand factor for a given number of sites shall apply to all sites indicated. For example, 20sites calculated at 45 percent of 3600 volt-amperes results in a permissible demand of1620 volt-amperes per site or a total of 32,400 volt-amperes for 20 sites.~~ ~~Informational Note: These demand factors may be inadequate in areas of extreme hot orcold temperature with loaded circuits for heating or air conditioning.Table 551.73(A) Demand Factors for Site Feeders and Service-Entrance Conductors for Park Sites~~ ~~Number of Recreational~~ ~~Vehicle Sites Demand Factor~~		

	~~(%) 1 100 2 90 3 80 4 75 5 65 6 60 7–9 55 10–12 50 13–15 48 16–18 47 19–21 45 22–24 43 25–35 42 plus 41~~ ~~Loads for other amenities such as, but not limited to, service buildings, recreational buildings,~~ ~~and swimming pools shall be calculated separately and then be added to the value calculated~~ ~~for the recreational vehicle sites where they are all supplied by a common service~~
Statement	These calculations are specific to this article and for the safe installation and maintenance of the electrical supply of RV parks.

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
551.73(B)	**638**	**280**	**FIRST REVISION 19**
Code Language	(B) Demand Factors. The demand factor for a given number of sites shall apply to all sites indicated. Informational Note 1: For example, 20 sites calculated at 45 percent of 3600 voltamperes results in a permissible demand of 1620 volt-amperes per site or a total of 32,400 volt-amperes for 20 sites. Informational Note 2 : These demand factors may be inadequate in areas of extreme hot or cold temperature with loaded circuits for heating or air conditioning.		
Statement	This language is explanatory and therefore needs to be in an Informational Note.		

Article/Section	**Public Input #**	**PI Report Page #**	**TG Action Recommendation**
551.74	**1163**	**373**	**FIRST REVISION 20**
Code Language	551.74 Overcurrent Protection. Overcurrent protection shall be provided in ~~accordance with Article 240~~ as required elsewhere in this Code .		
Statement	Section 4.1.4 of the NEC® Style Manual prohibits referencing an entire article except Article 100 or where required for context. The committee recommends that we simply state "as required elsewhere in this Code" here in lieu of the reference to Article 240.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.79	**2430**	**283**	**FIRST REVISION 21**
Code Language	551.79 Clearance for Overhead Conductors. Open conductors of not over 1000 volts ac , 1500 volts dc,, nominal, shall have a vertical clearance of not less than 5.5 m (18 ft) and a horizontal clearance of not less than 900 mm (3 ft) in all areas subject to recreational vehicle movement. In all other areas, clearances shall conform to 235.360 and 235.361. Informational Note: See 235.360 and 235.361, for clearances of conductors over 600 volts, nominal		
Statement	Requirements are revised to include the same voltage demarcation used in many places throughout the Code.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
551.80(B)	**1164**	**284**	**FIRST REVISION 22**
Code Language	(B) Protection Against Physical Damage Direct-buried conductors and cables entering or leaving a trench shall be protected by rigid metal conduit, intermediate metal conduit, electrical metallic tubing with supplementary corrosion protection, rigid polyvinyl chloride conduit (PVC), nonmetallic underground conduit with conductors (NUCC), high density polyethylene conduit (HDPE), reinforced thermosetting resin conduit (RTRC), liquidtight flexible nonmetallic conduit, liquidtight flexible metal conduit, or other approved raceways or enclosures. Where subject to physical damage, the conductors or cables shall be protected by rigid metal conduit, intermediate metal conduit, Schedule 80 PVC conduit, or RTRC listed for exposure to physical damage. All such protection shall extend at least 450 mm (18 in.) into the trench from finished grade. Informational Note: See 300.5 and Article 340, Part II, for conductors or Type UF cable used underground or in direct burial in earth.		
Statement	Section 4.1.4 of the NEC® Style Manual prohibits referencing an entire article other than Article 100 or where required for context. recommended that we point the user to Article 340, Part II as that would cover the uses permitted and uses not permitted, in this application, along with the bending radius and the ampacity.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
552.1	**1165**	**285**	**FIRST REVISION 23**
Code Language	~~The provisions of this article cover~~ This article covers the electrical conductors and equipment installed within or on park trailers not covered fully under Articles 550 and 551		
Statement	The phrase "the provisions of" is removed here in accordance with 4.1.3 of the NEC® Style Manual. Section 4.1.4 of the NEC® Style manual prohibits references to an entire article except Article 100 and where required for context. The references here to Articles 550 and 551 are left as is "for context" and no changes are recommended to that portion of the text.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
552.4	**2765**	**286**	**FIRST REVISION 24**
Code Language	552.4 General Requirements. A park trailer is intended for seasonal use. It is not intended as a permanent dwelling unit or for commercial uses such as banks, clinics, offices, or similar. Units designed for such purposes are classified as relocatable structures and are covered in ~~Part II of~~ Article 545, Part II .		
Statement	The text is revised to comply with the NEC Style Manual Section 4.1.4, regarding the use of Parts. 4.1.4 References to an Entire Article. References shall not be made to an entire article, except for the Article 100 or where referenced to provide the necessary context.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
552.43(B)	**240**	**288**	**RESOLVE**
Code Language	(B) Power-Supply Cord. If the park trailer has a power-supply cord, it shall be permanently attached to the panelboard enclosure, or to a junction box permanently connected to the panelboard enclosure , with the free end terminating in a molded-on attachment plug cap. Cords with adapters and pigtail ends, extension cords, and similar items shall not be attached to, or shipped with, a park trailer. A suitable clamp or the equivalent shall be provided at the panelboard enclosure knockout to afford strain relief for the cord to prevent strain from being transmitted to the terminals when the power-supply cord is handled in its intended manner. The cord shall be a listed type with 3-wire, 120-volt or 4-wire, 120/240-volt conductors, one of which shall be identified by a continuous green color or a continuous green color with one or more yellow stripes for use as the equipment grounding conductor.		
Statement	The proposal does not add clarity or improve the article.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
552.43(C)	**1167**	**373**	**FIRST REVISION 25**
Code Language	(C) Mast Weatherhead or Raceway. Where the calculated load exceeds 50 amperes or where a permanent feeder is used, the supply shall be by means of one of the following: (1) One mast weatherhead installation, installed in accordance with Article 230, Part II, containing four continuous, insulated, color-coded feeder conductors, one of which shall be an equipment grounding conductor (2) A rigid metal conduit, intermediate metal conduit, rigid polyvinyl chloride conduit, or other raceways identified for the location from the disconnecting means in the park trailer to the underside of the park trailer.		
Statement	Section 4.1.4 of the NEC® Style Manual prohibits reference to an entire article with the exception of Article 100 or where required for context.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
552.46(B)(3)	**1168**	**290**	**FIRST REVISION 26**
Code Language	(2) General Appliances. (including furnace, water heater, space heater, range, and central or room air conditioner, etc.) An individual branch circuit shall be permitted to supply any load for which it is rated. There shall be one or more circuits of adequate rating in accordance with 552.46(B)(3)(a) through(B)(3)(d). Informational Note No. 1: See 210.11(C)(2) for laundry branch circuit. Informational Note No. 2: See Article 440 ~~for~~ , Parts I through VI, for central air conditioning. (a) The total rating of fixed appliances shall not exceed 50 percent of the circuit rating if lighting outlets, general-use receptacles, or both are also supplied. (b) For fixed appliances with a motor(s) larger than 1⁄8 horsepower, the total calculated load shall be based on 125 percent of the largest motor plus the sum of the other loads. Where a branch circuit supplies continuous load(s) or any combination of continuous and noncontinuous loads, the branch-circuit conductor size shall be in accordance with 210.19(A). (c) The rating of a single cord-and-plug-connected appliance supplied by other than an individual branch circuit shall not exceed 80 percent of the circuit rating. (d) The rating of a range branch circuit shall be based on the range demand as specified for ranges in 552.47(B)(5)		
Statement	Section 4.1.4 of the NEC® Style Manual prohibits reference to an entire article with the exception of Article 100 or where required for context.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
552.48(O)(1)	**2766**	**373**	**FIRST REVISION 27**
Code Language	(1) Cord-and-Plug Connected. Cord-and-plug connections shall comply with 552.48(O)(1)(a) through (O)(1)(d). (a) The portion of a branch circuit that is installed in an expandable unit shall be permitted to be connected to the portion of the branch circuit in the main body of the vehicle by means of an attachment plug and cord listed for hard usage. The cord and its connections shall comply with Article 400, Parts I and ~~II of Article 400~~ and II and shall be considered as a permitted use under 400.10. Where the attachment plug and cord are located within the park trailer's interior, use of plastic thermoset or elastomer parallel cord Type SPT-3, SP-3, or SPE shall be permitted. (b) Where the receptacle provided for connection of the cord to the main circuit is located on the outside of the park trailer, it shall be protected with a ground-fault circuit interrupter for personnel and be listed for wet locations. A cord located on the outside of a park trailer shall be identified for outdoor use. (c) Unless removable or stored within the park trailer interior, the cord assembly shall have permanent provisions for protection against corrosion and mechanical damage while the park trailer is in transit. (d) The attachment plug and cord shall be installed so as not to permit exposed live attachment plug pins.		
Statement	Section 4.1.4 of the NEC® Style Manual prohibits reference to an entire article with the exception of Article 100 or where required for context.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
552.5	**1166**	**373**	**FIRST REVISION 28**
Code Language	552.5 Labels. Labels required by ~~Article 552 shall~~ this article shall be made of etched, metal-stamped, or embossed brass or stainless steel; plastic laminates not less than 0.13 mm (0.005 in.) thick; or anodized or alclad aluminum not less than 0.5 mm (0.020 in.) thick or the equivalent. Informational Note: See ANSI Z535.4-2011, Product Safety Signs and Labels, for guidance on other label criteria used in the park trailer industry		
Statement	Section 4.1.4 of the NEC® Style Manual prohibits reference to an entire article with the exception of Article 100 or where required for context.		

Article/Section	Public Input #	PI Report Page #	TG Action Recommendation
Code Language			
Statement			

2026 NEC® Public Input Task Group Report

Article 100 Definitions

CMP #	**7**		
TG#	**3**		
TG Chair	**Tom Lichtenstein**		
TG Members	**Adam Gilbert , David M. Mihalick, Paul J. Reis, Mark A. Cook, Phillip Ostrow, Brian Majerowicz, Paul David Seff, Clay Carroll**		
Article/Section	**Public Input #**	**PI Report Page #**	**TG Recommendation & Statement** **Revise Def. of distribution point**
100 Definitions-Art 547	414	165	**Action: Resolve** **Statement:** **The term service drops is a widely used and recognized term. The proposed term "utility drops" does not provide any further clarity than already exists.**

Article/Section	**Public Input #**	**PI Report Page #**	**TG Recommendation & Statement** **Revise definition of Structure, Relocatable**
100 Definitions-Art. 545	**594**	**170**	**Action: Resolve** **Statement:** **Various types of food dispensing trailers given as examples of a relocatable structure are portable food dispensing trailers and are specialized vehicles that should be addressed in their own definition in Article 100 and not that of a relocatable structure.**

2026 NEC® Public Input Task Group Report

Revised 01192024 Revisions highlighted in yellow

CMP #	7
TG#	3
TG Chair	Tom Lichtenstein
TG Members	A. Gilbert, D. Mihalick, P. Reis, M. Cook, P. Ostrow, P. Seff, C. Carroll, B. Majerowicz

Article/Section	Public Input #	PI Report Page #	TG Recommendation & Statement
New Section 545.2	2796		TG 3 FR-1 The public input reorganizes the section to comply with the NEC Style Manual Section 2.2.1.
545.4	2795		TG3 FR-2 The public input reorganizes the section to comply with the NEC Style Manual Section 2.2.1. to delete A) and replace B) with A).
545.22(D)	2040 2758		TG3 FR-3 The added language clarifies the equipment grounding sizing requirement and addresses the need to separate grounded and grounding conductors. Section (D)(2) is deleted and relocated to Section 545.26 as the intent is bonding and not grounding. This first revision also corrects the Style Manual issue in Section (D)(1) and is revised to comply with the NEC Style Manual Section 4.1.4, regarding the use of Parts.
545.26	2041		TG3 FR-4

			The proposed language clarifies the bonding requirement for more than two structures and was relocated from 545.22 (D) (2).
545.24(B)	4050		TG3 FR-16 The terms “overcurrent protection” and “Branch-Circuit Protective Equipment” were revised to “Branch Circuit Overcurrent Protective Devices” to be consistent with the defined term.

2026 NEC® Public Input Task Group Report

Revised 01192024 Revisions highlighted in yellow

CMP #	7
TG#	3
TG Chair	Tom Lichtenstein
TG Members	A. Gilbert, D. Mihalick, P. Reis, M. Cook, P. Ostrow, P. Seff, C. Carroll, B. Majerowicz

Article/Section	Public Input #	PI Report Page #	TG Recommendation & Statement
547.3	3086		TG3-FR-17 Move 547.3 to new 547.5 and delete 547.3 to comply with parallel numbering format required in the NEC Style Manual Section 2.2 for Numbering Conventions
New Section after 547.4	3369	186	Resolve- What is described in the public input is considered normal maintenance. No specific technical substantiation has been provided to support this revision.
547.23	4185	190	TG3-FR-8 Splitting the requirement into two paragraphs to increase usability instead of using a list format to comply with NEC Style Manul 3.5.1.1 .
547.26	163 4187	191 192	Resolve LFNC is not a non metallic cable and the list format is not appropriate in this case.
547.28	4287		TG3 FR-18 Clearly identified requirements which are not applicable to DC circuits by incorporating “AC only” as applicable per the Correlating Committee DC Task Group.
547.4	2759 4173	188 189	TG3 FR-9 The text is revised to comply with the NEC

			Style Manual Section 4.1.4, regarding the use of Parts and the clarification of Class II (not Class 2) hazardous location.
547.40	1152 2042	193 194	TG3 FR-10 Revision made to comply with Section 4.1.4 of the NEC® Style Manual Resolve No technical substantiation was provided that suggests a 3 wire feeder contributes to stray voltage.
547.41(A)(5)	2760	195	TG3 FR-11 Revision made to comply with NEC Style Manual Section 4.1.4.
547.41(B)	2761	196	TG3 FR-12 Revision made to comply with NEC Style Manual Section 4.1.4.
547.42	2762	197	TG3 FR-13 Revision made to comply with NEC Style Manual Section 4.1.4.
547.44	640	198	TG3 FR-14 Added “Equipotential Plane” to the title of part III to clarify the installation of the equipotential plane is not part of the distribution and keeps the location of the requirement consistent with legacy editions of the NEC.
547.44(B)	2076	200	TG3 FR-15 The changes incorporate similar equipotential bonding requirements from section 680.26 for consistency. Additional text provides detail on how the equipotential plane is to be constructed

			and bonded to the electrical system. For correlation, section 547.44 was revised to match the section 555.14 and 682.33 requirements. (Note to CMP- Need to verify construction is consistent with ASABA doc noted in INF Note 1. Prior to FD Meeting Dean Hunter)

2026 NEC® Public Input Task Group Report

Revised 01192024 Revisions highlighted in yellow

CMP #	**7**
TG#	**3**
TG Chair	**Tom Lichtenstein**
TG Members	**A. Gilbert, D. Mihalick, P. Reis, M. Cook, P. Ostrow, P. Seff, C. Carroll, B. Majerowicz**

Article/Section	Public Input #	PI Report Page #	TG Recommendation & Statement
604.6	3086		TG3, FR-19 Move 604.6 to new 604.2 to comply with parallel numbering format required in the NEC Style Manual Section 2.2 for Numbering Conventions.
604.10	4353	362	Resolve- 604.10 Exc, 2 permits manufactured wiring systems in outdoor locations if listed for outdoor locations. Installation in parking lots and garages would be covered by an outdoor locations Listing. Presently, UL 183, the Standard for Manufactured Wiring Systems does not address wet locations.
604.100	547 1513 668	364 365 366	TG-3, FR-5 The CMP made appropriate changes from each of the PI's to add clarity and comply with the NEC Style Manual 2.1.8.3.

2026 NEC® Public Input Task Group Report

Revised 01192024 Revisions highlighted in yellow

CMP #	**7**
TG#	**3**
TG Chair	**Tom Lichtenstein**
TG Members	**A. Gilbert, D. Mihalick, P. Reis, M. Cook, P. Ostrow, P. Seff, C. Carroll, B. Majerowicz**

Article/Section	Public Input #	PI Report Page #	TG Recommendation & Statement
675.16	2925	370	FR TG-3, FR-6 Revisions were made to comply with NEC Style Manual Section 4.1.4, which specifically addresses the usage of "Parts."
675.17	2926	371	FR TG-3, FR-7 Revisions were made to comply with NEC Style Manual Section 4.1.1, which restricts references to entire articles.
675.7 675.7(A)	3276 4050	368	Resolve- Section 430.6 would not be appropriate as it only addresses Conductor Ampacity and Motor Rating Determination and does not address the other attributes specified in 675.7. FR TG3-FR-21 The term “Overcurrent Protection” was revised to “Branch Circuit Overcurrent Protective Device” to be consistent with the defined term.
675.8(A)	1312	369	Resolve- Presently new Table 430.251(C) does not exist and cannot be considered for inclusion in this section.
675.6(3)	4050		FR TG3-FR-20

			The term "Overcurrent Protection" was revised to "Branch Circuit Overcurrent Protective Device" to be consistent with the defined term.

PI's 4403, 4434, 4440

NEC 2026 First Revision Meeting

Support PI's 4403, 4434, 4440 to bring personnel protection to more circuits at marinas

Littelfuse®

Expertise Applied | Answers Delivered

Marina Ground Fault Detection in the NEC

NEC Section 555.35 is broken into 3 sections:

- Outlets that aren't shore power (Class A GFCI)
- Shore power receptacles (30 mA or less GFPE)
- Feeder and Branch circuits (100mA or less GFPE).

Acronym Review

- GFCI – Ground Fault Circuit Interrupter
- GFPE – Ground Fault Protection of Equipment
- SPGFCI – Special Purpose GFCI
- GM/I – Grounding Monitor/Interrupter
- EGFPD – Equipment Ground Fault Protective Device

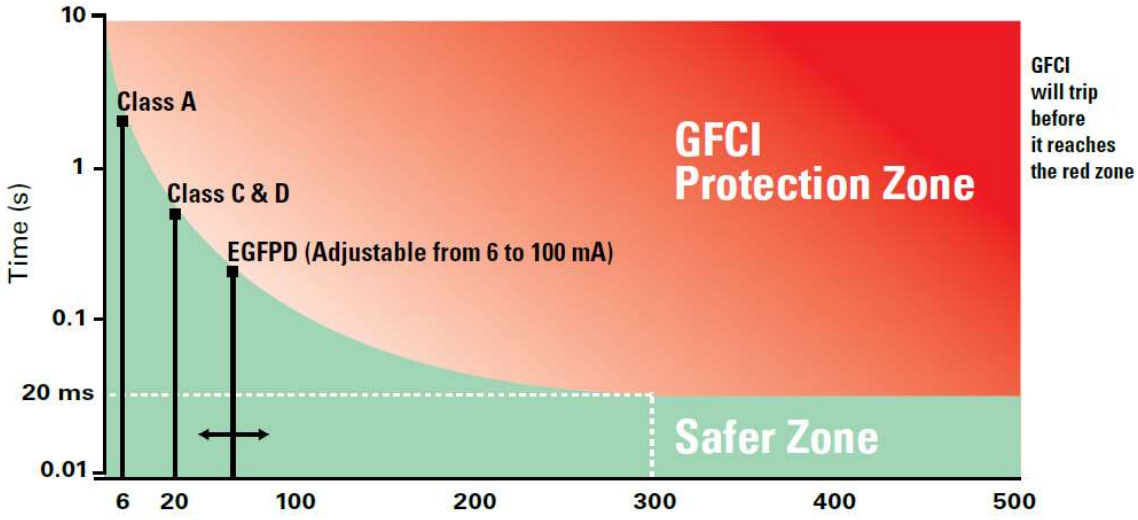
GFCI and EGFPD – Inverse Time Curve

- The curve to the right shows the inverse-time response curve, set by UL 943 and defined by the equation:

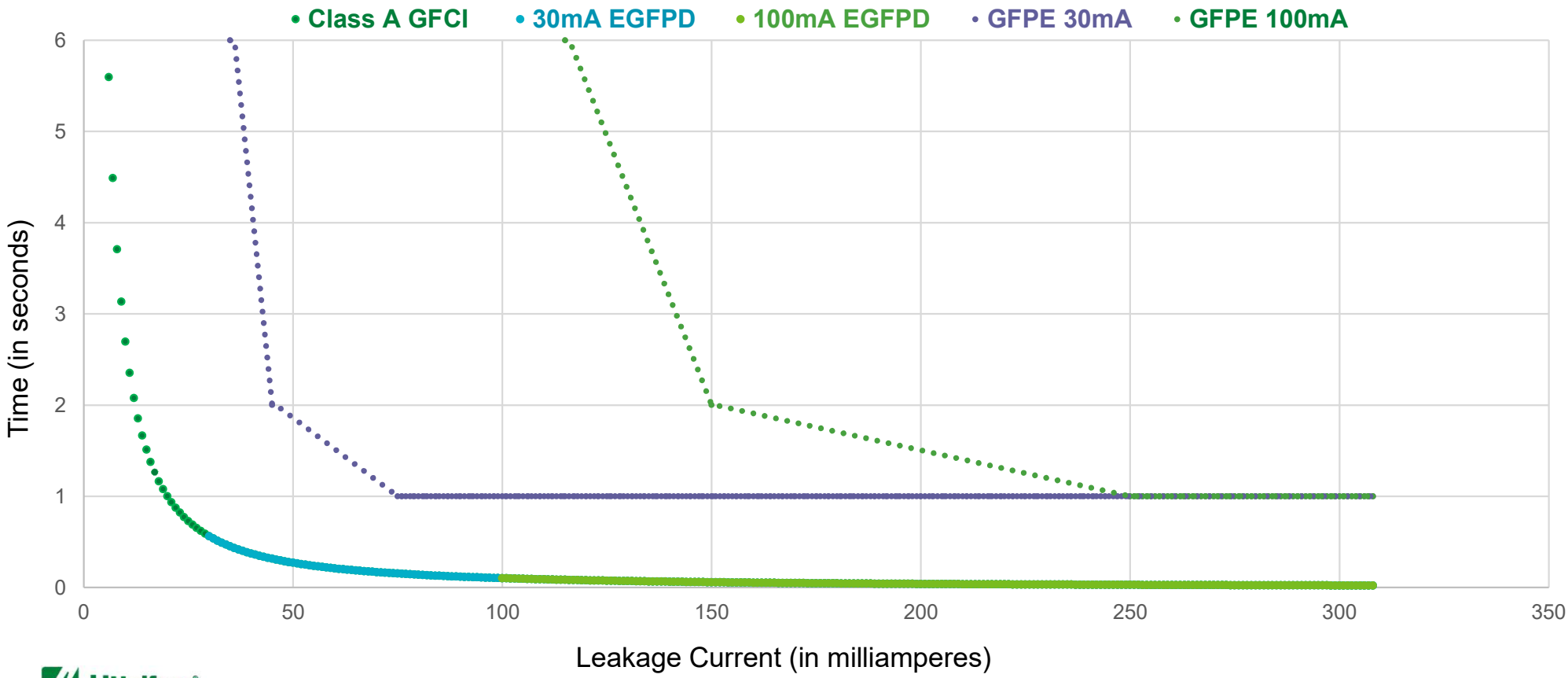
$$T = \left(\frac{20}{I}\right)^{1.43}$$

- GFCI 6 mA pickup
- SPGFCI <= 20 mA pickup

- Many faults are above 300 mA; SPGFCI must clear within 20 ms

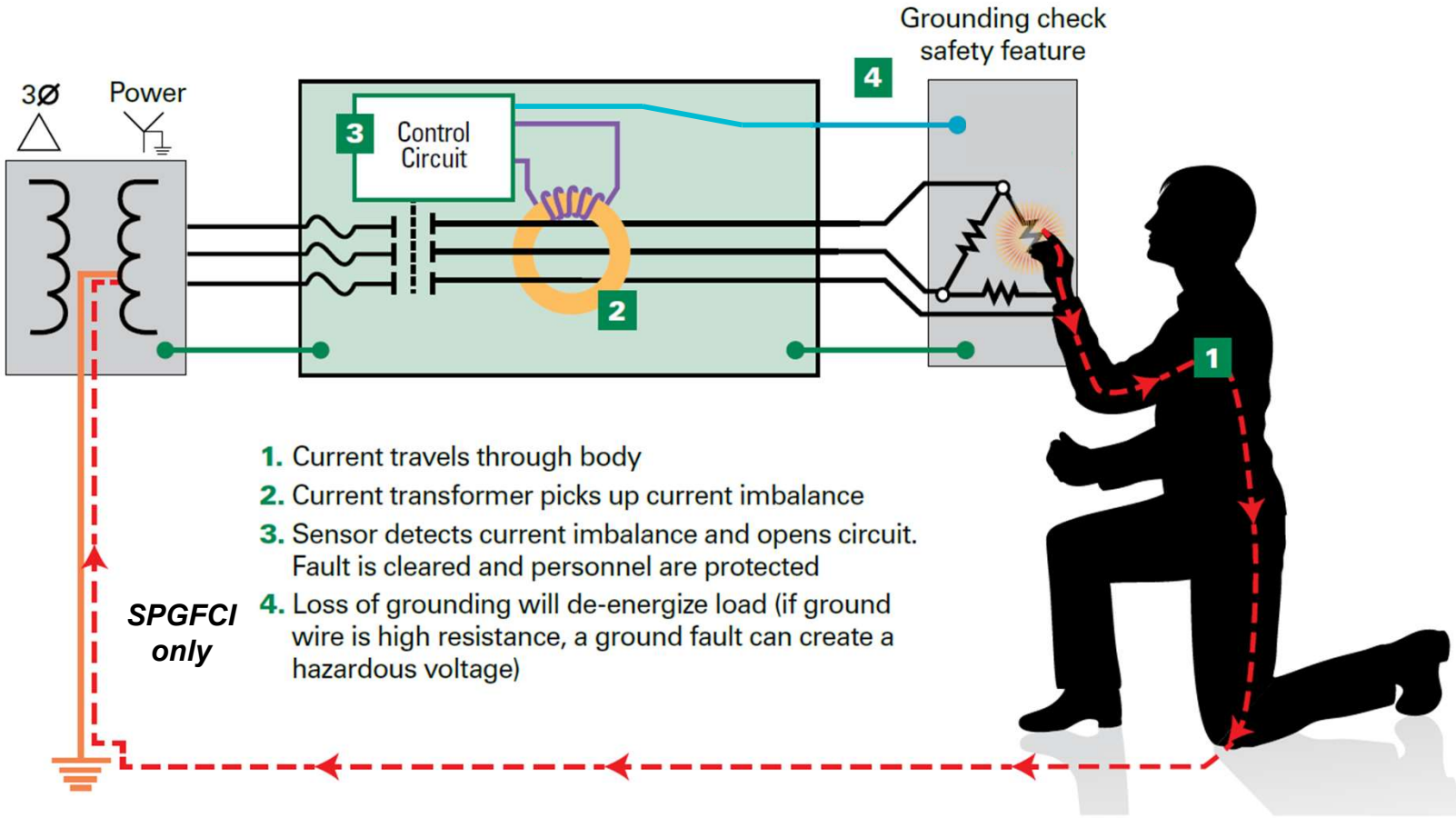


UL 943 Class A & EGFPD Curves vs. UL 1053 GFPE Requirements



Littelfuse
Expertise Applied | Answers Delivered

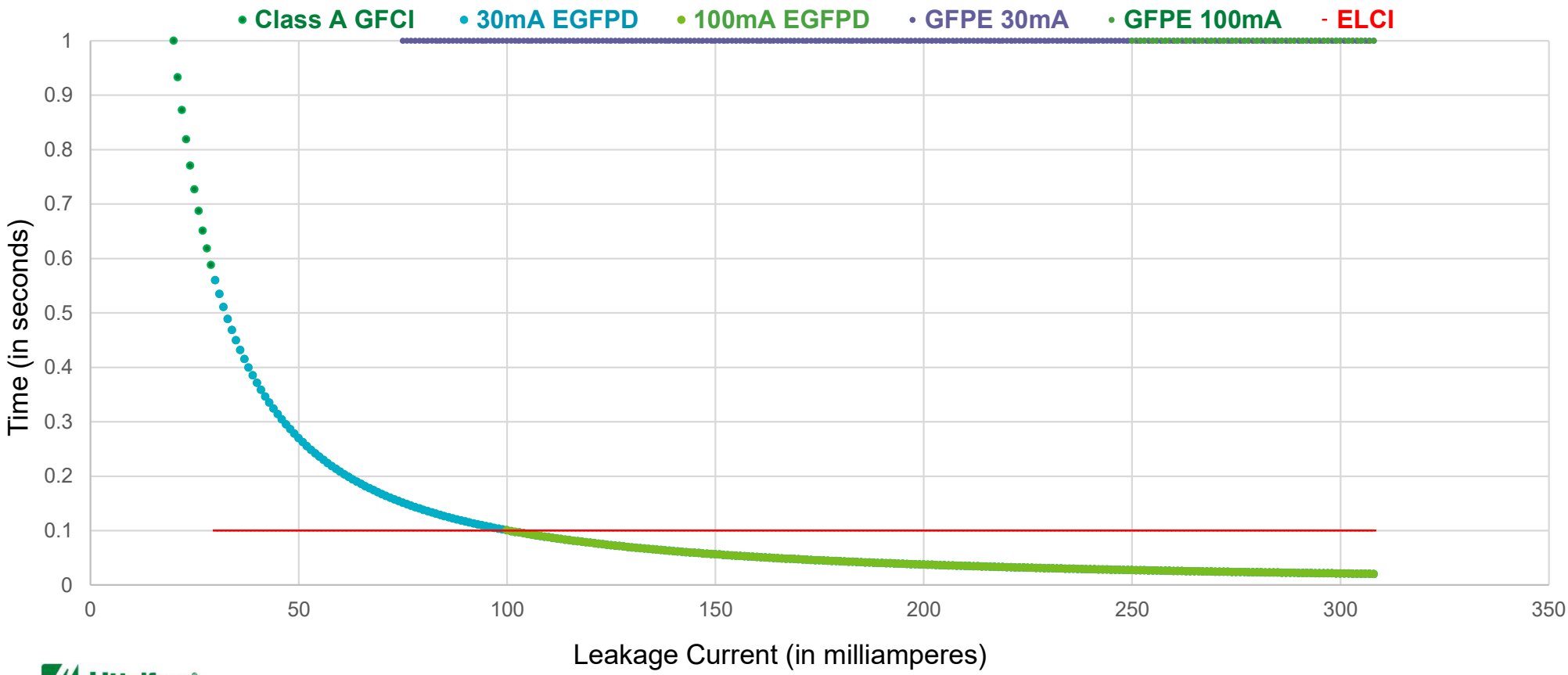
Operating Principle SPGFCI



Ground-Fault Protective Devices (Short Comparison)

	GFCI	Special-Purpose GFCI	EGFPD	GFPE
Purpose	Personnel Protection (Class A)	Personnel Protection (Class C, D, E)	Equipment Protection	Equipment Protection
Personnel Protection Detail	Let-Go & Ventricular Fibrillation Protection	Ventricular Fibrillation Protection	-	-
Trip Level	6 mA	20 mA	6 – 100 mA	30 mA – 1200 A
Trip Characteristics	Inverse Time	Inverse Time	Inverse Time	Definite or Inverse Time
Max Allowed Delay	25mS @ 300+ mA	20 ms @ 300+ mA	20 ms @ 300+ mA	1 s @ 3,000+ A
Fault Clearing	Required (Integrated)	Required (Integrated)	Required (Integrated)	External (ex: CB)
Ground Wire Monitor	Not Required	Required	Not Required	Not Required
USA Standard	UL 943	UL 943C	UL 943 / UL 1053	UL 1053
Canadian Standard	CSA C22.2 No. 144.1-06	CSA C22.2 No. 144-M91	CSA C22.2 No. 144-M91	CSA C22.2 No. 14-10
NEC Code References & Applications	NEC 210.8(A) NEC 210.8(B) *Many other references*	NEC 100 Definition NEC 410.184 Hort Lights NEC 680 Pools and Spas	NEC 426, 427 Fixed De-Icing Equipment Snow Melting Equipment Pipeline Electric Heating	NEC 230.95 Required for grounded systems ≤ 1200 A

ELCI vs UL 943



Littelfuse
Expertise Applied | Answers Delivered

CMP7

- Support PI's 4403, 4434, 4440 to bring personnel protection to more circuits at marinas

PI 3899

Article 627 Electric Self-Propelled Vehicle Power Transfer System

ELECTRIC VEHICLE (EV)

An automotive-type vehicle for on-road use, such as passenger automobiles, buses, trucks, vans, neighborhood electric vehicles, and electric motorcycles, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. Plug-in hybrid electric vehicles (PHEV) are electric vehicles having a second source of motive power. (CMP-12)

ELECTRIC VEHICLE SUPPLY EQUIPMENT (EVSE)

Equipment for plug-in charging, including the ungrounded, grounded, and equipment grounding conductors, and the electric vehicle connectors, attachment plugs, personnel protection system, and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle. (625) (CMP-12)

ARTICLE 625 ELECTRIC VEHICLE POWER TRANSFER SYSTEM

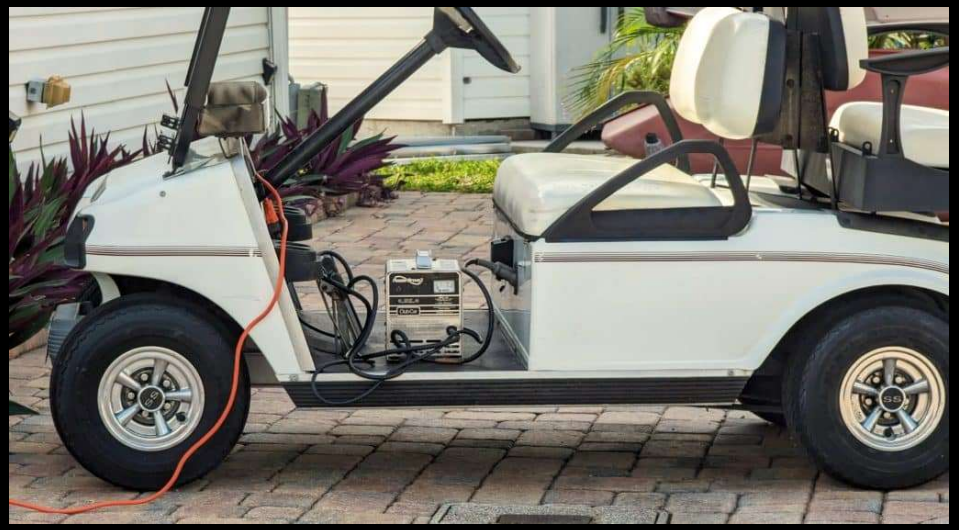
625.1 Scope.

This article covers the electrical conductors and equipment connecting an electric vehicle to premises wiring for the purposes of charging, power export, or bidirectional current flow.

ELECTRIC VEHICLE (EV)

https://www.boatline.com/blog/2022/04/04/7-benefits-of-electric-boats/

ELECTRIC VEHICLE (EV)



https://www.boatline.com/blog/2022/04/04/7-benefits-of-electric-boats/

ELECTRIC VEHICLE (EV)


CLEARCAP
CHARGING VOLTAGE 24, 36, 48


EVE

OPTIONS

- Change the definition of Electric Vehicle
- Change the title and scope of Article 625
  - Create Parts to address the new vehicles
- Create new Article and new defined terms

Electric Self-Propelled Vehicle (ESV)

A vehicle or marine vessel other than an electric vehicle such as farm equipment, boats and golf carts, primarily powered by an electric motor that draws current from a rechargeable storage battery, fuel cell, photovoltaic array, or other source of electric current. (CMP-12)

PI 3887

Electric Self-Propelled Vehicle Supply Equipment (ESVSE)

PI 3893

Electric Self-Propelled Vehicle Power Export Equipment (ESVPE)

PI 3894

Electric Self-Propelled Vehicle (ESV)

PI 3899

Article 627 Electric Self-Propelled Vehicle Power Transfer System

Marina Infrastructure for E-Boats

The Power in Electrical Safety

Engineering
Education
Inspection
Expert Witness
Performance Testing

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Marina Infrastructure for E-Boats

Electric Vessels

- Outboard
- Inboard
- Hybrid

Requirements for Marina Infrastructure (555 & 625)

- Existing Marina Electrical Infrastructure
- New Marina Electrical Infrastructure
- Charging
  - Slow Charging
  - Medium Charging
  - Fast Charging

Electric Boats

Electric Boats

Electric Boats

Outboard Electric Motor Options

Torqeedo

- 1HP to 25HP (Ultralight, Travel, & Cruise Series)
- Deep Blue Series
  - 25R (40HP) & 50R (80HP)

E-Motion 180E Electric Powertrain

- 180 HP

Evoy

- Breeze, Gale, Storm, & Hurricane

Brunswick (Mercury)

- Avator 7.5e, 20e, and 35e

Electric Boats

Electric Boats

Inboard Electric Boats

Electric Boats

Correct Craft

- **Super Air Nautique GS22E**
  - Complete boat package
  - Battery:
    - 124KWH
    - 200HP (continuous)
    - 300HP (peak)
  - Motor - 220KW (peak)
  - Motor - 135KW (continuous)
  - Performance watersport boat

Electric Boats

Ingenity

- **23E Pontoon**
- Roll-out last year (Miami).
  - Complete boat package
  - Battery options:
    - 63KWH & 124KWH
    - 200HP (continuous)
    - 300HP (peak)
  - Motor - 135KW (continuous)
  - Motor - 220KW (peak)

Electric Boats

X Shore

- **EELEX 8000**
  - Complete boat package
  - Battery - 126KWH
  - Motor - 226KW (peak)

Electric Boats

evoy

- Four offerings
- 120HP – 400HP

Electric Boats

Marina Infrastructure for E-Boats

Charging Electric Boats

There are two factors to consider for electric boat charging:

- Charging time
- Kilowatt-hour rating of battery

- Faster the charge -- More power and electrical infrastructure required

Marina Infrastructure for E-Boats

Charging Electric Boats

- Charging time
  - Slow charge = 8 – 10 hours
  - Medium charge = 4 – 6 hours
  - Fast charge = < 3 hours

- Kilo-watt of battery
  - 10 KWH – 400KWH

Marina Infrastructure for E-Boats

Existing Marina Infrastructure

Shore Power Receptacle		NEC diversity	KWH meter diversity	Receptacle Demand		
				(CD Charging 125%)	Battery (KW) ->	400
400 amp	480 volt 3ph	30%	90%	71.83 kilo-watts		5.57
200 amp	480 volt 3ph	30%	90%	35.91 kilo-watts		11.14
200 amp	208 volt 3ph	30%	90%	15.56 kilo-watts		25.70
100 amp	208 volt 3ph	30%	90%	7.78 kilo-watts		51.40
100 amp	240 volt	30%	90%	5.18 kilo-watts		77.16
50 amp	240 volt	30%	90%	2.59 kilo-watts		154.32
30 amp	120 volt	30%	90%	0.78 kilo-watts		514.40

Electric Boat Charging Times (hrs)

Marina Infrastructure for E-Boats

New Marina Infrastructure

Dedicated AC Power Source (load as 125% demanded)						
					Battery (KW) ->	400
400 amp	480 volt 3ph	80%	100%	266.04 kilo-watts		1.50
200 amp	480 volt 3ph	80%	100%	133.02 kilo-watts		3.01
200 amp	208 volt 3ph	80%	100%	57.64 kilo-watts		6.94
100 amp	208 volt 3ph	80%	100%	28.82 kilo-watts		13.88
100 amp	240 volt	80%	100%	19.20 kilo-watts		20.83
50 amp	240 volt	80%	100%	9.60 kilo-watts		41.67
30 amp	120 volt	80%	100%	2.88 kilo-watts		138.89

Electric Boat Charging Times (hrs)

Marina Infrastructure - Charging E-Boats

Marina Infrastructure - Charging E-Boats

Charging Electric Boats

There are two main factors to consider for electric boat charging:

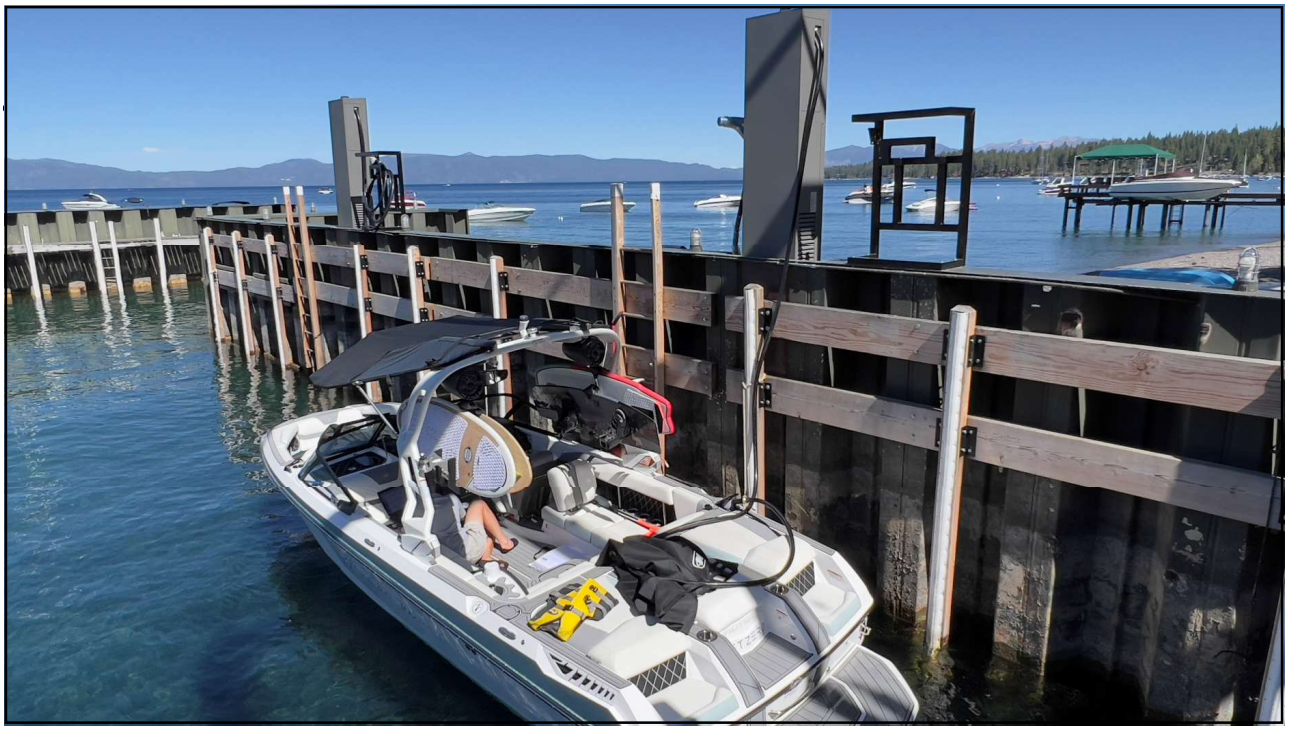
- What is the desired charging time?
- What is the battery capacity (kilowatt-hour rating of battery)?

- Faster the desired charge time = More electrical infrastructure
- Bigger the battery = More electrical infrastructure

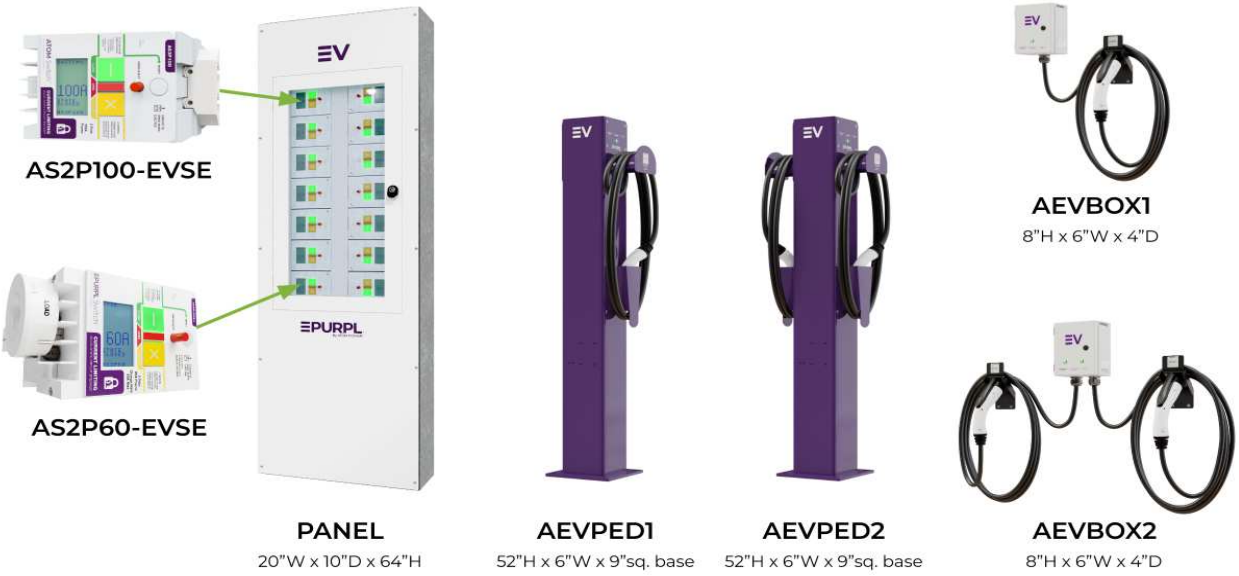
Marina Infrastructure - Charging E-Boats

Electric Chargers:

- Slow (very slow) chargers
  - AC chargers
  - Plug into existing shore power
- Medium chargers
  - AC chargers
  - DC chargers
- Fast chargers
  - DC chargers
  - AC-to-DC inverters
  - DC Battery Banks



Atom Power's EV Charging Products



Marina Infrastructure - Charging E-Boats

Charging Electric Boats

- Medium and Fast charging with smaller electrical infrastructure
  - Smart load-control solid-state breakers (AC medium)
  - Battery Banks (DC Fast)

Marina Infrastructure - Charging E-Boats

Kreisel DC Charging System

- 60KW input power
- 180KW output power

- Input power charges a battery bank which delivers high-power on-demand DC charging.

- MLE designed this system on the east coast of FL.

Understanding Leakage Current

The Power in Electrical Safety

Engineering
Education
Inspection
Commissioning

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Questions and Contact Info

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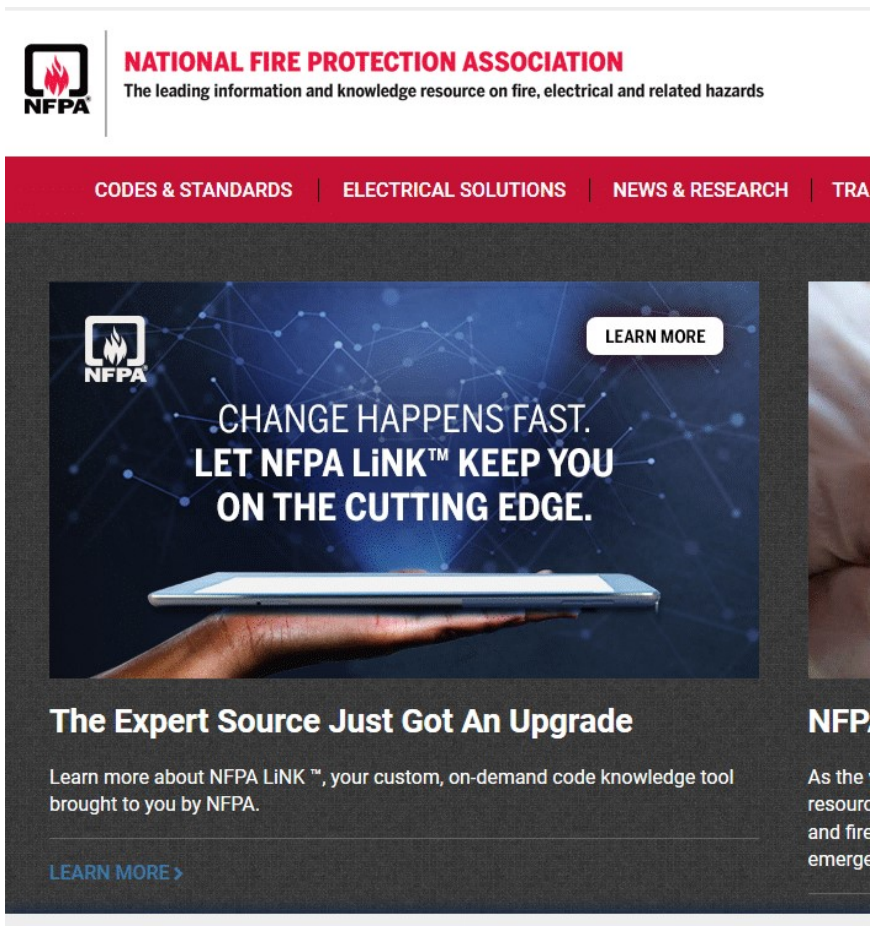
ENGINEERING EXCELLENCE

Founded to sell watches; evolved to sell everything	Founded to sell books; evolved to sell everything
1972	2017
sears	amazon
2 of every 3 Americans shopped in last 3 months	2 of every 3 Americans shopped in last 3 months
1987 Sales = 1% of GDP	2017 Sales = 1% of GDP

Merriam Associates

Source: Chicago Tribune



March 2020

Chapter 1

General

Chapter 2

Wiring & Protection

Chapter 3

Wiring Methods & Materials

Chapter 4

Equipment for General Use

Chapter 5

Special Occupancies

Chapter 6

Special Equipment

Chapter 7

Special Conditions

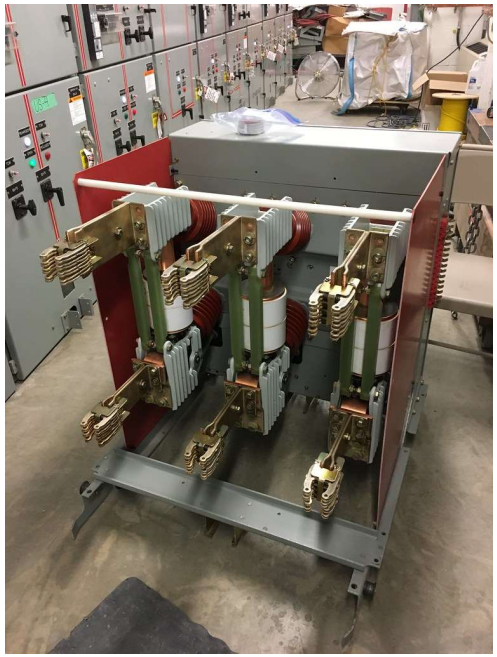
Chapter 8

Communications Systems

1937-2023 (35 editions):

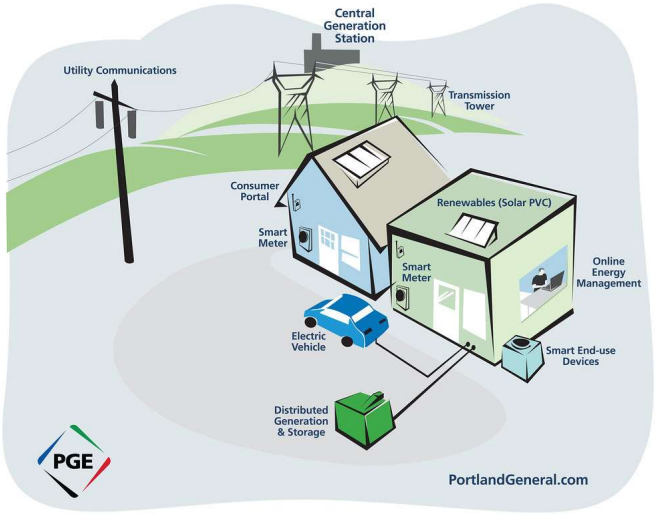
Introduction (Identified as Article 90 starting in the 1959 edition)	Chapter 1 – General	Chapter 2 – Wiring Design and Protection	Chapter 4 has grown from 10 articles in the 1937 edition to 22 articles in the 2023 edition
Chapter 5 has grown from 5 articles in the 1937 edition to 27 articles in the 2023 edition	Chapter 6 has grown from 7 articles in the 1937 edition to 27 articles in the 2023 edition	Chapter 7 has grown from 4 articles in the 1937 edition to 15 articles in the 2023 edition	Chapter 8 has grown from 2 articles in the 1937 edition to 6 articles in the 2023 edition

What Else is Coming Down the Pike?



By: MTA Construction and Development

By: Portland General Electric



By:National Renewable Labs

Where do we want to go?

- Remain relevant with the quickly evolving electrical industry
- Improve usability
  - Place content where it makes sense
  - Logical/parallel structure
    - Systems below 1000V
    - Limited Energy
    - Medium Voltage
  - Eliminate “Special Equipment”/ “Special Conditions”
  - Leverage the past to make the future even better
- Create a structure that looks to the future

NATIONAL FIRE PROTECTION ASSOCIATION

The leading information and knowledge resource on fire, electrical and related hazards

National Electrical Code® Correlating Committee White Paper

Keeping the NEC® Relevant - Is Now the Time to Modernize?

The National Electrical Code® (NEC®) is the foundation of the electrical installation regulatory infrastructure for the United States, Mexico, and numerous other jurisdictions around the world. Growing demand for safe, reliable, resilient, and efficient use of electrical power to support society and the economy is aligning with technological advancement of power generation sources, electrical distribution, and new electrical power loads. It is critical the NEC be revised and implemented by the electrical community every three years to support the accelerating pace of change and technological advancement.

The structure of the NEC plays a critical role for personnel in learning, understanding, applying, and enforcing the requirements established within this regulatory code. While the current structure, first introduced in 1937, has provided tremendous success and stability and continues to be used by engineers, contractors, electricians and training programs, the ability to efficiently learn and quickly apply and inspect advancing technologies and uniquely configured electrical systems is a challenge for all electrical professionals. The existing NEC structure needs modernization to continue to support the advancing electrical infrastructure configurations and technological advancements. Therefore, it is imperative that the electrical industry actively pursue a revised NEC organizational structure to support ease of learning, understanding, and applying the NEC safety provisions in a rapidly advancing new energy landscape.

Keeping the NEC Relevant Now is the Time to Modernize

- Industry Trends
- Medium Voltage
- Limited Energy
- Multi-Directional Power Flow
- Digital Delivery of Content
- Future Vision
- Path Forward
- Feedback

More difficult for AHJ's when inspecting

Less likely to have listed equipment since traditionally geared toward utility.

More likely to have requirements that are antiquated

Depth of knowledge of Technical Committees can be a challenge.

Wiring methods in Chapter 3 for >1000 volt systems are difficult to determine

With renewable energy and microgrids lines of distinction between NESC and NEC are blurred.

Medium Voltage

A Starting Point for Considering a New Approach

Limited Energy

Past

- Confusing
- No more Ma Bell
- Independence Chapter 8 vs Dependence Chapter 1-7
- Cat 5/6 Cable Article 725 and 805
- POE is Article 725 and 840
- How do we maintain relevance?

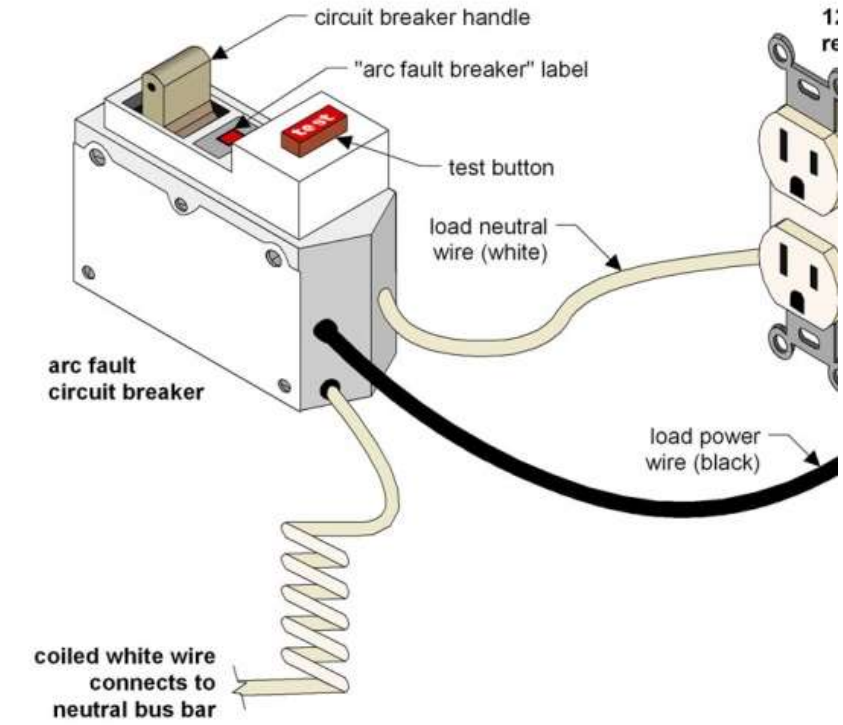
Future

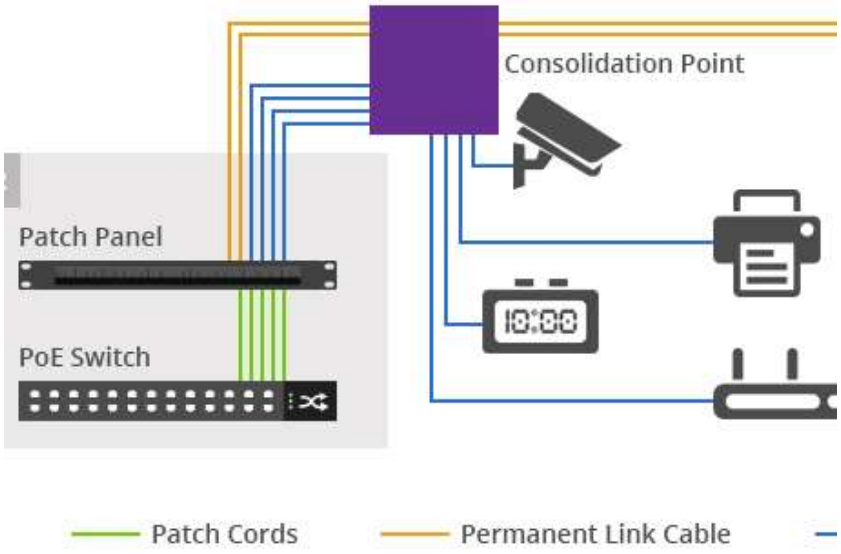
- Improve usability.
- Improve Terminology
- Create structure that is technology agnostic.
- Eliminate redundancy.
- Parallel Structure
- Everything communicates

Short-Term Goals (2026)

MV /Limited Energy	• Move from Medium voltage structure to Medium Voltage Technical changes • Work on Limited Energy
Create parallel structure for Limited Energy	• Make it look like the front of the book. • (Protection scheme, wire and a load)
Begin Implementation	• Move certain articles for long-term road map implementation

Arc fault circuit interrupter





90.3 –2023 NEC

- **Introduction**
- **Definitions and General Requirements** Chapter 1
- **Wiring and Protection** Chapter 2
- **Wiring Methods and Materials** Chapter 3
- **Equipment for General Wiring** Chapter 4
- **Special Occupancies** Chapter 5
- **Special Equipment** Chapter 6
- **Special Conditions** Chapter 7
- **Communication Systems** Chapter 8
- **Tables** Chapter 9
- **Informative Annex A through Informative Annex K**

(Light Blue) Applies generally to electrical installations

(Brown) Supplemental or Amendatory requirements

Applicable as referenced

Informative Only

PROPOSED 90.3 –2029 NEC

- **Introduction**
- **Definitions and General Requirements** Chapter 1
- **Wiring and Protection for Systems 1000 VAC, 1500 VDC and Below** Chapter 2
- **Wiring and Protection for Systems Over 1000 VAC, 1500 VDC** Chapter 3
- **Wiring and Protection for Limited Energy Systems** Chapter 4
- **Wiring Methods and Materials** Chapters 5 - 10
- **Equipment** Chapter 11 - 14
- **Specific Locations and Occupancies** Chapters 15 – 17
- **Energy Sources** Chapters 18
- **Life Safety and Emergency Systems** Chapter 19
- **Tables** Chapter 20
- **Informative Annex A through Informative Annex K**

Title		2023 Reference	2026 CMP	2029 CMP
90	Introduction	90	1	1
Chapter 1 Definitions and General Requirements				
100	Definitions	100	1	1
110	Requirements for Electrical Installations	110	1	1
120	Load Calculations	220	2	2
130	Energy Management Systems	750	13	13
140	Temporary Installations	590	3	3
Chapter 2 Wiring and Protection for Systems 1000 VAC, 1500 VDC and Below				
200	General Requirements	300	3	3
205	Conductors	310	6	6
206	Use and Identification of Grounded Conductors	200	5	5
210	Branch Circuits	210	2	2
215	Feeders	215	10	10
225	Outside Branch Circuits and Feeders	225	10	10
230	Services	230	10	10
240	Overcurrent Protection	240	10	10
242	Overvoltage Protection (Part I and II)	242	10	10
250	Grounding and Bonding	250	5	5

3

Chapter 3 Wiring and Protection for Systems Over 1000 VAC, 1500 VDC				
300	General Requirements	305	9	9
305	Conductors and Cables	315	9	9
306	Use and Identification of Grounded Conductors	205	5	9
310	Branch Circuits	235	9	9
315	Feeders	235	9	9
325	Outside Branch Circuits and Feeders	235	9	9
330	Services	235	9	9
342	Overvoltage Protection	242 (Part III)	10	9
350	Grounding and Bonding	250 (Part X)	5	5

4

Chapter 4 Wiring and Protection for Limited Energy Systems				
400	Wiring Requirements and Materials		3	3
405	Conductors and Cables (Including Listing and Flammability)	722	3	3
406	Use and Identification of Conductors		3	3
430	Interior Cabling Systems Part I- Class 1 Power-Limited Circuits Part II- Class 2 and Class 3 Part III- Class 4	724, 725, 726	3	3
435	Exterior Cabling Systems (Outside Plant) Part I- Communication Circuits Part II- Antenna Systems Part III- CATV Part IV- Networked-Powered Broadband Communication Systems Part V- Premises-Powered Broadband Communication Systems		16	16
440	Overcurrent Protection Part I- Class 1 Power-Limited Circuits Part II- Class 2 and Class 3 Part III- Class 4	724, 725, 726	3	3
442	Overvoltage Protection		3	3
450	Grounding and Bonding		16	5

5, 6

Chapter 5 Enclosures and Wiring Support Structures				
500	Cabinets, Cutout Boxes, and Meter Socket Enclosures	312	8	8
502	Outlet, Device, Pull, and Junction Boxes; Conduit Bodies; Fittings; and Handhole Enclosures	314	8	8
504	Cable Trays	392	8	8
506	Auxiliary Gutters	366	8	8
508	Metal Wireways	376	8	8
510	Nonmetallic Wireways	378	8	8
512	Nonmetallic Extensions	382	6	8
Chapter 6 Wire and Cable				
600	Armored Cable: Type AC	320	6	6
602	Flat Cable Assemblies: Type FC	322	6	6
604	Flat Conductor Cable: Type FCC	324	6	6
606	Integrated Gas Spacer Cable: Type IGS	326	6	6
608	Metal-Clad Cable: Type MC	330	6	6
610	Mineral-Insulated, Metal-Sheathed Cable: Type MI	332	6	6
612	Nonmetallic-Sheathed Cable: Types NM and NMC	334	6	6
614	Optical Fiber Cables	770	16	16
616	Instrumentation Tray Cable: Type ITC	335	6	6
618	Power and Control Tray Cable: Type TC	336	6	6
620	Type P Cable	337	6	6
622	Service-Entrance Cable: Types SE and USE	338	6	6
624	Underground Feeder and Branch-Circuit Cable: Type UF	340	6	6
626	Flexible Cords and Flexible Cables	400	6	6
628	Fixture Wires	402	6	6

7, 8

Chapter 7 Circular Raceways (Conduit and Tubing)				
700	Intermediate Metal Conduit: Type IMC	342	8	8
702	Rigid Metal Conduit: Type RMC	344	8	8
704	Flexible Metal Conduit: Type FMC	348	8	8
706	Liquidtight Flexible Metal Conduit: Type LFMC	350	8	8
708	Rigid Polyvinyl Chloride Conduit: Type PVC	352	8	8
710	High Density Polyethylene Conduit: Type HDPE Conduit	353	8	8
712	Nonmetallic Underground Conduit with Conductors: Type NUCC	354	8	8
714	Reinforced Thermosetting Resin Conduit: Type RTRC	355	8	8
716	Liquidtight Flexible Nonmetallic Conduit: Type LFNC	356	8	8
718	Electrical Metallic Tubing: Type EMT	358	8	8
720	Flexible Metallic Tubing: Type FMT	360	8	8
722	Electrical Nonmetallic Tubing: Type ENT	362	8	8
724	Raceways for Limited Energy Systems (Communication Raceways)	800, 805, 810, 820, 830, 840	16	16
Chapter 8 Non-Circular Raceways				
800	Cellular Concrete Floor Raceways	372	8	8
802	Cellular Metal Floor Raceways	374	8	8
804	Strut-Type Channel Raceway	384	8	8
806	Surface Metal Raceways	386	8	8
808	Surface Nonmetallic Raceways	388	8	8
810	Underfloor Raceways	390	8	8

9, 10, 11

Chapter 9 Power and Lighting Systems				
900	Busways	368	8/9	8
902	Cablebus	370	8	8
904	Insulated Bus Pipe (IBP) and Tubular Covered Conductors (TCC) (New)	369	8	8
906	Flexible Bus System (New)	371	8	8
908	Multioutlet Assembly	380	8	8
910	Low-Voltage Suspended Ceiling Power Distribution Systems	393	18	18
912	Manufactured Wiring Systems	604	7	7
916	Office Furnishings	605	18	18
Chapter 10 Open Wiring				
1000	Concealed Knob-and-Tube Wiring	394	6	6
1002	Messenger-Supported Wiring	396	6	6
1004	Open Wiring on Insulators	398	6	6
Chapter 11 Devices				
1100	Switches	404	9/10	10
1102	Wiring Devices	406	18	18
1104	Switchboards, Switchgear and Panelboards	408	10	10
1106	Industrial Control Panels	409	11	11
1108	Transformers and Transformer Vaults	450	9	9
1110	Phase Converters	455	13	13
1112	Capacitors	460	9/11	11
1114	Resistors and Reactors	470	9/11	11

12

Chapter 12 Utilization Equipment				
1200	Luminaires, Lampholders and Lamps	410	18	18
1202	Low-Voltage Lighting	411	18	18
1204	Electric Signs and Outline Lighting	600	18	18
1206	Motors, Motor Circuits, and Controller	430	11	11
1208	Cranes and Hoists	610	12	12
1210	Elevators, Dumbwaiters, Escalators, Moving Walks, Platform Lifts, and Stairway Chairlifts	620	12	12
1212	Electrically Driven or Controlled Irrigation Machines	675	7	7
1214	Appliances	422	17	17
1216	Fixed Electric Space Heating Equipment	424	17	17
1218	Fixed Resistance and Electrode Industrial Process Heating Equipment	425	17	17
1220	Fixed Outdoor Electric Deicing and Snow-Melting Equipment	426	17	17
1222	Fixed Electric Heating Equipment for Pipelines and Vessels	427	17	17
1224	Air-Conditioning and Refrigeration Equipment	440	11	11
1226	Induction and Dielectric Heating Equipment	665	12	12
1228	Electric Welders	630	12	12
1230	Pipe Organs	650	12	12
1232	Information Technology Equipment	645	12	12
1234	Sensitive Electronic Equipment	647	12	12
1236	X-Ray Equipment	660	12	12

13, 14

Chapter 13 Systems (Equipment)				
1300	Electric Vehicle Power Transfer System	625	12	12
1302	Electrified Truck Parking Spaces	626	12	12
1304	Audio Signal Processing, Amplification, and Reproduction Equipment	640	12	12
1306	Modular Data Centers	646	12	12
1308	Electrolytic Cells	668	12	12
1310	Electroplating	669	12	12
1312	Industrial Machinery	670	12	12
1314	Integrated Electrical Systems	685	12	12
Chapter 14 Equipment Over 1000 VAC, 1500 VDC				
1400	General	495 (Part I & II)	9	9
1402	Switchgear and Industrial Control Assemblies	495 (Part III)	9	9
1404	Mobile and Portable Equipment	495 (Part IV)	9	9
1406	Boilers	495 (Part V)	9	9
1408	Motors, Motor Circuits, and Controllers	430 (Part XI)	11	9
1410	Capacitors	460 (Part III)	11	9
1412	Resistors and Reactors	470 (Part III)	11	9

15

Chapter 15 Hazardous Locations				
1500	Hazardous (Classified) Locations, Classes I, II, and III, Divisions 1 and 2	500	14	14
1501	Class I Locations	501	14	14
1502	Class II Locations	502	14	14
1503	Class III Locations	503	14	14
1504	Intrinsically Safe Systems	504	14	14
1505	Zone 0, 1, and 2 Locations	505	14	14
1506	Zone 20, 21, and 22 Locations for Combustible Dusts or Ignitible Fibers/Flyings	506	14	14
1511	Commercial Garages, Repair and Storage	511	14	14
1512	Cannabis Oil Equipment and Cannabis Oil Systems Using Flammable or Combustible Materials	512	14	14
1513	Aircraft Hangars	513	14	14
1514	Motor Fuel Dispensing Facilities	514	14	14
1515	Bulk Storage Plants	515	14	14
1516	Spray Application, Dipping, Coating, and Printing Processes Using Flammable or Combustible Materials	516	14	14

16

Chapter 16 Occupancies				
1600	Health Care Facilities	517	15	15
1602	Assembly Occupancies	518	15	15
1604	Theaters, Audience Areas of Motion Picture and Television Studios, Performance Areas, and Similar Locations	520	15	15
1606	Control Systems for Permanent Amusement Attractions	522	15	15
1608	Carnivals, Circuses, Fairs, and Similar Events	525	15	15
1610	Motion Picture and Television Studios and Similar Locations	530	15	15
1612	Motion Picture Projection Rooms	540	15	15
1614	Manufactured Buildings and Relocatable Structures	545	7	7
1616	Agricultural Buildings	547	7	7
1618	Mobile Homes, Manufactured Homes, and Mobile Home Parks	550	7	7
1620	Recreational Vehicles and Recreational Vehicle Parks	551	7	7
1622	Park Trailers	552	7	7

17,

18,

19,

Chapter 17 Installations Associated with Bodies of Water				
1700	Swimming Pools, Fountains, and Similar Installations	680	17	17
1702	Natural and Artificially Made Bodies of Water	682	7	7
1704	Marinas, Boatyards, Floating Buildings, and Commercial and Noncommercial Docking Facilities	555	7	7
Chapter 18 Power Production and Energy Storage Systems				
1800	Interconnected Systems	705	13	13
1802	Generators	445	13	13
1804	Stationary Standby Batteries	480	13	13
1806	Solar Photovoltaic (PV) Systems	690	4	4
1808	Large-Scale Photovoltaic (PV) Electric Supply Stations	691	4	4
1810	Fuel Cell Systems	692	4	4
1812	Wind Electric Systems	694	4	4
1814	Energy Storage Systems	706	13	13
1816	Stand Alone Systems	710	4	4
1818	Optional Standby Systems	702	13	13
Chapter 19 Life Safety and Emergency Systems				
1900	Emergency Systems	700	13	13
1902	Legally Required Standby Systems	701	13	13
1904	Fire Pumps	695	13	13
1906	Fire Alarm Systems	760	3	3
1908	Circuit Integrity Cables and Electrical Protective Systems (Fire- Resistive Cable Systems)	728	3	3
1910	Critical Operations Power Systems (COPS)	708	13	13

Introduction

Definitions and General Requirements
Chapter 1

Wiring and Protection
Chapter 2

Wiring Methods and Materials
Chapter 3

Equipment for General Wiring
Chapter 4

Special Occupancies
Chapter 5

Special Equipment
Chapter 6

Special Conditions
Chapter 7

Communication Systems
Chapter 8

Tables
Chapter 9

Informative Annex A through Informative Annex K

2026 NEC STRUCTURE

2026 NEC		2023 NEC Reference
Chapter 1 Definitions and General Requirements		
100	Definitions	100
110	Requirements for Electrical Installations	110
120	Load Calculations	220
130	Energy Management Systems	750
140	Temporary Installations	590

Takeaways

- Feedback to Jeff Sargent
- Proposed structure is fluid and will continue to evolve as we receive input
- Intent to print proposed structure in Annex for 2026 NEC edition.
- Structure is not intended to impact technical, only the organization and correlation of the technical content
- Intent is to move articles once

Inverter Warning Label Proposal

551.32 Other Sources.

(A) General Requirements. Other sources of ac power, such as inverters, motor generators, or engine generators, shall be listed for use in recreational vehicles and shall be installed in accordance with the terms of the listing. Other sources of ac power shall be wired in full conformity with the requirements in Parts I, II, III, IV, and V of this article covering 120-volt electrical systems.

(B) Labeling of Inverters. If an inverter or inverter/inverter charger is provided, a safety label complying with 110.21(B) with the signal word WARNING in minimum 6-mm (1/4 in.) high letters and body text in minimum 3-mm (1/8 in.) high letters on a contrasting background shall be affixed at the panelboard(s) and at the entry of the feeder assembly to the vehicle and shall read as follows:

WARNING

This electrical system is equipped with an inverter/inverter charger.

Disconnect all AC and DC power to the inverter and/ or inverter charger before performing any service to the electrical system. Failure to do so can result in shock causing serious injury or death.

Committee Statement:

A recent field incident that resulted in electrical shock to an RV service technician was brought to the attention of the code panel. This label will alert service technicians and owners that although they have unplugged the vehicle, electrical hazards may still be present. The label size and description is consistent with other labels sizes in NFPA 1192.

INVERTER PREWIRE CODE CHANGE PROPOSAL

Insert at 551.47 (S) and renumber accordingly.

(S) Prewiring for Inverter Installation. Prewiring installed for the purpose of future inverter installation shall comply with the other applicable portions of this article and

the following:

(1) Circuit conductors shall based on the anticipated load as stated on the label required in (S)(4).

(2) Where junction boxes are utilized at either of the circuit originating or at the termination points, the free ends of the conductors shall be adequately capped or taped.

(3) Where devices, such as receptacle outlet, are installed, the installation shall be complete, including circuit conductor connections.

(4) A safety label complying with 110.21(B) with the signal word WARNING in minimum 6-mm (1⁄4-in.) high letters and body

text in mini- mum 3-mm (1⁄8-in.) high letters on a contrasting background shall be affixed on the

cover of each junction box containing incomplete circuitry and shall read, using one of the

following warnings, as appropriate:

WARNING

INVERTER PREP

ONLY INSTALL AN INVERTER LISTED SPECIFICALLY FOR RV USE

HAVING OVERCURRENT PROTECTION RATED 110–125-VOLT AC,

60 HZ, _____ AMPERES MAXIMUM.

PLEASE ENSURE WIRING AND EQUIPMENT ARE RATED FOR THE INVERTER INPUT AND OUTPUT.

The correct ampere rating shall be legibly marked in the blank space.

Statement of Problem and Substantiation for Proposal:

The public input provides owners and service technicians notice that the RV is prewired for the installation of an inverter. The label provides information to the service technician on the rating and sizing of the pre-wire installation. The label size and description is consistent with other labels sizes in NFPA 1192.

Public Comment No. 1647-NFPA 70-2024 [Global Input]

This Global Public Comment is for CMP-7 to review the use of the terms "overcurrent", "overcurrent protective devices" and "overcurrent protection".

Additional Proposed Changes

File Name	Description	Approved
CMP-7_OCPD_TG-4_CMP-10.pdf	CMP-7_OCPD_TG-4 CMP-10	
All_CMP_Comments_Files_from_CMP-10_TG-4.pdf	All CMP Comments Files from CMP-10 TG-4	

Statement of Problem and Substantiation for Public Comment

This Public Comment is submitted on behalf of a Task Group formed under the purview of Code Making Panel 10 consisting of Randy Dollar, Thomas Domitrovich, Jason Doty, Diane Lynch, Alan Manche, Nathan Philips, David Williams, and Danish Zia. This Public Comment, along with other Public Comments, was developed with the goal of improving usability and accuracy on requirements associated with overcurrent protective devices.

The Task Group reviewed all instances of the term "overcurrent", "overcurrent protective devices" and "overcurrent protection" and provided recommended changes to align proposed and current defined terms.

For consistency, the task group chose to use the full defined term "overcurrent protective device" in the title of all sections or subdivisions and the acronym "OCPD" or "OCPDs" when used in the body of each code section.

The term overcurrent protection applies to the application of an overcurrent protective device OCPD, to protect conductors and equipment.

Two documents are attached: One for your specific code panel and the other is a comprehensive document illustrating all of the code-wide comments made by this task group.

The current term "Overcurrent Protective Device, Branch-Circuit" is being deleted and the new defined term "Overcurrent Protective Device (OCPD)" will be used instead.

The following are the proposed terms being submitted to CMP-10.

PC 1639 Overcurrent Protection.
Automatic interruption of an overcurrent

PC 1636 Overcurrent Protective Device (OCPD).
A device capable of providing protection over the full range of overcurrent between its rated current and its interrupting rating. (CMP-10)

Informational Note 1: Prior editions of NFPA 70 included the defined term "branch circuit overcurrent protective device" for overcurrent protective devices suitable for providing protection for service, feeder and branch circuits. This term has been revised to a generalized term of "overcurrent protective device" (OCPD). The specific requirements using this term may include modifiers (such as branch OCPD, feeder OCPD, service OCPD) to specify location or application of the OCPD, or to specify variations (such as supplementary OCPD).

Informational Note 2: See 240.7 for a list of overcurrent protective devices suitable for providing protection for service, feeder, branch circuits and equipment.

Related Item

• Global PI 4050 • PC 1636 • PC 1639

Submitter Information Verification

Submitter Full Name: David Williams
Organization: Delta Charter Township
Street Address:
City:
State:
Zip:

Submittal Date: Sun Aug 25 21:44:26 EDT 2024
Committee: NEC-P07

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-7			
CMP	NEC Section (using First Draft of 2026 NEC)	Current Language	"New" Language
7	**Article 100**		
	Service Equipment, Mobile Home	overcurrent protective devices	overcurrent protective devices (OCPDs)
7	**Article 545**		
	545.24	Branch-circuit overcurrent protective device	Branch-circuit OCPD
	545.24(B) Title	Branch Circuit Overcurrent Protection Device	Overcurrent protective devices
	545.24(B)	a Branch Circuit Overcurrent Protective Device	an OCPD
7	**Article 547**		
	547.41(A)(6). (X2)	Overcurrent Protection	Fine as is
	547.41(B)	Overcurrent Protection	Fine as is
	547.42	Overcurrent Protection	Fine as is
7	**Article 550**		
	550.11(B). Title	Branch-Circuit protective equipment	Branch-Circuit Overcurrent Protection
	550.11(B)	Overcurrent Protection	Fine as is
	550.11(B)	Branch-Circuit Overcurrent Devices	OCPDs
	550.11(B)	Overcurrent protection size	OCPD rating
	550.15(E)	Branch-circuit overcurrent protective device	OCPD
	550.32	Overcurrent Protection	Fine as is
7	**Article 551**		
	551.31(A)	Overcurrent protective device	OCPD
	551.31(C)	Overcurrent protective device	OCPD
	551.31(D)	Overcurrent Protection	Fine as is
	551.42	Overcurrent Protection	Fine as is
	551.43. Title	Branch-Circuit protection	Branch-Circuit Overcurrent Protection
	551.43(A)	Branch Circuit Overcurrent Devices	Branch-Circuit OCPDs
	551.43(A)(3)	Overcurrent Protection	Fine as is
	551.45(C)	Overcurrent protective device	OCPD
	551.47(Q)	Overcurrent protective device	OCPD
	551.47(R)	Overcurrent Protection	Fine as is
	551.47(S)	Overcurrent Protection	Fine as is
	551.74	Overcurrent Protection	Fine as is
7	**Article 552**		
	552.10.(E) Title	Overcurrent Protection	Fine as is
	552.10(E)(1)	Overcurrent protective devices	OCPDs

	T-552.10(E)(1)	Overcurrent Protection	Fine as is
	552.10(E)(4). (X2)	Overcurrent protective device	OCPD
	552.42(A)	Branch Circuit Overcurrent Devices	OCPDs
	552.42(A)	Overcurrent Protection	Fine as is
	552.45(C)	Overcurrent protective device	OCPD
	552.46(A) IN	Overcurrent Protection	Fine as is
	552.47(P)	Overcurrent protective device	OCPD
	552.47(Q)	Overcurrent Protection	Fine as is
7	**Article 555**		
	555.53	Overcurrent protective device	OCPD
7	**Article 675**		
	675.6	Branch Circuit Overcurrent Protective Device	OCPD
	675.7	Branch Circuit Overcurrent Protective Devices	OCPDs
	675.8	Overcurrent Protection	Fine as is
7	**Article 682**		
	682.15(B)	Feeder Overcurrent protective device	Feeder OCPD

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-1			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
1	**Article 110**		
	110.10.	overcurrent protective devices	OCPDs
	110.10.	circuit protective devices	Fine as is
	110.26(C)(2)	overcurrent devices	OCPD
	110.26(C)(3)	overcurrent devices	OCPD
	110.52	Overcurrent protection	Fine as is
	110.52	Overcurrent	Motor-operated Equipment shall be provided with overcurrent protection
	110.52	Overcurrent	Transformers shall be provided with overcurrent protection

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-2			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
2	**Article 100**		
	Branch Circuit (Branch-Circuit)	overcurrent device	overcurrent protective device (OCPD)
2	**Article 120**		
	120.5(E)	overcurrent device	OCPD
	120.7(B)	overcurrent protective device	OCPD
	120.87(3)	Overcurrent protection	Fine as is
2	**Article 210**		
	210.4(A)	branch-circuit overcurrent protective device, OCPD	Fine as is
	210.4(C)	branch-circuit OCPD	Fine as is
	210.11(B)	branch-circuit OCPD	Fine as is
	210.12(A)	branch-circuit OCPD (X-8)	Fine as is
	210.18	~~overcurrent device~~ OCPD (X-2)	Fine as is
	210.19(A)(1)EX	branch-circuit OCPD	Fine as is
	210.20.	Overcurrent protection	Fine as is
	210.20.	branch-circuit OCPD	Fine as is
	210.20(A)	branch-circuit OCPD	Fine as is
	210.20(C)	branch-circuit OCPD	Fine as is
	T-210.24	Overcurrent protection	Fine as is
2	**Annex D**		
	D3. (X2)	Overcurrent Protection	CMP-2 To review references to OCPD and the revised terms.
	D3a. (X8)	Branch-Circuit OCPD	CMP-2 to Review
	D3a.	Overcurrent Protection	CMP-2 to Review
	D3a. (X2)	Branch-Circuit OCPD	CMP-2 to Review

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-3			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
3	**Article 100**		
	Fault Managed Power.	Overcurrent protection	Fine as is
	Fire Alarm Circuit	Overcurrent device	overcurrent protective device (OCPD)
3	**Article 300**		
	300.5-T	Overcurrent Protection	Fine as is
	300.17(I)	Overcurrent Device	OCPD
	300.28(C)(3). (X5)	Overcurrent Protection	Fine as is
3	**Article 590**		
	590.6(A)	Overcurrent Protection	Fine as is
	590.6(B)	be protected from Overcurrent	shall be provided with overcurrent protection
	590.9. Title	Overcurrent protective device	Fine as is
	590.9(A)	Overcurrent protective devices	OCPDs
	590.9(B) Title	Service Overcurrent protective devices	Fine as is
	590.9(B)	Overcurrent protective devices	OCPDs
3	**Article 721**		
	721.50(A)	Overcurrent	Fine as is
3	**Article 722**		
	722.1	Overcurrent Protection	Fine as is
3	**Article 724**	Class 1	
	724.40(B). (X3)	Overcurrent Devices	OCPDs
	724.40(B). (X2)	Overcurrent Device	OCPD
	724.40(B). (X2)	Overcurrent Protection	Fine as is
	724.43. (X4)	Overcurrent Protection	Fine as is
	724.45	Overcurrent Device	OCPD
	724.45. (X3)	Overcurrent Devices	OCPDs
	724.45(A)	Overcurrent Devices	OCPDs
	724.45(B)	Overcurrent Protection	Fine as is
	724.45(B)	Overcurrent Device	OCPD
	724.45(C). (X2)	Overcurrent protective devices	OCPDs
	724.45(D)	Overcurrent Protection	Fine as is
	724.45(E)	Overcurrent Protection	Fine as is
3	**Article 725**		
	725.1 In	Overcurrent Protection	Fine as is

	725.127	Overcurrent Device	OCPD
3	**Article 760**		
	760.41(B)	Overcurrent protective device	OCPD
	760.41(B)	Overcurrent protection devices	OCPDs
	760.43. (X3)	Overcurrent Protection	Fine as is
	760.45. Title	Overcurrent device	Overcurrent protective device
	760.45	Overcurrent protection devices	OCPDs
	760.45 Ex 1 & 2	Overcurrent Protection	Fine as is
	760.121(B)	Branch-Circuit Overcurrent protective device	OCPD
	760.121(B)	Overcurrent protection devices	OCPDs
	760.127	Overcurrent Protection	Fine as is
	760.127	Overcurrent Device	OCPD
3	**Article 794**		
	794.1	Overcurrent Protection	Fine as is

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-4			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
4	**Article 690**		
	690.2	PV dc Overcurrent protective devices	PV dc OCPDs
	690.8	Overcurrent Device	OCPD and OCPDs
	690.9. Title	Overcurrent Protection	Fine as is
	690.9(A). (X2)	be protected from Overcurrent	shall be provided with overcurrent protection
	690.9(A)(1). Title	Overcurrent Protection	Fine as is
	690.9(A)(1).	Overcurrent protective devices	OCPDs
	690.9(A)(2). Title	Overcurrent Protection	Fine as is
	690.9(A) (2)	be protected from Overcurrent	shall be provided with overcurrent protection
	690.9(A) (2) In	Overcurrent protection	Fine as is
	690.9(A) (2) In	Overcurrent device	OCPD
	690.9(A)(3)	Overcurrent	Fine as is
	690.9(B)	shall be permitted to prevent overcurrent of conductors	Fine as is
	690.9(B)	Overcurrent device	OCPD and OCPDs
	690.9(C)	Overcurrent protective device and Devices	OCPD and OCPDs
	690.31(E)	Overcurrent protective devices	OCPDs
	690.45	Overcurrent protective device	OCPD
	690.45	Overcurrent Device	OCPD
4	**Article 692**		
	692.8. Title	Overcurrent Device	Overcurrent Protective Devices
	692.8	Overcurrent protective device	OCPDs
	692.9	Overcurrent Protection	Fine as is
	692.9	Overcurrent Devices	OCPDs
4	**Article 694**		
	694.7(D)	Overcurrent Device	OCPD
	694.12(B). Title	Overcurrent Device	Overcurrent Protective Device
	694.12(B)(2). Title	Overcurrent Devices	Overcurrent Protective Devices
	694.12(B)(2)	Overcurrent Devices	OCPDs
	694.15	Overcurrent Protection	Fine as is
	694.15	Overcurrent Devices	OCPDs
	694.15 In	Overcurrent Protection	Fine as is
	694.15(B)(1)	Overcurrent Protection	Fine as is
	694.15(C)	Overcurrent Devices	OCPDs

4	Article 705		
	705.11(C). Title	Overcurrent Protection	Fine as is
	705.11(C)	be protected from overcurrent	have overcurrent protection
	705.11(C)(1). (1) (2) (3)	Overcurrent protective device	OCPD
	705.11(C)(2)	Overcurrent protection devices	OCPDs
	705.12(A)(2). (X4)	Overcurrent Device	OCPD
	705.12(A)(3)	Overcurrent Devices	OCPDs
	705.12(B)	(Multiple) Overcurrent Device and (s)	OCPD. And OCPDs
	705.12(B)	(Warning labels) Overcurrent Device and (s)	Overcurrent Protective Device and Devices
	705.28(B)Ex.1	Overcurrent Devices	OCPDs
	705.28(B)Ex.3	Overcurrent Device	OCPD
	705.30. Title	Overcurrent Protection	Fine as is
	705.30(A). (X2)	Overcurrent Protection	Fine as is
	705.30(A)	Overcurrent Devices	OCPDs
	705.30.(C)	Overcurrent Devices	OCPDs
	705.30.(F)	Overcurrent Protection	Fine as is
	705.70.	Overcurrent Devices	OCPDs
	705.70.	Overcurrent Protection	Fine as is

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-5			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
5	**Article 100**		
	Ground-Fault Current Path, Effective	overcurrent protective device	overcurrent protective device (OCPD)
	Ground-Fault Protection of Equipment	overcurrent device	overcurrent protective device (OCPD)
5	**Article 200**		
	200.10(E)	overcurrent device	OCPD
5	**Article 250**		
	250.4(A)(5). Title	Overcurrent protective Device	Fine as is
	250.4(A)(5)	Overcurrent Device	OCPD
	250.4(B)(4)	Overcurrent Devices	OCPDs
	250.30(A)(1)	Overcurrent Device	OCPD
	250.30(A)(1)	Overcurrent Devices	OCPDs
	250.32(B)(2). (X4)	Overcurrent Protection	Fine as is
	250.32(C)(2). (X4)	Overcurrent Protection	Fine as is
	250.35(B)	Overcurrent Protection	Fine as is
	250.36(D)	Overcurrent Device	Fine as is
	250.36(E)(1)	Overcurrent Device	OCPD
	250.102(B)(2)	Overcurrent Protection	Fine as is
	250.102(D). (X3)	Overcurrent Devices	OCPDs
	250.118(A)(5)	Overcurrent Devices	OCPDs
	250.118(A)(6)	Overcurrent Devices	OCPDs
	250.118(A)(7)	Overcurrent Devices	OCPDs
	250.122(C)	Overcurrent Device	OCPD
	250.122(F)(1). (X3)	Overcurrent protective device	OCPD
	250.122(G)	Overcurrent Device	OCPD
	250.142. (X2)	Overcurrent Device	OCPD
	250.148	Overcurrent Device	OCPD
	250.164	Overcurrent Device	OCPD
	250.166	Overcurrent Protection	Fine as is
	250.169	Overcurrent Devices	OCPD
5	**Article 270**		
	270.4(A)(5)	Overcurrent Device	OCPD
	270.4(B)(4)	Overcurrent Devices	OCPDs
	270.30(A)(1)	Overcurrent Devices	OCPDs

	270.32(B)(2). (X4)	Overcurrent Protection	Fine as is
	270.32(C)(2). (X4)	Overcurrent Protection	Fine as is
	270.35(B)	Overcurrent Protection	Fine as is
	270.35(B)	Overcurrent protective device	OCPD
	270.36(D)	Overcurrent Device	OCPD
	270.36(E)	Overcurrent Devices	OCPDs
	270.102(C)(2)	Overcurrent Protection	Fine as is
	270.102(D)	Overcurrent Device	OCPDs
	270.114(C)(3)	Overcurrent setting	CMP to review Language based on new terms
	270.118	Overcurrent Devices	OCPDs
	270.142	Overcurrent Devices	OCPDs
	270.148(B)	Overcurrent Device	OCPD
	270.164(B)	Overcurrent Device	OCPD
	270.166(A)	Overcurrent Protection	Fine as is
	270.169	Overcurrent Devices	OCPDs

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-6			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
6	**Article 310**		
	310.10(G).	Overcurrent Protection	Fine as is
	310.15(A)	Overcurrent Protection	Fine as is
	310.16-T	Overcurrent Protection	Fine as is
	310.17-T	Overcurrent Protection	Fine as is
6	**Article 335**		
	335.90.	Overcurrent Protection	Fine as is
6	**Article 382**		
	382.4	Supplementary Overcurrent Protection	Supplementary Overcurrent Protective Device
6	**Article 400**		
	400.16	Overcurrent Protection	Fine as is
	400.16	protected against Overcurrent	shall be provided with overcurrent protection
6	**Article 402**		
	402.14 (X2)	Overcurrent Protection	Fine as is

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-7			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
7	**Article 100**		
	Service Equipment, Mobile Home	overcurrent protective devices	overcurrent protective devices (OCPDs)
7	**Article 545**		
	545.24	Branch-circuit overcurrent protective device	Branch-circuit OCPD
	545.24(B) Title	Branch Circuit Overcurrent Protection Device	Overcurrent protective devices
	545.24(B)	a Branch Circuit Overcurrent Protective Device	an OCPD
7	**Article 547**		
	547.41(A)(6). (X2)	Overcurrent Protection	Fine as is
	547.41(B)	Overcurrent Protection	Fine as is
	547.42	Overcurrent Protection	Fine as is
7	**Article 550**		
	550.11(B). Title	Branch-Circuit protective equipment	Branch-Circuit Overcurrent Protection
	550.11(B)	Overcurrent Protection	Fine as is
	550.11(B)	Branch-Circuit Overcurrent Devices	OCPDs
	550.11(B)	Overcurrent protection size	OCPD rating
	550.15(E)	Branch-circuit overcurrent protective device	OCPD
	550.32	Overcurrent Protection	Fine as is
7	**Article 551**		
	551.31(A)	Overcurrent protective device	OCPD
	551.31(C)	Overcurrent protective device	OCPD
	551.31(D)	Overcurrent Protection	Fine as is
	551.42	Overcurrent Protection	Fine as is
	551.43. Title	Branch-Circuit protection	Branch-Circuit Overcurrent Protection
	551.43(A)	Branch Circuit Overcurrent Devices	Branch-Circuit OCPDs
	551.43(A)(3)	Overcurrent Protection	Fine as is
	551.45(C)	Overcurrent protective device	OCPD
	551.47(Q)	Overcurrent protective device	OCPD
	551.47(R)	Overcurrent Protection	Fine as is
	551.47(S)	Overcurrent Protection	Fine as is
	551.74	Overcurrent Protection	Fine as is
7	**Article 552**		
	552.10.(E) Title	Overcurrent Protection	Fine as is
	552.10(E)(1)	Overcurrent protective devices	OCPDs

	T-552.10(E)(1)	Overcurrent Protection	Fine as is
	552.10(E)(4). (X2)	Overcurrent protective device	OCPD
	552.42(A)	Branch Circuit Overcurrent Devices	OCPDs
	552.42(A)	Overcurrent Protection	Fine as is
	552.45(C)	Overcurrent protective device	OCPD
	552.46(A) IN	Overcurrent Protection	Fine as is
	552.47(P)	Overcurrent protective device	OCPD
	552.47(Q)	Overcurrent Protection	Fine as is
7	**Article 555**		
	555.53	Overcurrent protective device	OCPD
7	**Article 675**		
	675.6	Branch Circuit Overcurrent Protective Device	OCPD
	675.7	Branch Circuit Overcurrent Protective Devices	OCPDs
	675.8	Overcurrent Protection	Fine as is
7	**Article 682**		
	682.15(B)	Feeder Overcurrent protective device	Feeder OCPD

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-8			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
8	**Article 312**		
	312.11. Title	Overcurrent Devices	Overcurrent Protective Device
	312.11	Overcurrent Devices	OCPDs
	312.11(A). (X3)	Overcurrent Device	OCPDs
	312.11(B)	Overcurrent Devices	OCPDs
	312.11(B)(1)	Overcurrent Device	OCPD
8	**Article 366**		
	366.12	Overcurrent Devices	OCPDs
	366.56(D)	Overcurrent Protection	Fine as is
8	**Article 368**		
	368.17(A). Title	Overcurrent Protection	Fine as is
	368.17	Overcurrent Protection	Fine as is
	368.17(A)	Protected against Overcurrent	shall be provided with overcurrent protection
	368.17(B). (X2)	Overcurrent Protection	Fine as is
	368.17(B)	Overcurrent Device	OCPD
	368.17(C)	Overcurrent Devices	OCPDs
	368.17(C)Ex.2	Branch-Circuit Overcurrent Device	Branch-Circuit OCPD
	368.17(C)Ex.3	Overcurrent Device	OCPD
	368.17(C)Ex.4	Branch-Circuit overcurrent plug-in device	CMP to review Language based on new terms
	368.17(D). Title	Overcurrent Protection	Fine as is
	368.17(D)	Protected against Overcurrent	shall be provided with overcurrent protection
8	**Article 370**		
	370.23. Title	Overcurrent Protection	Fine as is
	370.23	Protected against Overcurrent	shall be provided with overcurrent protection
8	**Article 371**		
	371.17. Title	Overcurrent Protection	Fine as is
	371.17	Overcurrent Protection	Fine as is
	371.17 (A)-(C). Titles	Overcurrent Protection	Fine as is
	371.17(A)-(C)	Protected against Overcurrent	shall be provided with overcurrent protection
	371.17(D)	Protected against Overcurrent	shall be provided with overcurrent protection
	371.17(F)	Overcurrent	shall be provided with overcurrent protection
	371.17(G)	Overcurrent Protection	
	371.17(G)Ex	Overcurrent Protection	Fine as is
	371.17(G)Ex	Overcurrent Device	OCPD

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-9			
CMP	NEC Section (using First Draft of 2026 NEC)	Current Language	"New" Language
9	**Article 265**		
	265.18	Overcurrent Device	OCPD
	265.20.	Overcurrent Protection	Fine as is
	265.20.	Overcurrent protective devices	OCPDs
	265.20.	Overcurrent Devices	OCPDs
9	**Article 266**		
	266.1	Overcurrent Protection	Fine as is
	266.5	Overcurrent Protection	Fine as is
	266.5	Protected against overcurrent	shall be provided with overcurrent protection
	266.5	Overcurrent Device	OCPD
9	**Article 268**		
	268.2. (X2)	Overcurrent Protection	Fine as is
	268.70(F)	Overcurrent Devices	OCPDs
	268.82. (X4)	Overcurrent Protection	Fine as is
	Art. 268 Part VII	Overcurrent Protection	Fine as is
	268.90.	Overcurrent Device	OCPD
	268.90.	Overcurrent Devices	OCPDs
	268.91	Overcurrent Device	OCPD
	268.92	Overcurrent Devices	OCPDs
	268.93	Overcurrent Device	OCPD
9	**Article 450**		
	450.5 (previously 450.3). (X3)	overcurrent protection	Fine As Is
	450.5(A) and Table. (X3)	overcurrent protection	Fine As Is
	Table 450.5(A) Footnote 2. (X4)	overcurrent device	OCPD
	450.5(B)	overcurrent protection	Fine As Is
	Table 450.5(B) and Table (X2)	overcurrent protection	OCPD
	Table 450.5(B) Footnote 2. (X3)	overcurrent device	OCPD
	Table 450.5(B) Footnote 3	overcurrent protection	OCPD
	450.6(A) Title	overcurrent protection	Fine As Is
	450.6(A) (X3)	overcurrent device	OCPD
	450.6(A) Exception	overcurrent device	OCPD
	450.7(A)(1). (X2)	overcurrent protection	OCPD
	450.7(A)(2). Title	overcurrent protection	Fine As Is

	450.7(A)(2)	overcurrent sensing device	Fine As Is
		overcurrent protection	OCPD
		overcurrent device	OCPD
		branch or feeder protective devices	branch or feeder OCPDs
	450.7(A)(3)	overcurrent device	OCPD
	450.7(B)(2)	overcurrent protection	Fine As Is
	450.7(B)(2)(a)	overcurrent protective device	OCPD
	450.7(B)(2)(b)	overcurrent protection	OCPD
	450.7(B)(2)(b)	overcurrents	Fine As Is
	450.7(B)(2)(b) Exception	overcurrent device	OCPD
	450.8(A). (X2)	overcurrent protection	Fine As Is
	450.8(A)(1)	overcurrent protection	Fine As Is
	450.8(A)(2)	overcurrent protection	Fine As Is
	450.8(A)(3)	protective device	OCPD
	450.8(A)(4)(a)	protective device	OCPD
	450.8(B). Title	Overcurrent Protection	Fine As Is
	450.8(B)	overcurrent device	OCPD
	450.9	overcurrent protection	Fine As Is
	450.9	protective devices (2x)	OCPDs
	450.23(A)(1)(d) Informational Note	overcurrent protection	OCPD
	450.23(B)(1) Informational Note 2	overcurrent protection	OCPD
9	**Article 495**		
	495.62. Title	Overcurrent Protection	Fine As Is
	495.72	Overcurrent Relay	Fine As Is

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-10			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
10	**Article 100**		
	Circuit Breaker	Overcurrent	Fine as is
	Coordination, Selective. (Selective Coordination)	Overcurrent condition	Fine as is
	Coordination, Selective. (Selective Coordination)	overcurrent protective devices	overcurrent protective devices (OCPDs)
	Coordination, Selective. (Selective Coordination)	overcurrents	Fine as is
	Coordination, Selective. (Selective Coordination)	overcurrent protective device	overcurrent protective device (OCPD)
	Current Limiting (as applied to overcurrent protection devices)	overcurrent protection devices	overcurrent protective devices (OCPDs)
	Feeder	final branch-circuit overcurrent protective device	overcurrent protective device (OCPD)
	Fuse	overcurrent protective device	overcurrent protective device (OCPD)
	Fuse	overcurrent	Fine as is
	Fuse, Electronically Actuated	overcurrent protective device	overcurrent protective device (OCPD)
	Fuse, Electronically Actuated	overcurrent	Fine as is
	Overcurrent	Overcurrent protection	Fine as is
	Overcurrent Protective Device, Branch-Circuit	Revise with the term Overcurrent Protective Device. (OCPD)	
	Overcurrent **Protective** Device, Supplementary (need to Revise term with acronym)	overcurrent protective device	overcurrent protective device (OCPD)
	Panelboard	overcurrent devices	overcurrent protective devices (OCPDs)
	Surge-Protective Device (SPD). (X2)	overcurrent device. (X2)	overcurrent protective device (OCPD)
	Switchboard	overcurrent	overcurrent protective devices (OCPDs)
	Tap Conductor	Overcurrent protection	Fine as is
10	**Article 215**		
	215.1	Overcurrent protection	Fine as is
	215.4(A)(1)Ex.1	overcurrent devices protecting the feeders	feeder OCPD
	215.4(A)(1)Ex.3	overcurrent device	OCPD
	215.5 Title	Overcurrent protection	Fine as is
	215.5	Feeders shall be protected against overcurrent	Feeders shall be provided with overcurrent protection in accordance with Article 240, Parts I
	215.5	overcurrent device	OCPD
	215.5Ex	overcurrent device protecting the feeders	feeder OCPDs
	215.5Ex	overcurrent device	OCPD

	215.18(B)	branch circuit overcurrent devices	OCPDs
10	**Article 225**		
	225.40. Title	Overcurrent protective devices	Fine as is
	225.40.	feeder overcurrent device (x2)	feeder OCPD
	225.40.	branch circuit overcurrent devices	Branch circuit OCPDs
	225.42(B)	branch circuit overcurrent devices	OCPDs
10	**Article 230**		
	230.7 Ex.2	Overcurrent protection	Fine as is
	230.42(A)(1)	overcurrent device (X3)	OCPD
	230.82(6)	Overcurrent protection	Fine as is
	230.82(7)	Overcurrent protection	Fine as is
	230.82(8)	Overcurrent protection	Fine as is
	230.82(9)	Overcurrent protection	Fine as is
	230.82(10)	Overcurrent protection	Fine as is
	230 Part VII	Overcurrent protection	Fine as is
	230.90(A)	overcurrent device	OCPD
	230.90(A)Ex.3	overcurrent device	OCPD
	230.90(B)	overcurrent device	OCPD
	230.91	overcurrent device (X2)	OCPD
	230.92	overcurrent device (X4)	OCPDs and OCPD
	230.93	overcurrent device	OCPD
	230.94	overcurrent device (X3)	OCPD
	230.94	Overcurrent protection (X2)	Fine as is
	230.95(A)	overcurrent device	OCPD
	230.95(B)	overcurrent device	OCPD
10	**Article 240**		
	240	Overcurrent Protection	Fine as is
	240.1 (X3)	Overcurrent protection	Fine as is
	240.2	branch-circuit Overcurrent protective devices	~~branch-circuit~~ Overcurrent protective devices
	240.4. Title	Protection of Conductors	Overcurrent Protection of Conductors
	240.4	Protected against overcurrent	shall be provided with overcurrent protection in accordance with
	240.4(B). Title	Overcurrent devices	Overcurrent protective Devices
	240.4(B)	Overcurrent device	OCPD
	240.4(B)	Overcurrent protective device	OCPD

	240.4(C). Title	Overcurrent devices	Overcurrent protective Devices
	240.4(C). (X2)	Overcurrent device.	OCPD
	240.4(D)	Overcurrent Protection	Fine as is
	240.4(D)(1)	Overcurrent protection	Fine as is
	240.4(D)(1)(2)		(a) OCPDs in accordance with 240.7 shall be marked for use with 18 AWG copper conductor (b) Delete (c) change to (b)
	240.4(D)(2)	Overcurrent protection	Fine as is
	240.4(D)(2)(2)		(a) OCPDs in accordance with 240.7 shall be marked for use with 16 AWG copper conductor (b) Delete (c) change to (b)
	240.4(D)(3)	Overcurrent protection	Fine as is
	240.4(D)(3)(2)		~~(a) Fuses and circuit breakers in accordance with 240.7 marked for use with 14 AWG copper-clad aluminum conductor~~ ~~(b) Delete~~
	240.4(D)(3)(2)		OCPDs in accordance with 240.7 shall be marked for use with 14 AWG copper-clad aluminum conductor
	240.4(E)	Protected against overcurrent	shall be permitted to have overcurrent protection in accordance with the following
	240.4(F)	Overcurrent protection	Fine as is
	240.4(F)	Overcurrent protective device	OCPD
	240.4(G). (X2)	Overcurrent protection	Fine as is
	240.4(H)	Protected against overcurrent	shall be provided with overcurrent protection in accordance with
	240.5	Protected against overcurrent	shall be provided with overcurrent protection in accordance with
	240.5(A)	Overcurrent device	OCPD
	240.5(A)	Protected against overcurrent	Fixture wires shall be provided with overcurrent protection in accordance with
	240.5(A)	Supplementary overcurrent protection	Fine as is
	240.5(B) Title	Branch-circuit overcurrent device.	Branch-Circuit Overcurrent protective Devices

	240.9	Protection of conductors against overcurrent	Fine as is
	240.10. Title	Supplementary Overcurrent protection	Fine as is
	240.10.	Supplementary overcurrent protection	Fine as is
	240.10.	Branch-Circuit overcurrent devices	OCPDs
	240.10.	Supplementary overcurrent devices	Supplementary OCPDs
	240.11. (X2)	Feeder overcurrent protective devices.	Feeder OCPDs
	240.11. (X2)	Service overcurrent protective device.	Service OCPD
	240.15(A). Title	Overcurrent device	Overcurrent protective device required
	240.15(A)	Overcurrent device	OCPD
	240.15(A)	Overcurrent trip. Overcurrent relay	Fine as is
	240.15(B) Title	Overcurrent device	Circuit breaker as Overcurrent protective device
	240.16	Branch circuit overcurrent protective devices	OCPDs
	240.21	Overcurrent Protection	Fine as is
	240.21	overcurrent protective device	OCPD
	240.21 (A)	Overcurrent Protection	Fine as is
	240.21 (B)	Overcurrent Protection	Fine as is
	240.21 (B) (1) (1) (b)	Overcurrent device(s)	OCPDs
	240.21 (B) (1) (1) (b)	overcurrent protective device	OCPD
	240.21 (B)(1) (1) (4)	Overcurrent device	OCPD
	240.21 (B) (1)(1) (4) In	Overcurrent Protection	Fine as is
	240.21 (B) (2) (1)	Overcurrent device	OCPD
	240.21 (B) (2) (2)	Overcurrent devices	OCPDs
	240.21 (B) (3) (1)	Overcurrent device	OCPD
	240.21 (B) (3) (2)	Overcurrent device	OCPD
	240.21 (B) (4) (3)	Overcurrent device	OCPD
	240.21 (B) (4) (4)	Overcurrent device	OCPD
	240.21 (B) (4) (4)	Overcurrent devices	OCPDs
	240.21 (B) (5) (2)	Overcurrent device	OCPD
	240.21 (B) (5) (2)	Overcurrent devices	OCPDs
	240.21 (B) (5) (3)	Overcurrent device	OCPD
	240.21 (C). (X2)	Overcurrent Protection	Fine As Is
	240.21 (C) (1). Title	Title change	Overcurrent Protective Device
	240.21 (C) (1)	"…protected by overcurrent protection…"	Fine As Is
	240.21 (C) (1)	Overcurrent protective device	OCPD
	240.21 (C) (2) (1) (b)	Overcurrent device(s)	OCPDs

	240.21 (C) (2) (1) (b)	Overcurrent device	OCPD
	240.21 (C) (2) (4)	Overcurrent device	OCPD
	240.21 (C) (2) (4)	Overcurrent device	OCPD
	240.21 (C) (2) (4)	Overcurrent protection	Fine as is
	240.21 (C) (3) (2)	Overcurrent devices	OCPDs
	240.21 (C) (3) (3)	Overcurrent devices	OCPDs
	240.21 (C) (4) (2)	Overcurrent device	OCPD
	240.21 (C) (4) (2)	Overcurrent devices	OCPDs
	240.21 (C) (4) (3)	Overcurrent device	OCPD
	240.21 (C) (5)	Overcurrent Protection	Fine As Is
	240.21 (C) (6) (1)	Overcurrent device	OCPD
	240.21 (D)	Overcurrent devices	OCPDs
	240.21 (E)	.shall be permitted to be protected against overcurrent.	"..shall be permitted to have overcurrent protection.."
	240.21 (F)	.shall be permitted to be protected against overcurrent.	"..shall be permitted to have overcurrent protection.."
	240.21 (H). (X2)	Overcurrent Protection	Fine As Is
	240.22. (X2)	Overcurrent device	OCPD
	240.24(A)	Supplementary overcurrent protection	Fine as is
	240.24(A). (X4)	Overcurrent protective devices	OCPDs
	240.24(B)	Overcurrent devices	OCPDs
	240.24(B)(1). Title	Feeder overcurrent protective devices	Feeder OCPDs
	240.24(B)(1)	Service overcurrent protective devices	Service OCPDs
	240.24(B)(2). TITLE	Branch-circuit overcurrent protective device	Fine as is
	240.24(B)(2).	Branch-circuit overcurrent protective device	Branch-Circuit OCPD
	240.24(C)	Overcurrent protective devices	OCPDs
	240.24(D)	Overcurrent protective devices	OCPDs
	240.24(E)	Overcurrent protective devices	OCPDs
	240.24(E)	Supplementary overcurrent protection	Fine as is
	240.24(E) (X2)	Overcurrent protective devices	OCPDs
	240.24(F)	Overcurrent protective devices	OCPDs
	240.30(A)	Overcurrent devices	OCPDs
	240.32	Overcurrent devices	OCPDs
	240.33	Overcurrent devices	OCPDs
	240.86	Overcurrent device	OCPD
	240.86(B)	Overcurrent device	OCPD
	240.86(C)	Overcurrent device	OCPD

	240.87	Overcurrent device	OCPD
	240.90.	Overcurrent protection	Fine as is
	240.91(B). (X2)	Overcurrent device	OCPD
	240.92	Overcurrent device	OCPD
	240.92(A)	~~be protected~~	shall be provided with overcurrent protection
	240.92(C)	Overcurrent protection	Fine as is
	240.92(C)(1)(1)	Overcurrent device	OCPD
	240.92(C)(1)(2)	protective devices	Fine as is
	240.92(C)(1)(3)	Overcurrent devices	OCPDs
	240.92(C)(2)(1)	Overcurrent device	OCPD
	240.92(C)(2)(2) (X3)	Overcurrent devices	OCPDs
	240.92(C)(2)(3)	Overcurrent relaying	Fine as is
	240.92(C)(2)(4)	Overcurrent device	OCPD
	240.92(D)	Overcurrent protection	Fine as is
	240.92(D)(2). (X3)	Overcurrent devices	OCPDs
	240.92(D)(4)	Overcurrent device	OCPD
	240.92(E)	Overcurrent device	OCPD
	240.92(E)	Overcurrent protection	Fine as is
10	**Article 242**		
	242.14(ABC)	Overcurrent device	OCPD
	242.16	Overcurrent protection	Branch-circuit OCPD
10	**Article 404**		
	404.5	Overcurrent Devices	OCPDs
10	**Article 408**		
	408.4(A)	Overcurrent device	OCPD
	408.6 (X2)	Overcurrent protection devices	OCPDs
	408.36. Title	Overcurrent protection	Fine as is
	408.36. (X2)	Overcurrent protective device	OCPD
	408.36. (X3)	Overcurrent devices	OCPDs
	408.36(A)	Overcurrent protection	Fine as is
	408.36(B)	Overcurrent protection	Fine as is
	408.36(C)	Overcurrent device	OCPD
	408.36(D)	Overcurrent protection devices	OCPDs
	408.52	Overcurrent devices	OCPDs
	408.54	Overcurrent devices	OCPDs

	408.55	Overcurrent devices	OCPDs

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-11			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
11	**Article 409**		
	409.21. TITLE	Overcurrent Protection	Fine as is
	409.21(A)	Overcurrent Protection	Fine as is
	409.21(B)	Protection	Overcurrent protection
	409.21(B)	overcurrent protective device	OCPD
	409.21(B)	Overcurrent Protection	Fine as is
	409.21(C). (X2)	overcurrent protective device	OCPD
	409.104	Overcurrent Devices	OCPDs
11	**Article 430**		
	430.10(A) In.	Overcurrent Device	OCPD
	430.22(G)(1)(1)	Overcurrent Protection	Fine as is
	430.22(G)(1)(2)	Overcurrent Protection	Fine as is
	430.22(G)(2)(1)	Overcurrent Protection	Fine as is
	430.22(G)(2)(2)	Overcurrent Protection	Fine as is
	430.28	Branc-Circuit protective device	OCPD
	430.28	Overcurrent Device	OCPD
	430.51	Overcurrent	Fine as is
	430.53(C)(5)	Overcurrent Protection	Fine as is
	430.55	Overcurrent Protection	Fine as is
	430.61	Overcurrents	Fine as is
	430.62(A)Ex.2	Feeder Overcurrent protective device	Feeder OCDP
	430.62(A)Ex.2	Overcurrent Protection	Fine as is
	430.62(B)	Feeder Overcurrent protective device	Feeder OCDP
	430.63Ex.	Feeder Overcurrent device	Feeder OCDP
	430.63Ex.	Overcurrent Protection	Fine as is
	430.72. Title	Overcurrent Protection	Fine as is
	430.72(A)	protected against overcurrent	shall be provided with overcurrent protection in accordance with
	430.72(A)	Branch-circuit overcurrent protective devices	OCPDs
	430.72(A)	protected against overcurrent	shall be provided with overcurrent protection in accordance with
	430.72(B). (X2)	Overcurrent Protection	Fine as is
	430.72(B)	Overcurrent Device	OCPD

	430.72(B)	Overcurrent Protection	Fine as is
	430.72(B)(1) (X3)	Overcurrent Protection	Fine as is
	430.72(B)(2) Title	Branch-circuit overcurrent protective device	Fine as is
	430.72(B)(2) (X2)	protective devices	OCPDs
	430.72(C)Ex.	Overcurrent Protection	Fine as is
	430.72(C)(3)	Overcurrent Devices	OCPDs
	430.72(C)(4)	Overcurrent Device	OCPD
	430.72(C)(5)	Protection	Overcurrent protection
	430.87	Overcurrent Device	OCPD
	430.94. (X2)	Overcurrent Protection	Fine as is
	430.94. (X3)	Overcurrent protective device	OCPD
	430.109(A)(7)	Overcurrent protection	Fine as is
	430.109(B)	Branch-circuit overcurrent device	branch-circuit OCPD
	430.111(A). (X2)	Overcurrent Device	Fine as is
	430.112 Ex.	Branch circuit protective device	Suggest CMP to Review
	430.206. Title	Overcurrent protection	Fine as is
	430.206(B)(2)	considered to have Overcurrent	Overload
	430.206(C)	Fault-Current protection	Suggest CMP to Review
	430.207	Overcurrent (overload)Relays	Fine as is
	430.207	Overcurrent Relays	Fine as is
11	**Article 440**		
	440.21	Overcurrent	Fine as is
	440.21	Overcurrent Protection	Fine as is
	440.22(B)(2)Ex.	Overcurrent device	OCPD
	440.52(B)	Overcurrent	shall be provided with overcurrent protection
11	**Article 460**		
	460.9. Title	Overcurrent Protection	Fine As Is
	460.9. (X3)	Overcurrent Device	OCPD
	460.25	Overcurrent Protection	Fine As Is
	460.28(B)	Overcurrent Device	OCPD

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-12			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
12	**Article 610**		
	610. Part V	Overcurrent Protection	Fine as is
	610.41(A)	Overcurrent Devices	OCPDs
	610.43(A)(1)	Branch Circuit Overcurrent Device	OCPD
	610.53 Title	Overcurrent Protection	Fine as is
	610.53	be protected from Overcurrent	shall be provided with overcurrent protection
	610.53	Overcurrent Devices	OCPDs
	610.53(B)	Branch Circuit Overcurrent Devices	OCPDs
12	**Article 620**		
	620.12(A)(4)	Overcurrent Protection	Fine as is
	620.22(A)(2) Title	Overcurrent protective device	Fine as is
	620.22(A)(2)	Overcurrent Device protecting	branch-circuit OCPD
	620.22(A)(2)	Overcurrent Device	OCPD
	620.22(B)	Overcurrent Device protecting	branch-circuit OCPD
	620.22(B)	Overcurrent Device	OCPD
	620.25 Title	Overcurrent Devices	Overcurrent Protective Devices
	620.25. (X2)	Overcurrent Devices	OCPDs
	620.53	Overcurrent protective device	OCPD
	620.54	Overcurrent protective device	OCPD
	620.55	Overcurrent protective device	OCPD
	Art 620 Part VII	Overcurrent Protection	Fine as is
	620.61	Overcurrent Protection	Fine as is
	620.61(A). (X2)	be protected against Overcurrent	shall be provided with overcurrent protection
	620.62(A)	Overcurrent protective devices, (OCPD)	OCPDs
	620.62(B)	OCPDs	Fine as is
	620.62(C)	OCPDs. And. Overcurrent Devices	Fine as is. And. OCPDs
	620.62	Overcurrent protective devices	OCPDs
	620.65. (X3)	Overcurrent Devices	OCPDs
12	**Article 625**		
	625.60(C). (X4)	Overcurrent Protection	Fine as is
12	**Article 627**		
	627.41	Overcurrent Protection	Fine as is
	627.41(A)	Overcurrent Protection	Fine as is

	627.41(B)	Overcurrent Devices	OCPDs
12	**Article 630**		
	630.12	Overcurrent Protection	Fine as is
	630.12	Overcurrent Device	OCPD
	630.12(A). (X2)	Overcurrent Protection	Fine as is
	630.12(A). (X5)	Overcurrent Device	OCPD
	630.13	Overcurrent Protection	Fine as is
	630.32	Overcurrent Protection	Fine as is
	630.32	Overcurrent Device	OCPD
12	**Article 640**		
	640.9(C)	Overcurrent Protection	Fine as is
	640.22	Overcurrent protection devices	OCPDs
	640.22	Overcurrent Devices	OCPDs
	640.43	Overcurrent protection devices	OCPDs
12	**Article 645**		
	645.27	Overcurrent protective devices, (OCPD)	OCPDs
	645.27	Overcurrent protective devices	OCPDs
12	**Article 646**		
	646.7. (X11)	Overcurrent Protection	Fine as is
12	**Article 647**		
	647.5	Overcurrent Protection	Fine as is
12	**Article 650**		
	650.9	Overcurrent Protection	Fine as is
	650.9	Overcurrent Device	OCPD
12	**Article 660**		
	660.7	Overcurrent Protection	Fine as is
	660.7(A)	Overcurrent protective devices	OCPDs
	660.7(B)	Overcurrent Devices	OCPDs
	660.7(B)	Overcurrent Protection	Fine as is
	660.9	Overcurrent Devices	OCPDs
12	**Article 665**		
	665.24	Overcurrent Protection	Fine as is
12	**Article 668**		
	668.4(C)(2)	Overcurrent Protection	Fine as is
	668.21	Overcurrent Protection	Fine as is

	668.21	Overcurrent Device	OCPD
12	**Article 669**		
	669.9	Overcurrent Protection	Fine as is
	669.9	be protected from Overcurrent	shall be provided with overcurrent protection
12	**Article 670**		
	670.1	Overcurrent Protection	Fine as is
	670.4(B). (X3)	Overcurrent Protection	Fine as is
	670.5. (X4)	Overcurrent Protection	Fine as is
	670.5(C). (X2)	Overcurrent protective device	OCPD
12	**Article 685**		
	685.10.	Overcurrent Devices	OCPDs

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-13			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
13	**Article 100**		
	Emerg.Power Supply Systems (EPSS)	overcurrent protection devices	overcurrent protective devices (OCPDs)
	Transfer-Switch B-C Emerg. Ltg.	branch-circuit overcurrent device	branch-circuit overcurrent protective device (OCPD)
13	**Article 130**		
	130.80(C)	overcurrent devices	OCPDs
	130.80(C)	branch-circuit overcurrent device	OCPD
13	**Article 445**		
	445.11	Overcurrent protective Relay	Fine as is
	445.12. Title	Overcurrent Protection	Fine as is
	445.12(A)	Overcurrent protective means	Overcurrent protection means
	445.12(B)	Overcurrent Protection	Fine as is
	445.12(B) (X2)	Overcurrent Device	OCPD
	445.12(C)	Overcurrent Device	OCPD
	445.12(D)	Overcurrent Devices	OCPDs
	445.12(E). (X3)	Overcurrent Devices	OCPDs
	445.13(A). (X2)	Overcurrent Protection	Fine as is
	445.13(B). Title	Overcurrent protection	Fine as is
	445.13(B).	Overcurrent protective device	OCPD
	445.13(B)	Overcurrent Relay	Fine as is
13	**Article 455**		
	455.7	Overcurrent Protection	Fine As Is
	455.7	protected from Overcurrent	shall be provided with overcurrent protection in accordance with
	455.7(A)	Overcurrent Protection	Fine As Is
	455.7(B)	Overcurrent Protection	Fine As Is
13	**Article 480**		
	480.4(B) IN.2	Overcurrent Protection	Fine As Is
	480.6. (X2)	Overcurrent Protection	Fine As Is
	480.7	Overcurrent Device	OCPD
13	**Article 695**		
	695.4(C)	Overcurrent protective devices	OCPDs
	695.4(H). Title	Overcurrent Device Selection	Overcurrent Protective Device Selection
	695.4(H)	Overcurrent Devices	OCPDs

	695.5	Overcurrent Device	OCPD
	695.5	Overcurrent protective devices	OCPDs
	695.5	Overcurrent Protection	Fine as is
	695.6	Overcurrent protective devices	OCPDs
	695.6	Overcurrent Devices	OCPD
	695.6	Overcurrent Protection	Fine as is
	695.7(A)(2)	Overcurrent Devices	OCPDs
	695.7	Overcurrent Protection	Fine as is
13	**Article 700**		
	700.4(F)(8)	Overcurrent protective devices, (OCPD)	OCPDs
	700.6(E)	Overcurrent protective device	OCPD
	700.10(B). (X6)	Overcurrent Protection	Fine as is
	700.10(B)(6)(b)(ii)	Overcurrent protective device	OCPD
	700.10(B)(6)(e)	Overcurrent protective devices	OCPDs
	Art. 700 Part VI	Overcurrent Protection	Fine as is
	700.30.	Branch-circuit overcurrent devices	OCPDs
	700.32(A)	Overcurrent protective devices, (OCPDs)	OCPDs
	700.32(A) In	Overcurrent Protection	Fine as is
	700.32(C)	Overcurrent Devices	OCPDs
13	**Article 701**		
	701.6(C)	Overcurrent protective device	OCPD
	701.10(B)(1). (X5)	Overcurrent Protection	Fine as is
	701.10(B)(1)	Overcurrent protective device	OCPD
	Art. 701. Part IV	Overcurrent Protection	OCPDs
	701.30.	Branch-Circuit Overcurrent devices	Branch-Circuit OCPDs
	701.32(A). (X2)	Overcurrent protective devices, OCPDs	OCPDs
	701.32(B). (X3)	OCPDs	Fine as is
	701.32(C). (X2)	OCPDs	Fine as is
	701.32(C)Ex	Overcurrent Devices	OCPDs
	701.32(C) In 2	OCPD and OCPDs	Fine as is
13	**Article 702**		
	702.5(C)	Overcurrent protective device	OCPD
13	**Article 706**		
	706.15(E)(1)	Overcurrent Device	OCPD
	706.30(B)	Overcurrent Devices	OCPDs

	706.31 Title	Overcurrent Protection	Fine as is
	706.31(A)	shall be protected at the source from overcurrent.	shall be provided with overcurrent protection at the source
	706.31(A)	shall be protected from overcurrent.	shall be provided with overcurrent protection
	706.31(A) In	Overcurrent Device	OCPD
	706.31(B). Title	Overcurrent Device	Overcurrent Protective Device
	706.31(B)	Overcurrent protective devices	OCPDs
	706.31(B)	Overcurrent devices	OCPDs
	706.31(C)	Overcurrent protective devices	OCPDs
	706.31(E)	Overcurrent Protection	Fine as is
	706.33(B)(2)	Overcurrent Device	OCPD
13	**Article 708**		
	708.10(B)	Overcurrent Protection	Fine as is
	708.24(E)	Overcurrent protective device	OCPD
	Art. 708. Part IV	Overcurrent Protection	Fine as is
	708.50.	Feeder- and Branch-circuit overcurrent devices	Feeder- and Branch-circuit OCPDs
	708.52(B)	Overcurrent Devices	OCPDs
	708.54(A)	Overcurrent protective devices, (OCPD)	OCPDs
	708.54(A). (B). (C)	OCPDs	Fine as is
	708.54	Overcurrent Devices	OCPDs

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-14			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
14	**Article 500**		
	500.30(A)(2)	Branch Circuit Overcurrent Protection	OCPD
	500.30.	Overcurrent Protection	Fine as is
14	**Article 501**		
	501.105(B)(5)	Overcurrent Protection	Fine as is
	501.125(B)(2)	Motor Overcurrent	Fine as is
14	**Article 502**		
	502.120(A)	Overcurrent Devices	OCPDs
	502.120(B)(1)	Overcurrent Devices	OCPDs
	502.125	Motor Overcurrent	Fine as is
14	**Article 505**		
	505.30(A)(2)	Branch Circuit Overcurrent Protection	OCPD
	505.30.	Overcurrent Protection	Fine as is
14	**Article 506**		
	506.30.	Branch Circuit Overcurrent Protection	OCPD
	506.30.	Overcurrent Protection	Fine as is

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-15			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
15	**Article 100**		
	Bull Switch	Overcurrent protection	Fine as is
15	**Article 517**		
	517.17(B)	Overcurrent protective devices	OCPDs
	517.31(G). (X5)	Overcurrent protective devices	OCPDs
	517.31(G)	Overcurrent	Fine as is
	517.33((C). (X5)	Overcurrent protective devices	OCPDs
	517.42(F)	Overcurrent protective devices	OCPDs
	517.42(F)	Overcurrent	Fine as is
	517.73	Overcurrent Protection	Fine as is
	517.73(A)	Overcurrent protective devices	OCPDs
	517.73(B)	Overcurrent protective devices	OCPDs
	517.73(B)	Overcurrent Protection	Fine as is
	517.74(B)	Overcurrent protective devices	OCPDs
	517.160(A)(2)	Overcurrent Protection	Fine as is
	517.160(A)(2)	Overcurrent protective device	OCPD
	517.160(A)(2)	be protected against Overcurrent	be provided with overcurrent protection
	517.160(A)(3)	Overcurrent protective devices	OCPDs
	517.160(B)(1)	Overcurrent protective devices	OCPDs
15	**Article 518**		
	518.7(A)(1)	Overcurrent Protection	Fine as is
	518.17(A)(1) and (2)	Overcurrent Devices	OCPDs
15	**Article 520**		
	520.9	Branch Circuit Overcurrent Device	OCPD
	520.21	Overcurrent protective devices	OCPDs
	520.25. (X3)	Overcurrent Protection	Fine as is
	520.26	Overcurrent protective devices	OCPD
	520.26. (X3)	Overcurrent Protection	Fine as is
	520.27. (X2)	Overcurrent Device	OCPD
	520.44-T	Overcurrent Devices	OCPD
	520.50(C)	Overcurrent Protection	Fine as is
	520.50.	Branch-circuit overcurrent protective device	OCPDs
	520.52	Overcurrent Protection	Fine as is

	520.53(A)	Overcurrent protective devices	OCPDs
	520.53(D)	Overcurrent Protection	Fine as is
	520.54	Overcurrent Devices	OCPDs
	520.54(D)	Overcurrent Device	OCPD
	520.54(D)(1) and (2)	Overcurrent protective devices	OCPD
	520.54(E)	Overcurrent protective device	OCPD
	520.54(E). (X4)	Overcurrent protection device	OCPD
	520.54(E)	Overcurrent Devices	OCPDs
	520.54(K)	Overcurrent Device	OCPD
	520.68	Overcurrent protective device	OCPD
	520.68(3)	Overcurrent Device	OCPD
	520.68(4)	Overcurrent protective device	OCPD
	520.68(6)	Overcurrent Devices	OCPDs
	520.68(C)	Overcurrent Protection	Fine as is
15	**Article 522**		
	522.10(A)(2). (X3)	Overcurrent Devices	OCPDs
	522.10(A)(2	Overcurrent protective device	OCPD
	522.10(B). (X4)	Overcurrent Devices	OCPDs
	522.23. (X3)	Overcurrent Protection	Fine as is
15	**Article 525**		
	525.12	Overcurrent Device	OCPD
	525.23(B)	Overcurrent Device	OCPD
	525.23(C). (X2)	Overcurrent Protection	Fine as is
15	**Article 530**		
	530.9(A)	Branch-circuit overcurrent device	Branch-circuit OCPD
	530.10(C)	Overcurrent Protection	Fine as is
	530.23 and (A)	Overcurrent Protection	Fine as is
	530.23(B)	Overcurrent protective devices	OCPDs
	530.23(D)	Overcurrent Protection	Fine as is
	530.42	Overcurrent Protection	Fine as is
15	**Article 540**		
	540.11(B)	Overcurrent Devices	OCPDs

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-16			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
16	**Article 830**		
	830.15. (X4)	Overcurrent Protection	Fine as is

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-17			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
17	**Article 422**		
	422.5(C)	Branch-circuit overcurrent protective device	Branch-Circuit OCPD
	422.11. Title	Overcurrent Protection	Fine as is
	422.11	protected against overcurrent	shall be provided with overcurrent protection
	422.11(A)	Overcurrent Protection	Fine as is
	422.11(A)	Branch-circuit overcurrent protective device	Branch-Circuit OCPD
	422.11(B)	Overcurrent Protection	OCPDs
	422.11(C)	Overcurrent Protection	OCPDs
	422.11(D)	Overcurrent protective devices	OCPDs
	422.11(E)	Overcurrent Protection	Fine as is
	422.11(E)(1)	Overcurrent Protection	Fine as is
	422.11(E)(2)	Overcurrent Protection	Fine as is
	422.11(E)(3)	Overcurrent Protection	OCPD
	422.11(E)(3)	Overcurrent Device	OCPD
	422.11(F)(1)	Supplementary Overcurrent Protective Devices	Supplementary OCPDs
	422.11(F)(1)	Overcurrent Protective Devices	OCPDs
	422.11(G)	Overcurrent Protective Devices	OCPDs
	422.13	Overcurrent Protection	Fine as is
	422.31(A)	Branch-circuit overcurrent protective device	Branch-Circuit OCPD
	422.60(A)	Overcurrent Protection	Fine as is
	422.62(B)(1). (X2)	Overcurrent protective device	OCPD
17	**Article 424**		
	424.19	Supplementary Overcurrent Protective Devices	Supplementary OCPDs
	424.19(A)	Supplementary Overcurrent Protection	Fine as is
	424.19(A)	Supplementary Overcurrent Protection	Fine as is
	424.19(A)	Supplementary Overcurrent Protective Device(s)	Supplementary OCPDs
	424.19(B)	Supplementary Overcurrent Protection	Fine as is
	424.22	Overcurrent Protection	Fine as is
	424.22(A)	Overcurrent Protection	Fine as is
	424.22(A)	protected against overcurrent	"..shall be permitted to have overcurrent protection.."
	424.22(B)	Supplementary Overcurrent Protective Device	Supplementary OCPD
	424.22(C). Title	Overcurrent Protective Devices	Fine as is
	424.22(C)	Supplementary Overcurrent Protective Devices	Supplementary OCPDs

	424.22(C)	Overcurrent Protection	Fine as is
	424.22(C)	Supplementary Overcurrent Protection	Fine as is
	424.22(D) (X2)	Supplementary Overcurrent Protective Devices	Supplementary OCPDs
	424.22(E). (X3)	Supplementary Overcurrent Protective Devices	Supplementary OCPDs
	424.72	Overcurrent Protection	Fine as is
	424.72(A)	Overcurrent protective device	OCPD
	424.72(B)	Overcurrent protective device	OCPD
	424.72(C). Title	Supplementary Overcurrent Protective Devices	Fine as is
	424.72(C)	Supplementary Overcurrent Protective Devices	Supplementary OCPDs
	424.72(C)	Overcurrent Protection	Fine as is
	424.72(D). Title	Supplementary Overcurrent Protective Devices	Fine as is
	424.72(D).	Supplementary Overcurrent Protective Devices	Supplementary OCPDs
	424.72(D)	Overcurrent protective device	OCPD
	424.72(E)	Supplementary Overcurrent Protective Devices. (X3)	Supplementary OCPDs
	424.82	Overcurrent protective devices	OCPDs
17	**Article 425**		
	425.19	Supplementary Overcurrent Protective Devices	Supplementary OCPDs
	425.19(A). (X2)	Supplementary Overcurrent Protection	Fine as is
	425.19(A)	Supplementary Overcurrent Protective Devices	Supplementary OCPDs
	425.19(B)	Supplementary Overcurrent Protection	Fine as is
	425.22. Title	Overcurrent Protection	Fine as is
	425.22(A)	Overcurrent Protection	Fine as is
	425.22(A)	protected against overcurrent	"..shall be permitted to have overcurrent protection.."
	425.22(B)	Supplementary Overcurrent Protective Device	Supplementary OCPD
	425.22(C). Title	Overcurrent Protective Devices	Fine as is
	425.22(C)	Supplementary Overcurrent Protective Devices	Supplementary OCPDs
	425.22(C). (X2)	Supplementary Overcurrent Protection	Fine as is
	425.22(D). Title	Supplementary Overcurrent Protective Devices	Fine as is
	425.22(D). (X2)	Supplementary Overcurrent Protective Devices	Supplementary OCPDs
	425.22(E) (X3)	Supplementary Overcurrent Protective Devices	Supplementary OCPDs
	425.72	Overcurrent Protection	Fine as is
	425.72(A)	Overcurrent protective device	OCPD
	425.72(B)	Overcurrent protective device	OCPD
	425.72(C). Title	Supplementary Overcurrent Protective Devices	Fine as is
	425.72(C)	Supplementary Overcurrent Protective Devices	Supplementary OCPDs

	425.72(C)	Overcurrent Protection	Fine as is
	425.72(D)	Overcurrent protection	Fine as is
	425.72(E). Title	Supplementary Overcurrent Protective Devices	Fine as is
	425.72(E)	Supplementary Overcurrent Protective Devices	Supplementary OCPDs
	425.72(E)	Overcurrent Protective Devices	OCPD
	425.72(F). (X3)	Supplementary Overcurrent Protective Devices	Supplementary OCPDs
	425.82	Overcurrent protective devices	OCPDs
17	**Article 427**		
	427.57	Overcurrent Protection	Fine as is
	427.57	considered protected against Overcurrent	considered to have overcurrent protection
17	**Article 680**		
	680.10.(A)& (B)(2)	Overcurrent protective devices	OCPDs
	680.23(F)(2)	Overcurrent Protection	Fine as is

CMP-10 TG-4 Review of Overcurrent Language for the Articles undeer the purview of CMP-18			
CMP	**NEC Section (using First Draft of 2026 NEC)**	**Current Language**	**"New" Language**
18	**Article 393**		
	393.45. Title	Overcurrent ..... Protection	Overcurrent Protection ....
	393.45(A)	Overcurrent Protection	Fine as is
18	**Article 406**		
	406.46(F)	Overcurrent Device	OCPD
18	**Article 410**		
	410.59(A)	Branch-circuit overcurrent devices	Branch-Circuit OCPD
	410.153	Overcurrent Protection	Fine as is
18	**Article 600**		
	600.41	Overcurrent	CMP to Review

Public Comment No. 791-NFPA 70-2024 [Section No. 545.26]

545.26 Bonding of Exposed Non-Current-Carrying Metal Parts.

All exposed non-current-carrying metal parts that are likely to become energized shall be effectively bonded to the grounding terminal or enclosure of the panelboards. A bonding conductor shall be connected between the panelboards and an accessible terminal on the chassis. Chassis of mutiple relocatable structure sections that are connected to form a single structural unit shall be bonded together with a solid copper, 8 AWG minimum, insulated or bare bonding conductor with terminations in accordance with 250.8 and 250.12.

Statement of Problem and Substantiation for Public Comment

As written in the first draft, two buildings that are twenty miles apart need to be bonded together.

Related Item

• FR 8672

Submitter Information Verification

Submitter Full Name: Ryan Jackson
Organization: Self-employed
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State:
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Submittal Date: Mon Aug 05 12:18:18 EDT 2024
Committee: NEC-P07

Public Comment No. 1702-NFPA 70-2024 [Section No. 547.44(A)(2)]

(2) Outdoors.

Equipotential planes shall be installed in concrete slabs where metallic equipment is located that could become energized and is accessible to livestock.

The equipotential plane shall encompass the area where the livestock stands while accessing metallic equipment that could become energized and be bonded in accordance with 547 .44(B).

Informational note: Metallic equipment could include but is not limited to waterers, conveyance feeding equipment and feeding troughs with electrical equipment.

Statement of Problem and Substantiation for Public Comment

The added informational note explains the type of electrical equipment found in an outdoor area that would require an equipotential plane.

On average, an EP plane on a farm is is five ohms. Farm wiring errors and product misuse permit secondary neutral voltage drop to allow abnormal current flow on the EQP. A 300-foot branch circuit connected to a grounding system with the normal 1.5 volts will increase to 2.25 voltage (at two volts, EPs start to degrade effectiveness). The voltage increases the likelihood of problematic levels of stay voltage, not just at waterers but all over the farm. This is due to the branch circuit grounding conduct size. An 8 AWG reduces this concern significantly.

Related Item

• Committee Input No. 8741-NFPA 70-2024 [Global Input]

Submitter Information Verification

Submitter Full Name: Dean Hunter
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Submittal Date: Mon Aug 26 12:54:45 EDT 2024
Committee: NEC-P07

Public Comment No. 1724-NFPA 70-2024 [Article 550]

Article 550 Mobile Homes, Manufactured Homes, and Mobile Home Parks

Part I. General

550.1 Scope.

This article covers electrical conductors and equipment installed within or on mobile and manufactured homes, conductors that connect mobile and manufactured homes to a supply of electricity, and installation of electrical wiring, luminaires, equipment, and appurtenances related to electrical installations within a mobile home park up to the mobile home service-entrance conductors or, if none, the mobile home service equipment.

Informational Note: See 24 CFR 3280, *Manufactured Home Construction and Safety Standards* , of the Federal Department of Housing and Urban Development for additional information on manufactured housing.

550.2 Listing Requirements.

All electrical materials, devices, appliances, fittings, and other equipment shall be listed and labeled by a qualified testing agency and be connected in an approved manner when installed.

550.4 General Requirements.

(A) In Other Than Mobile Home Parks.

Mobile homes installed in other than mobile home parks shall comply with the requirements of this article.

(B) Connection to Wiring System.

This article shall apply to mobile homes intended for connection to a wiring system rated 120/240 volts, nominal, 3-wire ac, with a grounded neutral conductor.

Part II. Mobile and Manufactured Homes

550.10 Power Supply.

(A) Feeder.

The power supply to the mobile home shall be a feeder assembly consisting of not more than one listed 50-ampere mobile home power-supply cord or a permanently installed feeder.

Exception No. 1: A mobile home that is factory equipped with gas or oil-fired central heating equipment and cooking appliances shall be permitted to be provided with a listed mobile home power-supply cord rated 40 amperes.

Exception No. 2: A feeder assembly shall not be required for manufactured homes constructed in accordance with 550.32(B) .

(B) Power-Supply Cord.

If the mobile home has a power-supply cord, it shall be permanently attached to the panelboard's enclosure, or to a junction box permanently connected to the panelboard, with the free end terminating in an attachment plug cap.

Cords with adapters and pigtail ends, extension cords, and similar items shall not be attached to, or shipped with, mobile homes.

A suitable clamp or the equivalent shall be provided at the panelboard knockout to afford strain relief for the cord to prevent strain from being transmitted to the terminals when the power-supply cord is handled in its intended manner.

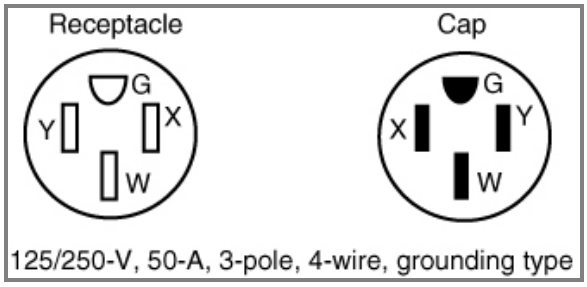
Cords shall be a listed type with four conductors, one of which shall be identified by a continuous green color or a continuous green color with one or more yellow stripes for use as the equipment grounding conductor.

(C) Attachment Plug Cap.

The attachment plug cap shall be a 3-pole, 4-wire, grounding type, rated 50 amperes, 125/250 volts with a configuration as shown in Figure 550.10(C) and intended for use with the 50-ampere, 125/250-volt receptacle configuration shown in Figure 550.10(C) . It shall be listed, by itself or as part of a power-supply cord assembly, for the purpose and shall be molded to or installed on the flexible cord so that it is secured tightly to the cord at the point where the cord enters the attachment plug cap. If a right-angle cap is used, the configuration shall be oriented so that the grounding member is farthest from the cord.

Informational Note: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications* , Figure 14-50, for complete details of the 50-ampere plug and receptacle configuration.

Figure 550.10(C) 50-Ampere, 125/250-Volt Receptacle and Attachment Plug Cap Configurations, 3-Pole, 4-Wire, Grounding-Types, Used for Mobile Home Supply Cords and Mobile Home Parks.



(D) Overall Length of a Power-Supply Cord.

The overall length of a power-supply cord, measured from the end of the cord, including bared leads, to the face of the attachment plug cap shall not be less than 6.4 m (21 ft) and shall not exceed 11 m (36 **1** ⁄ **2** ft). The length of the cord from the face of the attachment plug cap to the point where the cord enters the mobile home shall not be less than 6.0 m (20 ft).

(E) Marking.

The power-supply cord shall bear the following marking:

FOR USE WITH MOBILE HOMES — 40 AMPERES

or

FOR USE WITH MOBILE HOMES — 50 AMPERES

(F) Point of Entrance.

The point of entrance of the feeder assembly to the mobile home shall be in the exterior wall, floor, or roof.

(G) Protected.

Where the cord passes through walls or floors, it shall be protected by means of conduits and bushings or equivalent. The cord shall be permitted to be installed within the mobile home walls, provided a continuous raceway having a maximum size of 32 mm (1 **1**⁄**4** in.) is installed from the branch-circuit panelboard to the underside of the mobile home floor.

(H) Protection Against Corrosion and Mechanical Damage.

Permanent provisions shall be made for the protection of the attachment plug cap of the power-supply cord and any connector cord assembly or receptacle against corrosion and mechanical damage if such devices are in an exterior location while the mobile home is in transit.

(I) Mast Weatherhead or Raceway.

Where the calculated load exceeds 50 amperes or where a permanent feeder is used, the supply shall be by means of either of the following:

(1) One mast weatherhead installation, installed in accordance with Article 230 , Part II, containing four continuous, insulated, color-coded feeder conductors, one of which shall be an equipment grounding conductor.

(2) Raceways from the disconnecting means in the mobile home to the underside of the mobile home, with provisions for attachment to a suitable junction box or fitting to the raceway on the underside of the mobile home [with or without conductors as in 550.10(I)(1)], which shall be one of the following:

(3) Rigid metal conduit

(4) Intermediate metal conduit

(5) Rigid polyvinyl chloride conduit

(6) Other raceways identified for the location

The manufacturer shall provide written installation instructions stating the proper feeder conductor sizes for the raceway and the size of the junction box to be used.

550.11 Disconnecting Means and Branch-Circuit Protective Equipment.

The branch-circuit equipment shall be permitted to be combined with the disconnecting means as a single assembly. Such a combination shall be permitted to be designated as a panelboard. If a fused panelboard is used, the maximum fuse size for the mains shall be plainly marked with lettering at least 6 mm (**1**⁄**4** in.) high and visible when fuses are changed.

Where plug fuses and fuseholders are used, they shall be tamper-resistant Type S, enclosed in dead-front fuse panelboards. Electrical panelboards containing circuit breakers shall also be dead-front type.

Informational Note: See 110.22 concerning identification of each disconnecting means and each service, feeder, or branch circuit at the point where it originated and the type marking needed.

(A) Disconnecting Means.

A single disconnecting means shall be provided in each mobile home consisting of a circuit breaker, or a switch and fuses and its accessories installed in a readily accessible location near the point of entrance of the supply cord or conductors into the mobile home. The main circuit breakers or fuses shall be plainly marked "Main." This equipment shall contain a solderless type of grounding connector or bar for the purposes of grounding, with sufficient terminals for all grounding conductors. The terminations of the grounded circuit conductors shall be insulated in accordance with 550.16(A) . The disconnecting equipment shall have a rating not less than the calculated load. The distribution equipment, either circuit breaker or fused type, shall be located a minimum of 600 mm (24 in.) from the bottom of such equipment to the floor level of the mobile home.

> Informational Note: See 550.20(B) for information on disconnecting means for branch circuits designed to energize heating or air-conditioning equipment, or both, located outside the mobile home, other than room air conditioners.

A panelboard shall be rated not less than 50 amperes and employ a 2-pole circuit breaker rated 40 amperes for a 40-ampere supply cord, or 50 amperes for a 50-ampere supply cord. A panelboard employing a disconnect switch and fuses shall be rated 60 amperes and shall employ a single 2-pole, 60-ampere fuseholder with 40- or 50-ampere main fuses for 40- or 50-ampere supply cords, respectively. The outside of the panelboard shall be plainly marked with the fuse size.

The panelboard shall be located in an accessible location but shall not be located in a bathroom or a clothes closet. A clear working space at least 750 mm (30 in.) wide and 750 mm (30 in.) in front of the panelboard shall be provided. This space shall extend from the floor to the top of the panelboard.

(B) Branch-Circuit Protective Equipment.

Branch-circuit distribution equipment shall be installed in each mobile home and shall include overcurrent protection for each branch circuit consisting of either circuit breakers or fuses.

The branch-circuit overcurrent devices shall be rated as follows:

(1) Not more than the circuit conductors; and

(2) Not more than 150 percent of the rating of a single appliance rated 13.3 amperes or more that is supplied by an individual branch circuit; but

(3) Not more than the overcurrent protection size and of the type marked on the air conditioner or other motor-operated appliance.

(C) Two-Pole Circuit Breakers.

Where circuit breakers are provided for branch-circuit protection, 240-volt circuits shall be protected by a 2-pole common or companion trip, or by circuit breakers with identified handle ties.

(D) Electrical Nameplates.

A metal nameplate on the outside adjacent to the feeder assembly entrance shall read as follows:

THIS CONNECTION FOR 120/240-VOLT,

3-POLE, 4-WIRE, 60-HERTZ,

_____ AMPERE SUPPLY

The correct ampere rating shall be marked in the blank space.

Exception: For manufactured homes, the manufacturer shall provide in its written installation instructions or in the data plate the minimum ampere rating of the feeder assembly or, where provided, the service-entrance conductors intended for connection to the manufactured home. The rating provided shall not be less than the minimum load calculated in accordance with 550.18 .

550.12 Branch Circuits.

The number of branch circuits required shall be determined in accordance with 550.12(A) through (E).

(A) Lighting.

The number of branch circuits shall be based on 33 volt-amperes/m^2 (3 VA/ft^2) times outside dimensions of the mobile home (coupler excluded) divided by 120 volts to determine the number of 15- or 20-ampere lighting area circuits, for example,

$$\frac{3 \times \text{length} \times \text{width}}{120 \times 15 \text{ (or } 20)} = \text{No. of 15- (or 20-) ampere circuits} \qquad \textbf{[550.12(A)]}$$

(B) Small Appliances.

In kitchens, pantries, dining rooms, and breakfast rooms, two or more 20-ampere small-appliance circuits, in addition to the number of circuits required elsewhere in this section, shall be provided for all receptacle outlets required by 550.13(D) in these rooms. Such circuits shall have no other outlets.

Exception No. 1: Receptacle outlets installed solely for the electrical supply and support of an electric clock in any the rooms specified in 550.12(B) shall be permitted.

Exception No. 2: Receptacle outlets installed to provide power for supplemental equipment and lighting on gas-fired ranges, ovens, or counter-mounted cooking units shall be permitted.

Exception No. 3: A single receptacle for refrigeration equipment shall be permitted to be supplied from an individual branch circuit rated 15 amperes or greater.

Countertop receptacle outlets installed in the kitchen shall be supplied by not less than two small-appliance circuit branch circuits, either or both of which shall be permitted to supply receptacle outlets in the kitchen and other locations specified in 550.12(B).

(C) Laundry Area.

Where a laundry area is provided, a 20-ampere branch circuit shall be provided to supply the laundry receptacle outlet(s). This circuit shall have no other outlets.

(D) General Appliances.

For general appliances, such as furnaces, water heaters, ranges, and central or room air conditioners, there shall be one or more circuits of adequate rating in accordance with the following:

Informational Note: See Article 440, Parts I through VI, for central air conditioning.

(1) The ampere rating of fixed appliances shall be not over 50 percent of the circuit rating if lighting outlets (receptacles, other than kitchen, dining area, and laundry, considered as lighting outlets) are on the same circuit.

(2) For fixed appliances on a circuit without lighting outlets, the sum of rated amperes shall not exceed the branch-circuit rating. Motor loads or continuous loads shall not exceed 80 percent of the branch-circuit rating.

(3) The rating of a single cord- and plug-connected appliance on a circuit having no other outlets shall not exceed 80 percent of the circuit rating.

(4) The rating of a range branch circuit shall be based on the range demand as specified for ranges in 550.18(B)(5).

(E) Bathrooms.

Bathroom receptacle outlets shall be supplied by at least one 20-ampere branch circuit. Such circuits shall have no outlets other than as provided for in 550.13(E)(2).

550.13 Receptacle Outlets.

(A) Grounding-Type Receptacle Outlets.

All receptacle outlets shall comply with the following:

(1) Be of grounding type

(2) Be installed according to 406.12

(3) Except where supplying specific appliances, be 15- or 20-ampere, 125-volt, either single or multiple type, and accept parallel-blade attachment plugs

(B) Ground-Fault Circuit Interrupters (GFCIs).

Ground-fault circuit-interrupter protection shall be provided as required in 210.8 .

(C) Cord-Connected Fixed Appliance.

A grounding-type receptacle outlet shall be provided for each cord-connected fixed appliance installed.

(D) Receptacle Outlets Required.

Except in the bath, closet, and hallway areas, receptacle outlets shall be installed at wall spaces 600 mm (2 ft) wide or more so that no point along the floor line is more than 1.8 m (6 ft) measured horizontally from an outlet in that space. In addition, a receptacle outlet shall be installed in the following locations:

(1) Over or adjacent to countertops in the kitchen [at least one on each side of the sink if countertops are on each side and are 300 mm (12 in.) or over in width].

(2) Adjacent to the refrigerator and freestanding gas-range space. A multiple-type receptacle shall be permitted to serve as the outlet for a countertop and a refrigerator.

(3) At countertop spaces for built-in vanities.

(4) At countertop spaces under wall-mounted cabinets.

(5) In the wall at the nearest point to where a bar-type counter attaches to the wall.

(6) In the wall at the nearest point to where a fixed room divider attaches to the wall.

(7) In laundry areas within 1.8 m (6 ft) of the intended location of the laundry appliance(s).

(8) At least one receptacle outlet located outdoors and accessible at grade level and not more than 2.0 m (6 $^{1}/_{2}$ ft) above grade. A receptacle outlet located in a compartment accessible from the outside of the unit shall be considered an outdoor receptacle.

(9) At least one receptacle outlet shall be installed in bathrooms within 900 mm (36 in.) of the outside edge of each basin. The receptacle outlet shall be located above or adjacent to the basin location. This receptacle shall be in addition to any receptacle that is a part of a luminaire or appliance. The receptacle shall not be enclosed within a bathroom cabinet or vanity.

(E) Pipe Heating Cable(s) Outlet.

For the connection of pipe heating cable(s), a receptacle outlet shall be located on the underside of the unit as follows:

(1) Within 600 mm (2 ft) of the cold water inlet.

(2) Connected to an interior branch circuit, other than a small-appliance branch circuit. It shall be permitted to use a bathroom receptacle circuit for this purpose.

(3) On a circuit where all of the outlets are on the load side of the ground-fault circuit interrupter.

(4) This outlet shall not be considered as the receptacle required by 505.30(B)(2) .

(F) Receptacle Outlets Not Permitted.

Receptacle outlets shall not be permitted in the following locations:

(1) Receptacle outlets shall not be installed within or directly over a bathtub or shower space.

(2) A receptacle shall not be installed in a face-up position in any countertop.

(3) Receptacle outlets shall not be installed above electric baseboard heaters, unless provided for in the listing or manufacturer's instructions.

(G) Receptacle Outlets Not Required.

Receptacle outlets shall not be required in the following locations:

(1) In the wall space occupied by built-in kitchen or wardrobe cabinets

(2) In the wall space behind doors that can be opened fully against a wall surface

(3) In room dividers of the lattice type that are less than 2.5 m (8 ft) long, not solid, and within 150 mm (6 in.) of the floor

(4) In the wall space afforded by bar-type counters

550.14 Luminaires and Appliances.

(A) Fasten Appliances in Transit.

Means shall be provided to securely fasten appliances when the mobile home is in transit. (See 550.16 for provisions on grounding.)

(B) Accessibility.

Every appliance shall be accessible for inspection, service, repair, or replacement without removal of permanent construction.

(C) Pendants.

Listed pendant-type luminaires or pendant cords shall be permitted.

(D) Bathtub and Shower Luminaires.

Where a luminaire is installed over a bathtub or in a shower stall, it shall be of the enclosed and gasketed type listed for wet locations.

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.

(A) Nonmetallic Boxes.

Nonmetallic boxes shall be permitted only with nonmetallic cable or nonmetallic raceways.

(B) Nonmetallic Cable Protection.

Nonmetallic cable located 380 mm (15 in.) or less above the floor, if exposed, shall be protected from physical damage by covering boards, guard strips, or raceways. Cable likely to be damaged by stowage shall be so protected in all cases.

(C) Metal-Covered and Nonmetallic Cable Protection.

Metal-covered and nonmetallic cables shall be permitted to pass through the centers of the wide side of 2 by 4 studs. However, they shall be protected where they pass through 2 by 2 studs or at other studs or frames where the cable or armor would be less than 32 mm (1 $^{1}/_{4}$ in.) from the inside or outside surface of the studs where the wall covering materials are in contact with the studs. Steel plates on each side of the cable, or a tube, with not less than 1.35 mm (0.053 in.) wall thickness shall be required to protect the cable. These plates or tubes shall be securely held in place.

(D) Metal Faceplates.

Where metal faceplates are used, the installation shall comply with 406.40(B) and 406.16(B).

(E) Installation Requirements.

Where a range, clothes dryer, or other appliance is connected by metal-covered cable or flexible metal conduit, a length of not less than 900 mm (3 ft) of unsupported cable or conduit shall be provided to service the appliance. The cable or flexible metal conduit shall be secured to the wall. Type NM or Type SE cable shall not be used to connect a range or dryer. This shall not prohibit the use of Type NM or Type SE cable between the branch-circuit overcurrent protective device and a junction box or range or dryer receptacle.

(F) Raceways.

All cut ends of conduit and tubing shall be reamed or otherwise finished to remove rough edges. Where rigid metal conduit or intermediate metal conduit is terminated at an enclosure with a locknut and bushing connection, two locknuts shall be provided, one inside and one outside of the enclosure.

(G) Switches.

Switches shall be rated as follows:

(1) For lighting circuits, switches shall be rated not less than 10 amperes, 120 to 125 volts, and in no case less than the connected load.

(2) Switches for motor or other loads shall comply with 406.46.

(H) Under-Chassis Wiring (Exposed to Weather).

(1)

Where outdoor or under-chassis line-voltage (120 volts, nominal, or higher) wiring is exposed, it shall be protected by a conduit or raceway identified for use in wet locations. The conductors shall be listed for use in wet locations.

(2)

Where wiring is exposed to physical damage, it shall be protected by a raceway, conduit, or other means.

(I) Boxes, Fittings, and Cabinets.

Boxes, fittings, and cabinets shall be securely fastened in place and shall be supported from a structural member of the home, either directly or by using a substantial brace.

Exception: Snap-in-type boxes. Boxes provided with special wall or ceiling brackets and wiring devices with integral enclosures that securely fasten to walls or ceilings and are identified for the use shall be permitted without support from a structural member or brace. The testing and approval shall include the wall and ceiling construction systems for which the boxes and devices are intended to be used.

(J) Appliance Terminal Connections.

Appliances having branch-circuit terminal connections that operate at temperatures higher than 60°C (140°F) shall have circuit conductors as described in the following:

(1) Branch-circuit conductors having an insulation suitable for the temperature encountered shall be permitted to be run directly to the appliance.

(2) Conductors having an insulation suitable for the temperature encountered shall be run from the appliance terminal connection to a readily accessible outlet box placed at least 300 mm (1 ft) from the appliance. These conductors shall be in a suitable raceway or Type AC or MC cable of at least 450 mm (18 in.) but not more than 1.8 m (6 ft) in length.

(K) Component Interconnections.

Fittings and connectors that are intended to be concealed at the time of assembly shall be listed and identified for the interconnection of building components. Such fittings and connectors shall be equal to the wiring method employed in insulation, temperature rise, and fault-current withstanding and shall be capable of enduring the vibration and shock occurring in mobile home transportation.

Informational Note: See 550.19 for interconnection of multiple section units.

550.16 Grounding.

Grounding of both electrical and nonelectrical metal parts in a mobile home shall be through connection to a grounding bus in the mobile home panelboard and shall be connected through the green-colored insulated conductor in the supply cord or the feeder wiring to the grounding bus in the service-entrance equipment located adjacent to the mobile home location. Neither the frame of the mobile home nor the frame of any appliance shall be connected to the grounded circuit conductor in the mobile home. Where the panelboard is the service equipment as permitted by 550.32(B) , the neutral conductors and the equipment grounding bus shall be connected.

(A) Grounded Conductor.

(1) Insulated.

The grounded circuit conductor shall be insulated from the equipment grounding conductors and from equipment enclosures and other grounded parts. The grounded circuit conductor terminals in the panelboard and in ranges, clothes dryers, counter-mounted cooking units, and wall-mounted ovens shall be insulated from the equipment enclosure. Bonding screws, straps, or buses in the panelboard or in appliances shall be removed and discarded. Where the panelboard is the service equipment as permitted by 550.32(B) , the neutral conductors and the equipment grounding bus shall be connected.

(2) Connections of Ranges and Clothes Dryers.

Connections of ranges and clothes dryers with 120/240-volt, 3-wire ratings shall be made with 4-conductor cord and 3-pole, 4-wire, grounding-type plugs or by Type AC cable, Type MC cable, or conductors enclosed in flexible metal conduit.

(B) Equipment Grounding Means.

(1) Supply Cord or Permanent Feeder.

The green-colored insulated grounding wire in the supply cord or permanent feeder wiring shall be connected to the grounding bus in the panelboard or disconnecting means.

(2) Electrical System.

In the electrical system, all exposed metal parts, enclosures, frames, luminaire canopies, and so forth, shall be effectively bonded to the grounding terminal or enclosure of the panelboard.

(3) Cord-Connected Appliances.

Cord-connected appliances, such as washing machines, clothes dryers, and refrigerators, and the electrical system of gas ranges and so forth, shall be grounded by means of a cord with an equipment grounding conductor and grounding-type attachment plug.

(C) Bonding of Non-Current-Carrying Metal Parts.

(1) Exposed Non-Current-Carrying Metal Parts.

All exposed non-current-carrying metal parts that are likely to become energized shall be effectively bonded to the grounding terminal or enclosure of the panelboard. A bonding conductor shall be connected between the panelboard and an accessible terminal on the chassis. Chassis of multiple mobile home sections shall be bonded together with a solid copper, 8 AWG minimum, insulated or bare, bonding conductor with terminations in accordance with 250.8 and 250.12 .

(2) Grounding Terminals.

Grounding terminals shall be of the solderless type and listed as pressure-terminal connectors recognized for the wire size used. The bonding conductor shall be solid or stranded, insulated or bare, and shall be 8 AWG copper minimum, or equivalent. The bonding conductor shall be routed so as not to be exposed to physical damage.

(3) Metallic Piping and Ducts.

Metallic gas, water, and waste pipes and metallic air-circulating ducts shall be considered bonded if they are connected to the terminal on the chassis [see 550.16(C)(1)] by clamps, solderless connectors, or by suitable grounding-type straps.

(4) Metallic Roof and Exterior Coverings.

Any metallic roof and exterior covering shall be considered bonded if the following conditions are met:

(1) The metal panels overlap one another and are securely attached to the wood or metal frame parts by metallic fasteners.

(2) The lower panel of the metallic exterior covering is secured by metallic fasteners at a cross member of the chassis by two metal straps per mobile home unit or section at opposite ends.

The bonding strap material shall be a minimum of 100 mm (4 in.) in width of material equivalent to the skin or a material of equal or better electrical conductivity. The straps shall be fastened with paint-penetrating fittings such as screws and starwashers or equivalent.

550.17 Testing.

(A) Dielectric Strength Test.

The wiring of each mobile home shall be subjected to a 1-minute, 900-volt, dielectric strength test (with all switches closed) between live parts (including neutral conductor) and the mobile home ground. Alternatively, the test shall be permitted to be performed at 1080 volts for 1 second. This test shall be performed after branch circuits are complete and after luminaires or appliances are installed.

Exception: Listed luminaires or appliances shall not be required to withstand the dielectric strength test.

(B) Continuity and Operational Tests and Polarity Checks.

Each mobile home shall be subjected to all of the following:

(1) An electrical continuity test to ensure that all exposed electrically conductive parts are properly bonded

(2) An electrical operational test to demonstrate that all equipment, except water heaters and electric furnaces, is connected and in working order

(3) Electrical polarity checks of permanently wired equipment and receptacle outlets to determine that connections have been properly made

550.18 Calculations.

The method detailed in 550.18(A) through 550.18(C) shall be employed in calculating the supply-cord and distribution-panelboard load for each feeder assembly for each mobile home in lieu of the procedure shown in Article 120 , Parts I through IV, and be based on a 3-wire, 120/240-volt ac only supply with 120-volt loads balanced between the two ungrounded conductors of the 3-wire system.

(A) Lighting, Small-Appliance, and Laundry Load.

(1) Lighting Volt-Amperes.

Length times width of mobile home floor (outside dimensions) times 33 volt-amperes/m^2 (3 VA/ft^2) — for example, length × width × 3 = lighting volt-amperes.

(2) Small-Appliance Volt-Amperes.

Number of circuits times 1500 volt-amperes for each 20-ampere appliance receptacle circuit — for example, number of circuits × 1500 = small-appliance volt-amperes.

(3) Laundry Area Circuit Volt-Amperes.

1500 volt-amperes.

(4) Total Volt-Amperes.

Lighting volt-amperes plus small-appliance volt-amperes plus laundry area volt-amperes equals total volt-amperes.

(5) Net Volt-Amperes.

First 3000 total volt-amperes at 100 percent plus remainder at 35 percent equals volt-amperes to be divided by 240 volts to obtain current (amperes) per leg.

(B) Total Load for Determining Power Supply.

Total load for determining power supply is the sum of the following:

(1) Lighting and small-appliance load as calculated in 550.18(A)(5) .

(2) Nameplate amperes for motors and heater loads (exhaust fans, air conditioners, electric, gas, or oil heating). Omit smaller of the heating and cooling loads, except include blower motor if used as air-conditioner evaporator motor. Where an air conditioner is not installed and a 40-ampere power-supply cord is provided, allow 15 amperes per leg for air conditioning.

(3) Twenty-five percent of current of largest motor in 550.18(B)(2) .

(4) Total of nameplate amperes for waste disposer, dishwasher, water heater, clothes dryer, wall-mounted oven, cooking units. Where the number of these appliances exceeds three, use 75 percent of total.

(5) Derive amperes for freestanding range (as distinguished from separate ovens and cooking units) by dividing the following values by 240 volts as shown in Table 550.18(B) .

(6) If outlets or circuits are provided for other than factory-installed appliances, include the anticipated load.

Informational Note: See Informative Annex D , Example D11, for an illustration of the application of this calculation.

Table 550.18(B) Freestanding Range Load

Nameplate Rating (watts)	Use (volt-amperes)
0–10,000	80 percent of rating
Over 10,000–12,500	8,000
Over 12,500–13,500	8,400
Over 13,500–14,500	8,800
Over 14,500–15,500	9,200
Over 15,500–16,500	9,600
Over 16,500–17,500	10,000

(C) Optional Method of Calculation for Lighting and Appliance Load.

The optional method for calculating lighting and appliance load shown in 120.82 shall be permitted.

550.19 Interconnection of Multiple-Section Mobile or Manufactured Home Units.

(A) Wiring Methods.

Approved and listed fixed-type wiring methods shall be used to join portions of a circuit that must be electrically joined and are located in adjacent sections after the home is installed on its support foundation. The circuit's junction shall be accessible for disassembly when the home is prepared for relocation.

Informational Note: See 550.15(K) for component interconnections.

(B) Disconnecting Means.

Expandable or multiunit manufactured homes, not having permanently installed feeders, that are to be moved from one location to another shall be permitted to have disconnecting means with branch-circuit protective equipment in each unit when so located that after assembly or joining together of units, the requirements of 550.10 will be met.

550.20 Outdoor Outlets, Luminaires, Air-Cooling Equipment, and So Forth.

(A) Listed for Outdoor Use.

Outdoor luminaires and equipment shall be listed for wet locations or outdoor use. Outdoor receptacles shall comply with 406.9. Where located on the underside of the home or located under roof extensions or similarly protected locations, outdoor luminaires and equipment shall be listed for use in damp locations.

(B) Outside Heating Equipment, Air-Conditioning Equipment, or Both.

A mobile home provided with a branch circuit designed to energize outside heating equipment, air-conditioning equipment, or both, located outside the mobile home, other than room air conditioners, shall have such branch-circuit conductors terminate in a listed outlet box, or disconnecting means, located on the outside of the mobile home. A label shall be permanently affixed adjacent to the outlet box and shall contain the following information:

THIS CONNECTION IS FOR HEATING

AND/OR AIR-CONDITIONING EQUIPMENT.

THE BRANCH CIRCUIT IS RATED AT NOT MORE THAN

_____ AMPERES, AT _____ VOLTS, 60 HERTZ,

_____ CONDUCTOR AMPACITY.

A DISCONNECTING MEANS SHALL BE LOCATED

WITHIN SIGHT OF THE EQUIPMENT.

The correct voltage and ampere rating shall be given. The tag shall be not less than 0.51 mm (0.020 in.) thick etched brass, stainless steel, anodized or alclad aluminum, or equivalent. The tag shall not be less than 75 mm by 45 mm (3 in. by 1 $^{3}/_{4}$ in.) minimum size.

550.25 Arc-Fault Circuit-Interrupter Protection.

All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets or devices installed in mobile homes and manufactured homes shall comply with 210.12

Part III. Services and Feeders

550.30 Distribution System.

The mobile home park secondary electrical distribution system to mobile home lots shall be single-phase, 120/240 volts, nominal.

550.31 Allowable Demand Factors.

Park electrical wiring systems shall be calculated (at 120/240 volts) on the larger of the following:

(1) 16,000 volt-amperes for each mobile home lot

(2) The load calculated in accordance with 550.18 for the largest typical mobile home that each lot will accept

It shall be permissible to calculate the feeder or service load in accordance with Table 550.31 . No demand factor shall be allowed for any other load, except as provided in this *Code* .

Table 550.31 Demand Factors for Services and Feeders
Number of

Mobile Homes Demand

Factor (%) 1 100 2 55 3 44 4 39 5 33 6 29 7–9 28 10–12 27 13–15 26 16–21 25 22–40 24 41–60 23 61 and over 22

550.32 Service Equipment.

(A) Mobile Home Service Equipment.

Mobile home service equipment shall not be mounted in or on mobile homes. The service equipment shall be rated not less than that required by 550.32(C) and mounted within sight from the mobile home it serves. The installation of the service equipment shall comply with Article 230 , Part I through Part VII. The mobile home service disconnect shall be permitted to be used as the emergency disconnect in accordance with 230.70(A)(2) and 230.70(B)(2) .

(B) Manufactured Home Service Equipment.

Manufactured home service equipment shall be permitted to be installed in or on manufactured homes if all of the following conditions are met:

(1) The manufacturer shall include, in its written installation instructions, information requiring that the home be secured in place by an anchoring system or installed on and secured to a permanent foundation.

(2) The installation of the service shall comply with Article 230 , Part I through Part VII.

(3) Means shall be provided for the connection of a grounding electrode conductor to the service equipment and routing it outside the structure.

(4) Bonding and grounding of the service shall comply with Article 250 , Part I through Part V.

(5) The manufacturer shall include, in its written installation instructions, one method of grounding the service equipment at the installation site. The instructions shall clearly state that other methods of grounding are found in Article 250 .

(6) The minimum size grounding electrode conductor shall be specified in the instructions.

(7) A warning label, meeting the requirements in 110.21(B) and stating the following, shall be mounted on or adjacent to the service equipment:

WARNING

DO NOT PROVIDE ELECTRICAL POWER

UNTIL THE GROUNDING ELECTRODE(S)

IS INSTALLED AND CONNECTED

(SEE INSTALLATION INSTRUCTIONS).

Where the service equipment is not installed in or on the unit, the installation shall comply with the other requirements of this section.

(C) Rating.

Mobile home service equipment shall be rated at not less than 100 amperes at 120/240 volts, and provisions shall be made for connecting a mobile home feeder assembly by a permanent wiring method. Power outlets used as mobile home service equipment shall also be permitted to contain receptacles rated up to 50 amperes with appropriate overcurrent protection. Fifty-ampere receptacles shall conform to the configuration shown in Figure 550.10(C) .

> Informational Note: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications* , Figure 14-50, for complete details of the 50-ampere plug and receptacle configuration.

(D) Additional Outside Electrical Equipment.

Means for connecting a mobile home accessory building or structure or additional electrical equipment located outside a mobile home by a fixed wiring method shall be provided in either the mobile home service equipment or the local external disconnecting means permitted in 550.32(A) .

(E) Replacement Home.

When existing service equipment is reconnected to a replacement mobile or manufactured home, the service shall be provided with a surge protective device in accordance with 230.67 .

(F) Additional Receptacles on Service Equipment.

Receptacles located outside mobile or manufactured homes shall be provided with ground-fault circuit-interrupter protection as specified by 210.8(A) . Where receptacles provide power to mobile or manufactured homes in accordance with 550.10 , ground-fault circuit-interrupter protection shall not be required.

(G) Mounting Height.

Outdoor mobile home disconnecting means shall be installed so the bottom of the enclosure containing the disconnecting means is not less than 600 mm (2 ft) above finished grade or working platform. The disconnecting means shall be installed so that the center of the grip of the operating handle, when in the highest position, is not more than 2.0 m (6 ft 7 in.) above the finished grade or working platform.

(H) Marking.

Where a 125/250-volt receptacle is used in mobile home service equipment, the service equipment shall be marked as follows:

TURN DISCONNECTING SWITCH OR

CIRCUIT BREAKER OFF BEFORE INSERTING

OR REMOVING PLUG. PLUG MUST BE FULLY

INSERTED OR REMOVED.

The marking shall be located on the service equipment adjacent to the receptacle outlet.

550.33 Feeder.

(A) Feeder Equipment.

The feeder assembly, including the disconnecting means, shall not be mounted in or on the mobile home. A manufactured home feeder disconnecting means shall be permitted to be installed in or on the manufactured home in accordance with the requirements of 550.32(B) . The feeder equipment shall be rated not less than that required in 550.32(C) , mounted in a readily accessible outdoor location, and within sight from the mobile home or manufactured home it serves. Grounding of the disconnecting means shall be in accordance with 250.32 .

~~**(B)** Feeder Conductors.~~

~~Feeder conductors shall comply with the following:~~

(1) ~~Feeder conductors shall consist of either a listed cord, factory installed in accordance with 550.10(B) , or a permanently installed feeder consisting of four insulated, color-coded conductors that shall be identified by the factory or field marking of the conductors in compliance with 310.6 . Equipment grounding conductors shall not be identified by stripping the insulation.~~

(2) ~~Feeder conductors shall be installed in compliance with 250.32(B) .~~

~~*Exception: An existing feeder installed without an equipment grounding conductor shall be permitted to comply with 250.32(B)(1) Exception No. 1.*~~

~~**(C)** Feeder Capacity.~~

~~Mobile home and manufactured home feeder circuit conductors shall have a capacity not less than the loads supplied, shall have an ampacity of not less than 100 amperes, and shall be permitted to be sized in accordance with 310.12 .~~

Additional Proposed Changes

File Name	Description	Approved
20240826_-_2026_NEC_Article_550_with_FRs_.docx	New Article 550- with FRs from first draft.	

Statement of Problem and Substantiation for Public Comment

During the first draft meeting, CMP-7 supported restructuring of Article 550 to improve usability and a task group was appointed to finalize the revisions proposed in PI-1776. The task group consisted of Ryan Hyer, David Smith, and Dean Hunter. The task group reviewed the initial public input which added “parts” to separate requirements, relocated and renumbered sections, changed the term “power-supply cord” to “feeder assembly” throughout the article to be consistent with the defined term. In addition, the first draft first revisions were added to the document and NEC Style Manual issues were revised. The group reviewed and added the proposed first revisions to Article 550 and made minor grammar updates for clarity and usability.

Related Item

- CI-8794-NFPA 70-2024 • CCN- 275 • Public Input #1776-NFPA 70-2023 [Article 550]

Submitter Information Verification

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Committee: NEC-P07

Part I. General

550.1 Scope.

This article covers ~~the~~ electrical conductors and equipment installed within or on mobile and manufactured homes, ~~the~~ conductors that connect mobile and manufactured homes to a supply of electricity, and ~~the~~ installation of electrical wiring, luminaires, equipment, and appurtenances related to electrical installations within a mobile home park up to the mobile home service-entrance conductors or, if none, the mobile home service equipment.

Informational Note: See ~~NFPA 501-2017~~ 24 CFR 3280, ~~*Standard on Manufactured Housing*, and Part 3280,~~ *Manufactured Home Construction and Safety Standards*, of the Federal Department of Housing and Urban Development for additional information on manufactured housing.

550.2 Listing Requirements.

All electrical materials, devices, appliances, fittings, and other equipment shall be listed and labeled by a qualified testing agency and be connected in an approved manner when installed.

550.4 General Requirements.

550.4(A) In Other Than Mobile Home Parks.

Mobile homes installed in other than mobile home parks shall comply with the ~~provisions~~ requirements of this article.

550.4(B) Connection to Wiring System.

This article shall apply to mobile homes intended for connection to a wiring system rated 120/240 volts, nominal, 3-wire ac, with a grounded neutral conductor.

~~**550.4(C) Listed and Labeled.**~~

~~All electrical materials, devices, appliances, fittings, and other equipment shall be listed and labeled by a qualified testing agency and shall be connected in an approved manner when installed.~~

Part II. Mobile and Manufactured Homes

550.10 Power Supply.

550.10(A) Feeder.

The power supply to the mobile home shall ~~be a feeder assembly~~ consist~~ing~~ of not more than one listed 50-ampere mobile home feeder assembly ~~power-supply cord~~ or a permanently installed feeder.

Exception No. 1: A mobile home that is factory equipped with gas or oil-fired central heating equipment and cooking appliances shall be permitted to be provided with a listed mobile home power-supply cord rated 40 amperes.

Exception No. 2: A feeder assembly shall not be required for manufactured homes constructed in accordance with 550.32(B).

550.10(B) Feeder Assembly ~~Power Supply Cord~~.

A feeder assembly ~~If the~~ serving a mobile home ~~has a power-supply cord, it~~ shall be permanently attached to the panelboard's enclosure, or to a junction box permanently connected to the panelboard, with the free end terminating in an attachment plug cap.

Cords with adapters and pigtail ends, extension cords, and similar items shall not be attached to, or shipped with, a mobile home.

A suitable clamp or the equivalent shall be provided at the panelboard knockout to afford strain relief for the cord to prevent strain from being transmitted to the terminals when the feeder assembly ~~power-supply cord~~ is handled in its intended manner.

Commented [HD(1]: FR 8445

Commented [HD(2]: FR- 8444

Commented [HD(3R2]: Relocated the language from 550.4(C)

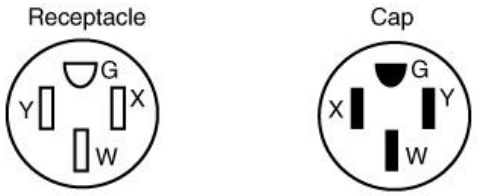
Commented [HD(4]: Changed the heading to include Feeder Assembly. Also, incorporated the changes from FR-8450

The feeder assembly ~~Cord~~ shall be a listed type with four conductors, one of which shall be identified by a continuous green color or a continuous green color with one or more yellow stripes for use as the equipment grounding conductor.

550.10(C) Attachment Plug Cap.
The attachment plug cap shall be a 3-pole, 4-wire, grounding type, rated 50 amperes, 125/250 volts with a configuration as shown in Figure 550.10(C) and intended for use with the 50-ampere, 125/250-volt receptacle configuration shown in Figure 550.10(C). ~~It shall be listed, by itself or as part of a power-supply cord~~ It ~~assembly, for the purpose and~~ shall be molded to or installed on the flexible cord so that it is secured tightly to the cord at the point where the cord enters the attachment plug cap. If a right-angle cap is used, the configuration shall be oriented so that the grounding member is farthest from the cord.

Informational Note: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*, Figure 14-50, for complete details of the 50-ampere plug and receptacle configuration.

Figure 550.10(C) 50-Ampere, 125/250-Volt Receptacle and Attachment Plug Cap Configurations, 3-Pole, 4-Wire, Grounding-Types, Used for Feeder Assemblies for a ~~-~~Mobile Home ~~Supply Cords~~ and Mobile Home Parks.



125/250-V, 50-A, 3-pole, 4-wire, grounding type

550.10(D) Overall Length of a Feeder Assembly~~Power-Supply Cord~~.
The overall length of the feeder assembly ~~a power-supply cord~~, measured from the end of the cord, including bared leads, to the face of the attachment plug cap shall not be less than 6.4 m (21 ft) and shall not exceed 11 m (36½ ft). The length of the cord from the face of the attachment plug cap to the point where the cord enters the mobile home shall not be less than 6.0 m (20 ft).

550.10(E) Marking.
The feeder assembly ~~power-supply cord~~ shall bear the following marking:

FOR USE WITH MOBILE HOMES — 40 AMPERES

or

FOR USE WITH MOBILE HOMES — 50 AMPERES

550.10(F) Point of Entrance.
The point of entrance of the feeder assembly to the mobile home shall be in the exterior wall, floor, or roof.

550.10(G) Protected.
Where the cord passes through walls or floors, it shall be protected by means of conduits and bushings or equivalent. The cord shall be permitted to be installed within the mobile home walls, provided a continuous raceway having a maximum size of 32 mm (1¼ in.) is installed from the branch-circuit panelboard to the underside of the mobile home floor.

550.10(H) Protection Against Corrosion and Mechanical Damage.

Permanent provisions shall be made for the protection of the attachment plug cap of the feeder assembly~~power supply cord~~ and any connector cord assembly or receptacle against corrosion and mechanical damage if such devices are in an exterior location while the mobile home is in transit.

550.10(I) Mast Weatherhead or Raceway.
Where the calculated load exceeds 50 amperes or where a permanent feeder is used, the supply shall be by means of either of the following:

(1) One mast weatherhead installation, installed in accordance with ~~Part II of~~ Article 230, Part II, containing four continuous, insulated, color-coded feeder conductors, one of which shall be an equipment grounding conductor

(2) ~~A rigid metal conduit, intermediate metal conduit, rigid polyvinyl chloride conduit, or other raceways identified for the location,~~ Raceways from the disconnecting means in the mobile home to the underside of the mobile home, with provisions for ~~the~~ attachment to a suitable junction box or fitting to the raceway on the underside of the mobile home [with or without conductors as in 550.10(I)(1)] which shall be one of the following:

1. Rigid metal conduit
2. Intermediate metal conduit
3. Rigid polyvinyl chloride conduit
4. Other raceways identified for the location

~~.~~The manufacturer shall provide written installation instructions stating the proper feeder conductor sizes for the raceway and the size of the junction box to be used.

550.11 Disconnecting Means and Branch-Circuit Protective Equipment.
The branch-circuit equipment shall be permitted to be combined with the disconnecting means as a single assembly. Such a combination shall be permitted to be designated as a panelboard. If a fused panelboard is used, the maximum fuse size for the mains shall be plainly marked with lettering at least 6 mm (¼ in.) high and visible when fuses are changed.

Where plug fuses and fuseholders are used, they shall be tamper-resistant Type S, enclosed in dead-front fuse panelboards. Electrical panelboards containing circuit breakers shall also be dead-front type.

Informational Note: See 110.22 ~~concerning~~ for identification of each disconnecting means and each service, feeder, or branch circuit at the point where it originated and the type marking needed.

550.11(A) Disconnecting Means.
A single disconnecting means shall be provided in each mobile home consisting of a circuit breaker, or a switch and fuses and its accessories. The disconnecting means shall be ~~-~~installed in a readily accessible location near the point of entrance of the feeder assembly ~~supply cord~~ or conductors into the mobile home. The main circuit breakers or fuses shall be plainly marked "Main." This equipment shall contain a solderless type of grounding connector or bar for the purposes of grounding, with sufficient terminals for all grounding conductors. The terminations of the grounded circuit conductors shall be insulated in accordance with 550.18~~16~~(A). The disconnecting equipment shall have a rating not less than the calculated load. The distribution equipment, either circuit breaker or fused type, shall be located a minimum of 600 mm (24 in.) from the bottom of such equipment to the floor level of the mobile home.

Informational Note: See 550.16~~20~~(A~~B~~) for ~~information on~~ disconnecting means ~~for~~ of branch circuits designed to energize heating or air-conditioning equipment, or both, located outside the mobile home, other than room air conditioners.

A panelboard shall be rated not less than 50 amperes and employ a 2-pole circuit breaker rated 40 amperes for a 40-ampere feeder assembly ~~supply cord~~, or 50 amperes for a 50-ampere feeder assembly ~~supply cord~~. A panelboard employing a disconnect switch and fuses shall be rated 60 amperes and shall employ a single 2-pole, 60-ampere

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fuseholder with 40- or 50-ampere main fuses for 40- or 50-ampere feeder assembly ~~supply cords~~, respectively. The outside of the panelboard shall be plainly marked with the fuse size.

The panelboard shall be located in an accessible location but shall not be located in a bathroom or a clothes closet. A clear working space at least 750 mm (30 in.) wide and 750 mm (30 in.) in front of the panelboard shall be provided. This space shall extend from the floor to the top of the panelboard.

550.11(B) Branch-Circuit Protective Equipment.
Branch-circuit distribution equipment shall be installed in each mobile home and shall include overcurrent protection for each branch circuit consisting of either circuit breakers or fuses.

The branch-circuit overcurrent devices shall be rated as follows:

(1) Not more than the circuit conductors; and

(2) Not more than 150 percent of the rating of a single appliance rated 13.3 amperes or more that is supplied by an individual branch circuit; but

(3) Not more than the overcurrent protection size and of the type marked on the air conditioner or other motor-operated appliance.

550.11(C) Two-Pole Circuit Breakers.
Where circuit breakers are provided for branch-circuit protection, 240-volt circuits shall be protected by a 2-pole common or companion trip, or by circuit breakers with identified handle ties.

550.11(D) Electrical Nameplates.
A metal nameplate on the outside adjacent to the feeder assembly entrance shall read as follows:

THIS CONNECTION FOR 120/240-VOLT,
3-POLE, 4-WIRE, 60-HERTZ,
_____ AMPERE SUPPLY

The correct ampere rating shall be marked in the blank space.

Exception: For manufactured homes, the manufacturer shall provide in its written installation instructions or in the data plate the minimum ampere rating of the feeder assembly or, where provided, the service-entrance conductors intended for connection to the manufactured home. The rating provided shall not be less than the minimum load calculated in accordance with ~~550.30~~18.

550.12 Branch Circuits.
The number of branch circuits required shall be determined in accordance with 550.12(A) through (E).

550.12(A) Lighting.
The number of branch circuits shall be based on 33 volt-amperes/m^2 (3 VA/ft^2) times outside dimensions of the mobile home (coupler excluded) divided by 120 volts to determine the number of 15- or 20-ampere lighting area circuits, for example,

[550.12(A)]

$$\frac{3 \times \text{length} \times \text{width}}{120 \times 15 \text{ (or } 20)} = \text{No. of 15- (or 20-) ampere circuits}$$

550.12(B) Small Appliances.

In kitchens, pantries, dining rooms, and breakfast rooms, two or more 20-ampere small-appliance circuits, in addition to the number of circuits required elsewhere in this section, shall be provided for all receptacle outlets required by 550.13(FD) in these rooms. The small appliance ~~Such~~ circuits shall have no other outlets.

Exception No. 1: Receptacle outlets installed solely for the electrical supply and support of an electric clock in any the rooms specified in 550.12(B) shall be permitted.

Exception No. 2: Receptacle outlets installed to provide power ~~for supplemental equipment and lighting~~ on gas-fired ranges, ovens, or counter-mounted cooking units shall be permitted.

Exception No. 3: A single receptacle for refrigeration equipment shall be permitted to be supplied from an individual branch circuit rated 15 amperes or greater.

Countertop receptacle outlets installed in the kitchen shall be supplied by not less than two small-appliance circuit branch circuits, either or both of which shall be permitted to supply receptacle outlets in the kitchen and other locations specified in 550.12(B).

550.12(C) Laundry Area.
Where a laundry area is provided, a 20-ampere branch circuit shall be provided to supply the laundry receptacle outlet(s). This circuit shall have no other outlets.

550.12(D) General Appliances.
For general appliances such as ~~(Including~~ furnaces, water heaters, ranges, and central or room air conditioners, ~~etc.).~~ ~~T~~there shall be one or more circuits of adequate rating in accordance with the following:

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Informational Note: See Article 440, Parts I through IV for central air conditioning.

(1) The ampere rating of fixed appliances shall be not over 50 percent of the circuit rating if lighting outlets (receptacles, other than kitchen, dining area, and laundry, considered as lighting outlets) are on the same circuit.

(2) For fixed appliances on a circuit without lighting outlets, the sum of rated amperes shall not exceed the branch-circuit rating. Motor loads or continuous loads shall not exceed 80 percent of the branch-circuit rating.

(3) The rating of a single cord-and-plug-connected appliance on a circuit having no other outlets shall not exceed 80 percent of the circuit rating.

(4) The rating of a range branch circuit shall be based on the range demand as specified for ranges in 550.3018(B)(5).

550.12(E) Bathrooms.
Bathroom receptacle outlets shall be supplied by at least one 20-ampere branch circuit. Such circuits shall have no outlets other than as provided for in 550.13(GE)(2).

550.13 Receptacle Outlets.

550.13(A) Grounding-Type Receptacle Outlets.
All receptacle outlets shall comply with the following:

(1) Be of grounding type

(2) Be installed according to 406.4

(3) Except where supplying specific appliances, be 15- or 20-ampere, 125-volt, either single or multiple type, and accept parallel-blade attachment plugs

550.13(B) Ground-Fault Circuit Interrupters (GFCIs).
Ground-fault circuit-interrupter protection shall be provided as required in 210.8. ~~(A). In addition, in the following areas within a mobile or manufactured home, GFCI protection is limited to 125-volt, 15- and 20-ampere receptacles or outlets:~~

~~(1) Compartments accessible from outside the unit~~

~~(2) Bathrooms, including receptacles in luminaires~~

~~(3) Kitchens, where receptacles are installed to serve countertop surfaces~~

~~(4) Sinks, where receptacles are installed within 1.8 m (6 ft) from the top inside edge of the sink~~

~~(5) Dishwashers~~

~~Informational Note: See 422.5(A) for information on protection of dishwashers.~~

550.13(C) Arc-Fault Circuit-Interrupter Protection.

All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets or devices installed in mobile homes and manufactured homes shall comply with 210.12

550.13(D) Outdoor Receptacles

Outdoor receptacle outlets shall comply with 406.9.

550.13(E~~C~~) Cord-Connected Fixed Appliance.
A grounding-type receptacle outlet shall be provided for each cord-connected fixed appliance installed.

550.13(F~~D~~) Receptacle Outlets Required.
Except in the bathroom, closet, and hallway areas, receptacle outlets shall be installed at wall spaces 600 mm (2 ft) wide or more so that no point along the floor line is more than 1.8 m (6 ft) measured horizontally from an outlet in that space. In addition, a receptacle outlet shall be installed in the following locations:

(1) Over or adjacent to countertops in the kitchen [at least one on each side of the sink if countertops are on each side and are 300 mm (12 in.) or over in width].

(2) Adjacent to the refrigerator and freestanding gas-range space. A multiple-type receptacle shall be permitted to serve as the outlet for a countertop and a refrigerator.

(3) At countertop spaces for built-in vanities.

(4) At countertop spaces under wall-mounted cabinets.

(5) In the wall at the nearest point to where a bar-type counter attaches to the wall.

(6) In the wall at the nearest point to where a fixed room divider attaches to the wall.

(7) In laundry areas within 1.8 m (6 ft) of the intended location of the laundry appliance(s).

(8) At least one receptacle outlet located outdoors and accessible at grade level and not more than 2.0 m (6½ ft) above grade. A receptacle outlet located in a compartment accessible from the outside of the unit shall be considered an outdoor receptacle.

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(9) At least one receptacle outlet shall be installed in bathrooms within 900 mm (36 in.) of the outside edge of each basin. The receptacle outlet shall be located above or adjacent to the basin location. This receptacle shall be in addition to any receptacle that is a part of a luminaire or appliance. The receptacle shall not be enclosed within a bathroom cabinet or vanity.

550.13(GE) Pipe Heating Cable(s) Receptacle Outlet.
For the connection of pipe heating cable(s), a receptacle outlet shall be located on the underside of the unit as follows:

(1) Within 600 mm (2 ft) of the cold water inlet.

(2) Connected to an interior branch circuit, other than a small-appliance branch circuit. It shall be permitted to use a bathroom receptacle circuit for this purpose.

(3) On a circuit where all of the outlets are on the load side of the GFCI ground-fault circuit interrupter.

(4) This outlet shall not be considered as the receptacle required by 550.13(FD)(8).

550.13(HF) Receptacle Outlets Not Permitted.
Receptacle outlets shall not be permitted in the following locations:

(1) Receptacle outlets shall not be installed within or directly over a bathtub or shower space.

(2) A receptacle shall not be installed in a face-up position in any countertop.

(3) Receptacle outlets shall not be installed above electric baseboard heaters, unless provided for in the listing or manufacturer's instructions.

550.13(IG) Receptacle Outlets Not Required.
Receptacle outlets shall not be required in the following locations:

(1) In the wall space occupied by built-in kitchen or wardrobe cabinets

(2) In the wall space behind doors that can be opened fully against a wall surface

(3) In room dividers of the lattice type that are less than 2.5 m (8 ft) long, not solid, and within 150 mm (6 in.) of the floor

(4) In the wall space afforded by bar-type counters

550.14 Luminaires and Appliances.

550.14(A) Fasten Appliances in Transit.
Means shall be provided to securely fasten appliances when the mobile home is in transit.

Informational Note: (See 550.1816 for provisions on grounding.)

550.14(B) Accessibility.
Every appliance shall be accessible for inspection, service, repair, or replacement without removal of permanent construction.

550.15 Luminaires

550.154(AC) Pendants.

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Listed pendant-type luminaires or pendant cords shall be permitted.

550.154(BD) Bathtub and Shower Luminaires.
Where a luminaire is installed over a bathtub or in a shower stall, it shall be of the enclosed and gasketed type listed for wet locations.

550.15(C) Exterior Mounted Luminaires.

Outdoor luminaires shall be listed for wet locations or outdoor use. Outdoor luminaires located on the underside of the home, under roof extensions or similarly protected locations, shall be listed for use in damp locations.

550.16 Equipment
Outdoor electrical equipment shall be listed for wet locations or outdoor use. Outdoor electrical equipment located on the underside of the home, under roof extensions or similarly protected locations, shall be listed for use in damp locations.

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550.16(A) Outside Heating and Air-Conditioning Equipment.
A mobile home provided with a branch circuit designed to energize outside heating equipment, air-conditioning equipment, or both, located outside the mobile home, other than room air conditioners, shall have such branch-circuit conductors terminate in a listed outlet box, or disconnecting means, located on the outside of the mobile home. A label shall be permanently affixed adjacent to the outlet box and shall contain the following information:

THIS CONNECTION IS FOR HEATING
AND/OR AIR-CONDITIONING EQUIPMENT.
THE BRANCH CIRCUIT IS RATED AT NOT MORE THAN
_____ AMPERES, AT _____ VOLTS, 60 HERTZ,
_____ CONDUCTOR AMPACITY.
A DISCONNECTING MEANS SHALL BE LOCATED
WITHIN SIGHT OF THE EQUIPMENT.

The correct voltage and ampere rating shall be given. The tag shall be not less than 0.51 mm (0.020 in.) thick etched brass, stainless steel, anodized or alclad aluminum, or equivalent. The tag shall not be less than 75 mm by 45 mm (3 in. by 1¼ in.) minimum size.

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550.175 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.

550.175(A) Nonmetallic Boxes.
Nonmetallic boxes shall be permitted only with nonmetallic cable or nonmetallic raceways.

550.175(B) Nonmetallic Cable Protection.
Nonmetallic cable located 380 mm (15 in.) or less above the floor, if exposed, shall be protected from physical damage by covering boards, guard strips, or raceways. Cable likely to be damaged by stowage shall be so protected in all cases.

550.175(C) Metal-Covered and Nonmetallic Cable Protection.
Metal-covered and nonmetallic cables shall be permitted to pass through the centers of the wide side of 2 by 4 studs. However, they shall be protected where they pass through 2 by 2 studs or at other studs or frames where the cable or armor would be less than 32 mm (1¼ in.) from the inside or outside surface of the studs where the wall covering materials are in contact with the studs. Steel plates on each side of the cable, or a tube, with not less than 1.35 mm (0.053 in.) wall thickness shall be required to protect the cable. These plates or tubes shall be securely held in place.

550.175(D) Metal Faceplates.
Where metal faceplates are used, the installation shall comply with 404.9(B) and 406.6(B).

550.175(E) Installation Requirements.
Where a range, clothes dryer, or other appliance is connected by metal-covered cable or flexible metal conduit, a length of not less than 900 mm (3 ft) of unsupported cable or conduit shall be provided to service the appliance. The cable or flexible metal conduit shall be secured to the wall. Type NM or Type SE cable shall not be used to connect a range or dryer. This shall not prohibit the use of Type NM or Type SE cable between the branch-circuit overcurrent protective device and a junction box or range or dryer receptacle.

550.175(F) Raceways.
All cut ends of conduit and tubing shall be reamed or otherwise finished to remove rough edges. Where rigid metal conduit or intermediate metal conduit is terminated at an enclosure with a locknut and bushing connection, two locknuts shall be provided, one inside and one outside of the enclosure. Rigid nonmetallic conduit, electrical nonmetallic tubing, or surface raceway shall be permitted. ~~All cut ends of conduit and tubing shall be reamed or otherwise finished to remove rough edges.~~

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550.175(G) Switches.
Switches shall be rated as follows:

(1) For lighting circuits, switches shall be rated not less than 10 amperes, 120 to 125 volts, and in no case less than the connected load.

(2) Switches for motor or other loads shall comply with 404.14.

550.175(H) Under-Chassis Wiring (Exposed to Weather).

550.175(H)(1)
Where outdoor or under-chassis line-voltage (120 volts, nominal, or higher) wiring is exposed, it shall be protected by a conduit or raceway identified for use in wet locations. The conductors shall be listed for use in wet locations.

550.175(H)(2)
Where wiring is exposed to physical damage, it shall be protected by a raceway, conduit, or other means.

550.175(I) Boxes, Fittings, and Cabinets.
Boxes, fittings, and cabinets shall be securely fastened in place and shall be supported from a structural member of the home, either directly or by using a substantial brace.

Exception: Snap-in-type boxes. Boxes provided with special wall or ceiling brackets and wiring devices with integral enclosures that securely fasten to walls or ceilings and are identified for the use shall be permitted without support from a structural member or brace. The testing and approval shall include the wall and ceiling construction systems for which the boxes and devices are intended to be used.

550.175(J) Appliance Terminal Connections.
Appliances having branch-circuit terminal connections that operate at temperatures higher than 60°C (140°F) shall have circuit conductors as described in the following:

(1) Branch-circuit conductors having an insulation suitable for the temperature encountered shall be permitted to be run directly to the appliance.

(2) Conductors having an insulation suitable for the temperature encountered shall be run from the appliance terminal connection to a readily accessible outlet box placed at least 300 mm (1 ft) from the appliance. These conductors shall be in a suitable raceway or Type AC or MC cable of at least 450 mm (18 in.) but not more than 1.8 m (6 ft) in length.

550.175(K) Component Interconnections.
Fittings and connectors that are intended to be concealed at the time of assembly shall be listed and identified for the interconnection of building components. Such fittings and connectors shall be equal to the wiring method employed in insulation, temperature rise, and fault-current withstanding and shall be capable of enduring the vibration and shock occurring in mobile home transportation.

Informational Note: See 550.21~~19~~ for interconnection of multiple section units.

550.18~~6~~ Grounding.
Grounding of both electrical and nonelectrical metal parts in a mobile home shall be through connection to a grounding bus in the mobile home panelboard and shall be connected through the green-colored insulated conductor in the feeder assembly ~~supply cord~~ or the feeder wiring to the grounding bus in the service-entrance equipment located adjacent to the mobile home location. Neither the frame of the mobile home nor the frame of any appliance shall be connected to the grounded circuit conductor in the mobile home. Where the panelboard is the service equipment as permitted by 550.5~~3~~2(B), the neutral conductors and the equipment grounding bus shall be connected.

550.18~~6~~(A) Grounded Conductor.

550.18~~6~~(A)(1) Insulated.
The grounded circuit conductor shall be insulated from the equipment grounding conductors and from equipment enclosures and other grounded parts. The grounded circuit conductor terminals in the panelboard and in ranges, clothes dryers, counter-mounted cooking units, and wall-mounted ovens shall be insulated from the equipment enclosure. Bonding screws, straps, or buses in the panelboard or in appliances shall be removed and discarded. Where the panelboard is the service equipment as permitted by 550.5~~3~~2(B), the neutral conductors and the equipment grounding bus shall be connected.

550.18~~6~~(A)(2) Connections of Ranges and Clothes Dryers.
Connections of ranges and clothes dryers with 120/240-volt, 3-wire ratings shall be made with 4-conductor cord and 3-pole, 4-wire, grounding-type plugs or by Type AC cable, Type MC cable, or conductors enclosed in flexible metal conduit.

550.18~~6~~(B) Equipment Grounding Means.

550.18~~6~~(B)(1) Feeder Assembly ~~Supply Cord~~ or Permanent Feeder.
The green-colored insulated grounding wire in the feeder assembly ~~supply cord~~ or permanent feeder wiring shall be connected to the grounding bus in the panelboard or disconnecting means.

550.18~~6~~(B)(2) Electrical System.
In the electrical system, all exposed metal parts, enclosures, frames, luminaire canopies, and so forth, shall be effectively bonded to the grounding terminal or enclosure of the panelboard.

550.18~~6~~(B)(3) Cord-Connected Appliances.
Cord-connected appliances, such as washing machines, clothes dryers, and refrigerators, and the electrical system of gas ranges and so forth, shall be grounded by means of a cord with an equipment grounding conductor and grounding-type attachment plug.

550.18~~6~~(C) Bonding of Non-Current-Carrying Metal Parts.

550.18~~6~~(C)(1) Exposed Non-Current-Carrying Metal Parts.
All exposed non-current-carrying metal parts that are likely to become energized shall be effectively bonded to the grounding terminal or enclosure of the panelboard. A bonding conductor shall be connected between the panelboard and an accessible terminal on the chassis. Chassis of multiple mobile home sections shall be bonded together with a solid copper, 8 AWG minimum, insulated or bare, bonding conductor with terminations in accordance with 250.8 and 250.12.

550.18~~6~~(C)(2) Grounding Terminals.
Grounding terminals shall be of the solderless type and listed as pressure-terminal connectors recognized for the wire size used. The bonding conductor shall be solid or stranded, insulated or bare, and shall be 8 AWG copper minimum, or equivalent. The bonding conductor shall be routed so as not to be exposed to physical damage.

550.18~~6~~(C)(3) Metallic Piping and Ducts.
Metallic gas, water, and waste pipes and metallic air-circulating ducts shall be considered bonded if they are connected to the terminal on the chassis [see 550.18~~6~~(C)(1)] by clamps, solderless connectors, or by suitable grounding-type straps.

550.186(C)(4) Metallic Roof and Exterior Coverings.
Any metallic roof and exterior covering shall be considered bonded if the following conditions are met:

(1) The metal panels overlap one another and are securely attached to the wood or metal frame parts by metallic fasteners.

(2) The lower panel of the metallic exterior covering is secured by metallic fasteners at a cross member of the chassis by two metal straps per mobile home unit or section at opposite ends.

The bonding strap material shall be a minimum of 100 mm (4 in.) in width of material equivalent to the skin or a material of equal or better electrical conductivity. The straps shall be fastened with paint-penetrating fittings such as screws and starwashers or equivalent.

550.197 Testing.

550.197(A) Dielectric Strength Test.
The wiring of each mobile home shall be subjected to a 1-minute, 900-volt, dielectric strength test (with all switches closed) between live parts (including neutral conductor) and the mobile home ground. Alternatively, the test shall be permitted to be performed at 1080 volts for 1 second. This test shall be performed after branch circuits are complete and after luminaires or appliances are installed.

Exception: Listed luminaires or appliances shall not be required to withstand the dielectric strength test.

550.197(B) Continuity and Operational Tests and Polarity Checks.
Each mobile home shall be subjected to all of the following:

(1) An electrical continuity test to ensure that all exposed electrically conductive parts are properly bonded

(2) An electrical operational test to demonstrate that all equipment, except water heaters and electric furnaces, is connected and in working order

(3) Electrical polarity checks of permanently wired equipment and receptacle outlets to determine that connections have been properly made

Part III Calculations

550.3018 Calculations.
The ~~following~~ method detailed in 550.30(A) through 550.30(C) shall be employed in calculating the supply-cord and distribution-panelboard load for each feeder assembly for each mobile home in lieu of the procedure shown in Article ~~220~~120, Parts I through IV, and ~~shall~~ be based on a 3-wire, 120/240-volt ac only supply with 120-volt loads balanced between the two ungrounded conductors of the 3-wire system.

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550.3018(A) Lighting, Small-Appliance, and Laundry Load.

550.3018(A)(1) Lighting Volt-Amperes.
Length times width of mobile home floor (outside dimensions) times 33 volt-amperes/m^2 (3 VA/ft^2)— for example, length × width × 3 = lighting volt-amperes.

550.3018(A)(2) Small-Appliance Volt-Amperes.
Number of circuits times 1500 volt-amperes for each 20-ampere appliance receptacle circuit — for example, number of circuits × 1500 = small-appliance volt-amperes.

550.3018(A)(3) Laundry Area Circuit Volt-Amperes.
1500 volt-amperes.

550.3018(A)(4) Total Volt-Amperes.

Lighting volt-amperes plus small-appliance volt-amperes plus laundry area volt-amperes equals total volt-amperes.

550.~~3~~18(A)(5) Net Volt-Amperes.
First 3000 total volt-amperes at 100 percent plus remainder at 35 percent equals volt-amperes to be divided by 240 volts to obtain current (amperes) per leg.

550.30~~18~~(B) Total Load for Determining Power Supply.
Total load for determining power supply is the sum of the following:

(1) Lighting and small-appliance load as calculated in 550.30~~18~~(A)(5).

(2) Nameplate amperes for motors and heater loads (exhaust fans, air conditioners, electric, gas, or oil heating). Omit smaller of the heating and cooling loads, except include blower motor if used as air-conditioner evaporator motor. Where an air conditioner is not installed and a 40-ampere feeder assembly ~~power-supply cord~~ is provided, allow 15 amperes per ~~leg~~ phase for air conditioning.

(3) Twenty-five percent of current of largest motor in 550.30~~18~~(B)(2).

(4) Total of nameplate amperes for waste disposer, dishwasher, water heater, clothes dryer, wall-mounted oven, cooking units. Where the number of these appliances exceeds three, use 75 percent of total.

(5) Derive amperes for freestanding range (as distinguished from separate ovens and cooking units) by dividing the following values by 240 volts as shown in Table 550.30~~18~~(B).

(6) If outlets or circuits are provided for other than factory-installed appliances, include the anticipated load.

Informational Note: See Informative Annex D, Example D11, for an illustration of the application of this calculation.

Table 550.30~~18~~(B) Freestanding Range Load

Nameplate Rating (watts)	Use (volt-amperes)
0–10,000	80 percent of rating
Over 10,000–12,500	8,000
Over 12,500–13,500	8,400
Over 13,500–14,500	8,800
Over 14,500–15,500	9,200
Over 15,500–16,500	9,600

Table 550.3018(B) Freestanding Range Load

Nameplate Rating (watts)	Use (volt-amperes)
Over 16,500–17,500	10,000

550.3018(C) Optional Method of Calculation for Lighting and Appliance Load.
The optional method for calculating lighting and appliance load shown in 220.82 120.82 shall be permitted.

Part IV Interconnected Sections of Mobile or Manufactured Home Units

550.4119 Interconnection of Multiple-Section Mobile or Manufactured Home Units.

550.4119(A) Wiring Methods.
Approved and listed fixed-type wiring methods shall be used to join portions of a circuit that must be electrically joined and are located in adjacent sections after the home is installed on its support foundation. The circuit's junction shall be accessible for disassembly when the home is prepared for relocation.

Informational Note: See 550.175(K) for component interconnections.

550.4119(B) Disconnecting Means.
Expandable or multiunit manufactured homes, not having permanently installed feeders, that are to be moved from one location to another shall be permitted to have disconnecting means with branch-circuit protective equipment in each unit when so located that after assembly or joining together of units, the requirements of 550.10 will be met.

~~**550.20 Outdoor Outlets, Luminaires, Air-Cooling Equipment, and So Forth.**~~

~~**550.20(A) Listed for Outdoor Use.**~~
~~Outdoor luminaires and equipment shall be listed for wet locations or outdoor use. Outdoor receptacles shall comply with 406.9. Where located on the underside of the home or located under roof extensions or similarly protected locations, outdoor luminaires and equipment shall be listed for use in damp locations.~~

~~**550.20(B) Outside Heating Equipment, Air-Conditioning Equipment, or Both.**~~
~~A mobile home provided with a branch circuit designed to energize outside heating equipment, air-conditioning equipment, or both, located outside the mobile home, other than room air conditioners, shall have such branch-circuit conductors terminate in a listed outlet box, or disconnecting means, located on the outside of the mobile home. A label shall be permanently affixed adjacent to the outlet box and shall contain the following information:~~

~~THIS CONNECTION IS FOR HEATING~~
~~AND/OR AIR-CONDITIONING EQUIPMENT.~~
~~THE BRANCH CIRCUIT IS RATED AT NOT MORE THAN~~
~~_____ AMPERES, AT _____ VOLTS, 60 HERTZ,~~
~~_____ CONDUCTOR AMPACITY.~~
~~A DISCONNECTING MEANS SHALL BE LOCATED~~
~~WITHIN SIGHT OF THE EQUIPMENT.~~

~~The correct voltage and ampere rating shall be given. The tag shall be not less than 0.51 mm (0.020 in.) thick etched brass, stainless steel, anodized or alclad aluminum, or equivalent. The tag shall not be less than 75 mm by 45 mm (3 in. by 1¾ in.) minimum size.~~

~~**550.25 Arc-Fault Circuit-Interrupter Protection.**~~
~~All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets or devices installed in mobile homes and manufactured homes shall comply with 210.12~~

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Part VIII. Services and Feeders

550.530 Distribution System.
The mobile home park secondary electrical distribution system to mobile home lots shall be single-phase, 120/240 volts, nominal.

550.531 Allowable Demand Factors.
Park electrical wiring systems shall be calculated (at 120/240 volts) on the larger of the following:

(1) 16,000 volt-amperes for each mobile home lot

(2) The load calculated in accordance with 550.3018 for the largest typical mobile home that each lot will accept

It shall be permissible to calculate the feeder or service load in accordance with Table 550.531. No demand factor shall be allowed for any other load, except as provided in this *Code*.

Table 550.531 Demand Factors for Services and Feeders

Number of Mobile Homes	Demand Factor (%)
1	100
2	55
3	44
4	39
5	33
6	29
7–9	28
10–12	27
13–15	26
16–21	25

Table 550.531 Demand Factors for Services and Feeders

Number of Mobile Homes	Demand Factor (%)
22–40	24
41–60	23
61 and over	22

550.532 Service Equipment.

550.532(A) Mobile Home Service Equipment.
The mMobile home service equipment shall not be mounted in or on the mobile homes. The service equipment shall be rated not less than that required in accordance with by 550.532(C), mounted in a readily accessible outdoor location, and mounted within sight from the mobile home it serves. The installation of the service equipment shall comply with Article 230, The mobile home service disconnect shall be permitted to be used as the emergency disconnect in accordance with 230.70(A)(2) and 230.70(B)(2)230.85.

550.532(B) Manufactured Home Service Equipment.
The mManufactured home service equipment shall be permitted to be installed in or on a manufactured homes, provided that if all of the following conditions are met:

(1) The manufacturer shall include in its written installation instructions information indicating that the home shall be secured in place by an anchoring system or installed on and secured to a permanent foundation.

(2) The installation of the service shall comply with Article 230 Part I through Part VII of Article 230.

(3) Means shall be provided for the connection of a grounding electrode conductor to the service equipment and routing it outside the structure.

(4) Bonding and grounding of the service shall comply be in accordance with Article 250, Part I through Part V of Article 250.

(5) The manufacturer shall include in its written installation instructions one method of grounding the service equipment at the installation site. The instructions shall clearly state that other methods of grounding are found in Article 250.

(6) The minimum size grounding electrode conductor shall be specified in the instructions.

(7) A warning label shall be mounted on or adjacent to the service equipment. The label shall meet meeting the requirements in 110.21(B) and shall stateing the following. shall be mounted on or adjacent to the service equipment:

WARNING
DO NOT PROVIDE ELECTRICAL POWER
UNTIL THE GROUNDING ELECTRODE(S)
IS INSTALLED AND CONNECTED
(SEE INSTALLATION INSTRUCTIONS).

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Where the service equipment is not installed in or on the unit, the installation shall comply with the other requirements of this section.

550.532(C) Rating.
Mobile home service equipment shall be rated at not less than 100 amperes at 120/240 volts, and provisions shall be made for connecting a mobile home feeder assembly by a permanent wiring method. Power outlets used as mobile home service equipment shall also be permitted to contain receptacles rated up to 50 amperes with appropriate overcurrent protection. Fifty-ampere receptacles shall conform to the configuration shown in Figure 550.10(C).

Informational Note: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*, Figure 14-50, for complete details of the 50-ampere plug and receptacle configuration.

550.532(D) Additional Outside Electrical Equipment.
Means for connecting a mobile home accessory building or structure or additional electrical equipment located outside a mobile home by a fixed wiring method shall be provided in either the mobile home service equipment or the local external disconnecting means permitted in 550.532(A).

550.52 (E) Replacement Home.

When existing service equipment is reconnected to a replacement mobile or manufactured home, the service shall be provided with a surge protective device in accordance with 230.67.

550.532(EF) Additional Receptacles on Service Equipment.
Receptacles located outside a mobile or manufactured homes shall be provided with GFCI ground-fault circuit-interrupter protection as specified by 210.8(A). Where receptacles provide power to a mobile or manufactured homes in accordance with 550.10, GFCI ground-fault circuit-interrupter protection shall not be required.

550.532(FG) Mounting Height.
Outdoor mobile home disconnecting means shall be installed so the bottom of the enclosure containing the disconnecting means is not less than 600 mm (2 ft) above finished grade or working platform. The disconnecting means shall be installed so that the center of the grip of the operating handle, when in the highest position, is not more than 2.0 m (6 ft 7 in.) above the finished grade or working platform.

550.532(GH) Marking.
Where a 125/250-volt receptacle is used in mobile home service equipment, the service equipment shall be marked as follows:

TURN DISCONNECTING SWITCH OR
CIRCUIT BREAKER OFF BEFORE INSERTING
OR REMOVING PLUG. PLUG MUST BE FULLY
INSERTED OR REMOVED.

The marking shall be located on the service equipment adjacent to the receptacle outlet.

550.533 Feeder.

550.533(A) Feeder Equipment.
The feeder assembly, including the disconnecting means, shall not be mounted in or on the mobile home. A manufactured home feeder disconnecting means shall be permitted to be installed in or on the manufactured home in accordance with the requirements of 550.532(B). The feeder equipment shall be rated not less than that required in 550.532(C), mounted in a readily accessible outdoor location, and within sight from the mobile home or manufactured home it serves. Grounding of the disconnecting means shall be in accordance with 250.532.

550.533(B) Feeder Conductors.
Feeder conductors shall comply with the following:

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(1) Feeder conductors shall consist of either a listed cord, factory installed in accordance with 550.10(B), or a permanently installed feeder consisting of four insulated, color-coded conductors that shall be identified by the factory or field marking of the conductors in compliance with 310.6. Equipment grounding conductors shall not be identified by stripping the insulation.

(2) Feeder conductors shall be installed in compliance with 250.32(B).

Exception: An existing feeder installed without an equipment grounding conductor shall be permitted to comply with 250.32(B)(1) Exception No. 1.

550.5~~3~~3(C) Feeder Capacity.
Mobile home and manufactured home feeder circuit conductors shall have a capacity not less than the loads supplied, shall have an ampacity of not less than 100 amperes, and shall be permitted to be sized in accordance with 310.12.

Public Comment No. 560-NFPA 70-2024 [Article 550]

Article 550 Mobile Homes, Manufactured Homes, and Mobile Home Parks

Part I. General

550.1 Scope.

This article covers electrical conductors and equipment installed within or on mobile and manufactured homes, conductors that connect mobile and manufactured homes to a supply of electricity, and installation of electrical wiring, luminaires, equipment, and appurtenances related to electrical installations within a mobile home park up to the mobile home service-entrance conductors or, if none, the mobile home service equipment.

> Informational Note: See 24 CFR 3280, *Manufactured Home Construction and Safety Standards*, of the Federal Department of Housing and Urban Development for additional information on manufactured housing.

550.2 Listing Requirements.

All electrical materials, devices, appliances, fittings, and other equipment shall be listed and labeled by a qualified testing agency and be connected in an approved manner when installed.

550.4 General Requirements.

(A) In Other Than Mobile Home Parks.

Mobile homes installed in other than mobile home parks shall comply with the requirements of this article.

(B) Connection to Wiring System.

This article shall apply to mobile homes intended for connection to a wiring system rated 120/240 volts, nominal, 3-wire ac, with a grounded neutral conductor.

Part II. Mobile and Manufactured Homes

550.10 Power Supply.

(A) Feeder.

The power supply to the mobile home shall be a feeder assembly consisting of not more than one listed 50-ampere mobile home power-supply cord or a permanently installed feeder.

Exception No. 1: A mobile home that is factory equipped with gas or oil-fired central heating equipment and cooking appliances shall be permitted to be provided with a listed mobile home power-supply cord rated 40 amperes.

Exception No. 2: A feeder assembly shall not be required for manufactured homes constructed in accordance with 550.32(B).

(B) Power-Supply Cord.

If the mobile home has a power-supply cord, it shall be permanently attached to the panelboard's enclosure, or to a junction box permanently connected to the panelboard, with the free end terminating in an attachment plug cap.

Cords with adapters and pigtail ends, extension cords, and similar items shall not be attached to, or shipped with, mobile homes.

A suitable clamp or the equivalent shall be provided at the panelboard knockout to afford strain relief for the cord to prevent strain from being transmitted to the terminals when the power-supply cord is handled in its intended manner.

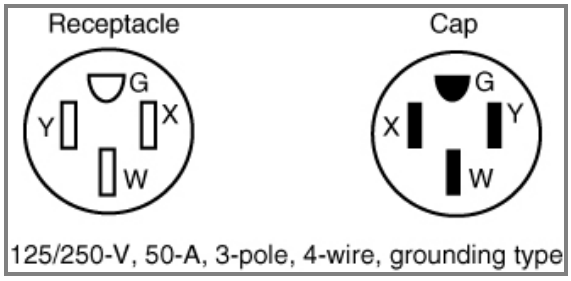
Cords shall be a listed type with four conductors, one of which shall be identified by a continuous green color or a continuous green color with one or more yellow stripes for use as the equipment grounding conductor.

(C) Attachment Plug Cap.

The attachment plug cap shall be a 3-pole, 4-wire, grounding type, rated 50 amperes, 125/250 volts with a configuration as shown in Figure 550.10(C) and intended for use with the 50-ampere, 125/250-volt receptacle configuration shown in Figure 550.10(C). It shall be listed, by itself or as part of a power-supply cord assembly, for the purpose and shall be molded to or installed on the flexible cord so that it is secured tightly to the cord at the point where the cord enters the attachment plug cap. If a right-angle cap is used, the configuration shall be oriented so that the grounding member is farthest from the cord.

> Informational Note: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*, Figure 14-50, for complete details of the 50-ampere plug and receptacle configuration.

Figure 550.10(C) 50-Ampere, 125/250-Volt Receptacle and Attachment Plug Cap Configurations, 3-Pole, 4-Wire, Grounding-Types, Used for Mobile Home Supply Cords and Mobile Home Parks.



(D) Overall Length of a Power-Supply Cord.

The overall length of a power-supply cord, measured from the end of the cord, including bared leads, to the face of the attachment plug cap shall not be less than 6.4 m (21 ft) and shall not exceed 11 m (36½ ft). The length of the cord from the face of the attachment plug cap to the point where the cord enters the mobile home shall not be less than 6.0 m (20 ft).

(E) Marking.

The power-supply cord shall bear the following marking:

FOR USE WITH MOBILE HOMES — 40 AMPERES

or

FOR USE WITH MOBILE HOMES — 50 AMPERES

(F) Point of Entrance.

The point of entrance of the feeder assembly to the mobile home shall be in the exterior wall, floor, or roof.

(G) Protected.

Where the cord passes through walls or floors, it shall be protected by means of conduits and bushings or equivalent. The cord shall be permitted to be installed within the mobile home walls, provided a continuous raceway having a maximum size of 32 mm (1¼ in.) is installed from the branch-circuit panelboard to the underside of the mobile home floor.

(H) Protection Against Corrosion and Mechanical Damage.

Permanent provisions shall be made for the protection of the attachment plug cap of the power-supply cord and any connector cord assembly or receptacle against corrosion and mechanical damage if such devices are in an exterior location while the mobile home is in transit.

(I) Mast Weatherhead or Raceway.

Where the calculated load exceeds 50 amperes or where a permanent feeder is used, the supply shall be by means of either of the following:

(1) One mast weatherhead installation, installed in accordance with Article 230, Part II, containing four continuous, insulated, color-coded feeder conductors, one of which shall be an equipment grounding conductor.

(2) Raceways from the disconnecting means in the mobile home to the underside of the mobile home, with provisions for attachment to a suitable junction box or fitting to the raceway on the underside of the mobile home [with or without conductors as in 550.10(I)(1)], which shall be one of the following:

a. Rigid metal conduit

b. Intermediate metal conduit

c. Rigid polyvinyl chloride conduit

d. Other raceways identified for the location

The manufacturer shall provide written installation instructions stating the proper feeder conductor sizes for the raceway and the size of the junction box to be used.

550.11 Disconnecting Means and Branch-Circuit Protective Equipment.

The branch-circuit equipment shall be permitted to be combined with the disconnecting means as a single assembly. Such a combination shall be permitted to be designated as a panelboard. If a fused panelboard is used, the maximum fuse size for the mains shall be plainly marked with lettering at least 6 mm (¼ in.) high and visible when fuses are changed.

Where plug fuses and fuseholders are used, they shall be tamper-resistant Type S, enclosed in dead-front fuse panelboards. Electrical panelboards containing circuit breakers shall also be dead-front type.

> Informational Note: See 110.22 concerning identification of each disconnecting means and each service, feeder, or branch circuit at the point where it originated and the type marking needed.

(A) Disconnecting Means.

A single disconnecting means shall be provided in each mobile home consisting of a circuit breaker, or a switch and fuses and its accessories installed in a readily accessible location near the point of entrance of the supply cord or conductors into the mobile home. The main circuit breakers or fuses shall be plainly marked "Main." This equipment shall contain a solderless type of grounding connector or bar for the purposes of grounding, with sufficient terminals for all grounding conductors. The terminations of the grounded circuit conductors shall be insulated in accordance with 550.16(A). The disconnecting equipment shall have a rating not less than the calculated load. The distribution equipment, either circuit breaker or fused type, shall be located a minimum of 600 mm (24 in.) from the bottom of such equipment to the floor level of the mobile home.

> Informational Note: See 550.20(B) for information on disconnecting means for branch circuits designed to energize heating or air-conditioning equipment, or both, located outside the mobile home, other than room air conditioners.

A panelboard shall be rated not less than 50 amperes and employ a 2-pole circuit breaker rated 40 amperes for a 40-ampere supply cord, or 50 amperes for a 50-ampere supply cord. A panelboard employing a disconnect switch and fuses shall be rated 60 amperes and shall employ a single 2-pole, 60-ampere fuseholder with 40- or 50-ampere main fuses for 40- or 50-ampere supply cords, respectively. The outside of the panelboard shall be plainly marked with the fuse size.

The panelboard shall be located in an accessible location but shall not be located in a bathroom or a clothes closet. A clear working space at least 750 mm (30 in.) wide and 750 mm (30 in.) in front of the panelboard shall be provided. This space shall extend from the floor to the top of the panelboard.

(B) Branch-Circuit Protective Equipment.

Branch-circuit distribution equipment shall be installed in each mobile home and shall include overcurrent protection for each branch circuit consisting of either circuit breakers or fuses.

The branch-circuit overcurrent devices shall be rated as follows:

(1) Not more than the circuit conductors; and

(2) Not more than 150 percent of the rating of a single appliance rated 13.3 amperes or more that is supplied by an individual branch circuit; but

(3) Not more than the overcurrent protection size and of the type marked on the air conditioner or other motor-operated appliance.

(C) Two-Pole Circuit Breakers.

Where circuit breakers are provided for branch-circuit protection, 240-volt circuits shall be protected by a 2-pole common or companion trip, or by circuit breakers with identified handle ties.

(D) Electrical Nameplates.

A metal nameplate on the outside adjacent to the feeder assembly entrance shall read as follows:

THIS CONNECTION FOR 120/240-VOLT,
3-POLE, 4-WIRE, 60-HERTZ,
_____ AMPERE SUPPLY

The correct ampere rating shall be marked in the blank space.

Exception: For manufactured homes, the manufacturer shall provide in its written installation instructions or in the data plate the minimum ampere rating of the feeder assembly or, where provided, the service-entrance conductors intended for connection to the manufactured home. The rating provided shall not be less than the minimum load calculated in accordance with 550.18.

550.12 Branch Circuits.

The number of branch circuits required shall be determined in accordance with 550.12(A) through (E).

(A) Lighting.

The number of branch circuits shall be based on 33 volt-amperes/m^2 (3 VA/ft^2) times outside dimensions of the mobile home (coupler excluded) divided by 120 volts to determine the number of 15- or 20-ampere lighting area circuits, for example,

$$\frac{3 \times \text{length} \times \text{width}}{120 \times 15 \text{ (or } 20)} = \text{No. of 15- (or 20-) ampere circuits} \quad \textbf{[550.12(A)]}$$

(B) Small Appliances.

In kitchens, pantries, dining rooms, and breakfast rooms, two or more 20-ampere small-appliance circuits, in addition to the number of circuits required elsewhere in this section, shall be provided for all receptacle outlets required by 550.13(D) in these rooms. Such circuits shall have no other outlets.

Exception No. 1: Receptacle outlets installed solely for the electrical supply and support of an electric clock in any the rooms specified in 550.12(B) shall be permitted.

Exception No. 2: Receptacle outlets installed to provide power for supplemental equipment and lighting on gas-fired ranges, ovens, or counter-mounted cooking units shall be permitted.

Exception No. 3: A single receptacle for refrigeration equipment shall be permitted to be supplied from an individual branch circuit rated 15 amperes or greater.

Countertop receptacle outlets installed in the kitchen shall be supplied by not less than two small-appliance circuit branch circuits, either or both of which shall be permitted to supply receptacle outlets in the kitchen and other locations specified in 550.12(B).

(C) Laundry Area.

Where a laundry area is provided, a 20-ampere branch circuit shall be provided to supply the laundry receptacle outlet(s). This circuit shall have no other outlets.

(D) General Appliances.

For general appliances, such as furnaces, water heaters, ranges, and central or room air conditioners, there shall be one or more circuits of adequate rating in accordance with the following:

Informational Note: See Article 440, Parts I through VI, for central air conditioning.

(1) The ampere rating of fixed appliances shall be not over 50 percent of the circuit rating if lighting outlets (receptacles, other than kitchen, dining area, and laundry, considered as lighting outlets) are on the same circuit.

(2) For fixed appliances on a circuit without lighting outlets, the sum of rated amperes shall not exceed the branch-circuit rating. Motor loads or continuous loads shall not exceed 80 percent of the branch-circuit rating.

(3) The rating of a single cord- and plug-connected appliance on a circuit having no other outlets shall not exceed 80 percent of the circuit rating.

(4) The rating of a range branch circuit shall be based on the range demand as specified for ranges in 550.18(B)(5).

(E) Bathrooms.

Bathroom receptacle outlets shall be supplied by at least one 20-ampere branch circuit. Such circuits shall have no outlets other than as provided for in 550.13(E)(2).

550.13 Receptacle Outlets.

(A) Grounding-Type Receptacle Outlets.

All receptacle outlets shall comply with the following:

(1) Be of grounding type

(2) Be installed according to 406.12

(3) Except where supplying specific appliances, be 15- or 20-ampere, 125-volt, either single or multiple type, and accept parallel-blade attachment plugs

(B) Ground-Fault Circuit Interrupters (GFCIs).

Ground-fault circuit-interrupter protection shall be provided as required in 210.8.

(C) Cord-Connected Fixed Appliance.

A grounding-type receptacle outlet shall be provided for each cord-connected fixed appliance installed.

(D) Receptacle Outlets Required.

Except in the bath, closet, and hallway areas, receptacle outlets shall be installed at wall spaces 600 mm (2 ft) wide or more so that no point along the floor line is more than 1.8 m (6 ft) measured horizontally from an outlet in that space. In addition, a receptacle outlet shall be installed in the following locations:

(1) Over or adjacent to countertops in the kitchen [at least one on each side of the sink if countertops are on each side and are 300 mm (12 in.) or over in width].

(2) Adjacent to the refrigerator and freestanding gas-range space. A multiple-type receptacle shall be permitted to serve as the outlet for a countertop and a refrigerator.

(3) At countertop spaces for built-in vanities.

(4) At countertop spaces under wall-mounted cabinets.

(5) In the wall at the nearest point to where a bar-type counter attaches to the wall.

(6) In the wall at the nearest point to where a fixed room divider attaches to the wall.

(7) In laundry areas within 1.8 m (6 ft) of the intended location of the laundry appliance(s).

(8) At least one receptacle outlet located outdoors and accessible at grade level and not more than 2.0 m (6½ ft) above grade. A receptacle outlet located in a compartment accessible from the outside of the unit shall be considered an outdoor receptacle.

(9) At least one receptacle outlet shall be installed in bathrooms within 900 mm (36 in.) of the outside edge of each basin. The receptacle outlet shall be located above or adjacent to the basin location. This receptacle shall be in addition to any receptacle that is a part of a luminaire or appliance. The receptacle shall not be enclosed within a bathroom cabinet or vanity.

(E) Pipe Heating Cable(s) Outlet.

For the connection of pipe heating cable(s), a receptacle outlet shall be located on the underside of the unit as follows:

(1) Within 600 mm (2 ft) of the cold water inlet.

(2) Connected to an interior branch circuit, other than a small-appliance branch circuit. It shall be permitted to use a bathroom receptacle circuit for this purpose.

(3) On a circuit where all of the outlets are on the load side of the ground-fault circuit interrupter.

(4) This outlet shall not be considered as the receptacle required by 505.30(B)(2).

(F) Receptacle Outlets Not Permitted.

Receptacle outlets shall not be permitted in the following locations:

(1) Receptacle outlets shall not be installed within or directly over a bathtub or shower space.

(2) A receptacle shall not be installed in a face-up position in any countertop.

(3) Receptacle outlets shall not be installed above electric baseboard heaters, unless provided for in the listing or manufacturer's instructions.

(G) Receptacle Outlets Not Required.

Receptacle outlets shall not be required in the following locations:

(1) In the wall space occupied by built-in kitchen or wardrobe cabinets

(2) In the wall space behind doors that can be opened fully against a wall surface

(3) In room dividers of the lattice type that are less than 2.5 m (8 ft) long, not solid, and within 150 mm (6 in.) of the floor

(4) In the wall space afforded by bar-type counters

550.14 Luminaires and Appliances.

(A) Fasten Appliances in Transit.

Means shall be provided to securely fasten appliances when the mobile home is in transit. (See 550.16 for provisions on grounding.)

(B) Accessibility.

Every appliance shall be accessible for inspection, service, repair, or replacement without removal of permanent construction.

(C) Pendants.

Listed pendant-type luminaires or pendant cords shall be permitted.

(D) Bathtub and Shower Luminaires.

Where a luminaire is installed over a bathtub or in a shower stall, it shall be of the enclosed and gasketed type listed for wet locations.

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.

(A) Nonmetallic Boxes.

Nonmetallic boxes shall be permitted only with nonmetallic cable or nonmetallic raceways.

(B) Nonmetallic Cable Protection.

Nonmetallic cable located 380 mm (15 in.) or less above the floor, if exposed, shall be protected from physical damage by covering boards, guard strips, or raceways. Cable likely to be damaged by stowage shall be so protected in all cases.

(C) Metal-Covered and Nonmetallic Cable Protection.

Metal-covered and nonmetallic cables shall be permitted to pass through the centers of the wide side of 2 by 4 studs. However, they shall be protected where they pass through 2 by 2 studs or at other studs or frames where the cable or armor would be less than 32 mm (1¼ in.) from the inside or outside surface of the studs where the wall covering materials are in contact with the studs. Steel plates on each side of the cable, or a tube, with not less than 1.35 mm (0.053 in.) wall thickness shall be required to protect the cable. These plates or tubes shall be securely held in place.

(D) Metal Faceplates.

Where metal faceplates are used, the installation shall comply with 406.40(B) and 406.16(B).

(E) Installation Requirements.

Where a range, clothes dryer, or other appliance is connected by metal-covered cable or flexible metal conduit, a length of not less than 900 mm (3 ft) of unsupported cable or conduit shall be provided to service the appliance. The cable or flexible metal conduit shall be secured to the wall. Type NM or Type SE cable shall not be used to connect a range or dryer. This shall not prohibit the use of Type NM or Type SE cable between the branch-circuit overcurrent protective device and a junction box or range or dryer receptacle.

(F) Raceways.

All cut ends of conduit and tubing shall be reamed or otherwise finished to remove rough edges. Where rigid metal conduit or intermediate metal conduit is terminated at an enclosure with a locknut and bushing connection, two locknuts shall be provided, one inside and one outside of the enclosure.

(G) Switches.

Switches shall be rated as follows:

(1) For lighting circuits, switches shall be rated not less than 10 amperes, 120 to 125 volts, and in no case less than the connected load.

(2) Switches for motor or other loads shall comply with 406.46.

(H) Under-Chassis Wiring (Exposed to Weather).

(1)

Where outdoor or under-chassis line-voltage (120 volts, nominal, or higher) wiring is exposed, it shall be protected by a conduit or raceway identified for use in wet locations. The conductors shall be listed for use in wet locations.

(2)

Where wiring is exposed to physical damage, it shall be protected by a raceway, conduit, or other means.

(I) Boxes, Fittings, and Cabinets.

Boxes, fittings, and cabinets shall be securely fastened in place and shall be supported from a structural member of the home, either directly or by using a substantial brace.

Exception: Snap-in-type boxes. Boxes provided with special wall or ceiling brackets and wiring devices with integral enclosures that securely fasten to walls or ceilings and are identified for the use shall be permitted without support from a structural member or brace. The testing and approval shall include the wall and ceiling construction systems for which the boxes and devices are intended to be used.

(J) Appliance Terminal Connections.

Appliances having branch-circuit terminal connections that operate at temperatures higher than 60°C (140°F) shall have circuit conductors as described in the following:

(1) Branch-circuit conductors having an insulation suitable for the temperature encountered shall be permitted to be run directly to the appliance.

(2) Conductors having an insulation suitable for the temperature encountered shall be run from the appliance terminal connection to a readily accessible outlet box placed at least 300 mm (1 ft) from the appliance. These conductors shall be in a suitable raceway or Type AC or MC cable of at least 450 mm (18 in.) but not more than 1.8 m (6 ft) in length.

(K) Component Interconnections.

Fittings and connectors that are intended to be concealed at the time of assembly shall be listed and identified for the interconnection of building components. Such fittings and connectors shall be equal to the wiring method employed in insulation, temperature rise, and fault-current withstanding and shall be capable of enduring the vibration and shock occurring in mobile home transportation.

Informational Note: See 550.19 for interconnection of multiple section units.

550.16 Grounding.

Grounding of both electrical and nonelectrical metal parts in a mobile home shall be through connection to a grounding bus in the mobile home panelboard and shall be connected through the green-colored insulated conductor in the supply cord or the feeder wiring to the grounding bus in the service-entrance equipment located adjacent to the mobile home location. Neither the frame of the mobile home nor the frame of any appliance shall be connected to the grounded circuit conductor in the mobile home. Where the panelboard is the service equipment as permitted by 550.32(B), the neutral conductors and the equipment grounding bus shall be connected.

(A) Grounded Conductor.

(1) Insulated.

The grounded circuit conductor shall be insulated from the equipment grounding conductors and from equipment enclosures and other grounded parts. The grounded circuit conductor terminals in the panelboard and in ranges, clothes dryers, counter-mounted cooking units, and wall-mounted ovens shall be insulated from the equipment enclosure. Bonding screws, straps, or buses in the panelboard or in appliances shall be removed and discarded. Where the panelboard is the service equipment as permitted by 550.32(B), the neutral conductors and the equipment grounding bus shall be connected.

(2) Connections of Ranges and Clothes Dryers.

Connections of ranges and clothes dryers with 120/240-volt, 3-wire ratings shall be made with 4-conductor cord and 3-pole, 4-wire, grounding-type plugs or by Type AC cable, Type MC cable, or conductors enclosed in flexible metal conduit.

(B) Equipment Grounding Means.

(1) Supply Cord or Permanent Feeder.

The green-colored insulated grounding wire in the supply cord or permanent feeder wiring shall be connected to the grounding bus in the panelboard or disconnecting means.

(2) Electrical System.

In the electrical system, all exposed metal parts, enclosures, frames, luminaire canopies, and so forth, shall be effectively bonded to the grounding terminal or enclosure of the panelboard.

(3) Cord-Connected Appliances.

Cord-connected appliances, such as washing machines, clothes dryers, and refrigerators, and the electrical system of gas ranges and so forth, shall be grounded by means of a cord with an equipment grounding conductor and grounding-type attachment plug.

(C) Bonding of Non-Current-Carrying Metal Parts.

(1) Exposed Non-Current-Carrying Metal Parts.

All exposed non-current-carrying metal parts that are likely to become energized shall be effectively bonded to the grounding terminal or enclosure of the panelboard. A bonding conductor shall be connected between the panelboard and an accessible terminal on the chassis. Chassis of multiple mobile home sections shall be bonded together with a solid copper, 8 AWG minimum, insulated or bare, bonding conductor with terminations in accordance with 250.8 and 250.12.

(2) Grounding Terminals.

Grounding terminals shall be of the solderless type and listed as pressure-terminal connectors recognized for the wire size used. The bonding conductor shall be solid or stranded, insulated or bare, and shall be 8 AWG copper minimum, or equivalent. The bonding conductor shall be routed so as not to be exposed to physical damage.

(3) Metallic Piping and Ducts.

Metallic gas, water, and waste pipes and metallic air-circulating ducts shall be considered bonded if they are connected to the terminal on the chassis [see 550.16(C)(1)] by clamps, solderless connectors, or by suitable grounding-type straps.

(4) Metallic Roof and Exterior Coverings.

Any metallic roof and exterior covering shall be considered bonded if the following conditions are met:

(1) The metal panels overlap one another and are securely attached to the wood or metal frame parts by metallic fasteners.

(2) The lower panel of the metallic exterior covering is secured by metallic fasteners at a cross member of the chassis by two metal straps per mobile home unit or section at opposite ends.

The bonding strap material shall be a minimum of 100 mm (4 in.) in width of material equivalent to the skin or a material of equal or better electrical conductivity. The straps shall be fastened with paint-penetrating fittings such as screws and starwashers or equivalent.

550.17 Testing.

(A) Dielectric Strength Test.

The wiring of each mobile home shall be subjected to a 1-minute, 900-volt, dielectric strength test (with all switches closed) between live parts (including neutral conductor) and the mobile home ground. Alternatively, the test shall be permitted to be performed at 1080 volts for 1 second. This test shall be performed after branch circuits are complete and after luminaires or appliances are installed.

Exception: Listed luminaires or appliances shall not be required to withstand the dielectric strength test.

(B) Continuity and Operational Tests and Polarity Checks.

Each mobile home shall be subjected to all of the following:

(1) An electrical continuity test to ensure that all exposed electrically conductive parts are properly bonded

(2) An electrical operational test to demonstrate that all equipment, except water heaters and electric furnaces, is connected and in working order

(3) Electrical polarity checks of permanently wired equipment and receptacle outlets to determine that connections have been properly made

550.18 Calculations.

The method detailed in 550.18(A) through 550.18(C) shall be employed in calculating the supply-cord and distribution-panelboard load for each feeder assembly for each mobile home in lieu of the procedure shown in Article 120, Parts I through IV, and be based on a 3-wire, 120/240-volt ac only supply with 120-volt loads balanced between the two ungrounded conductors of the 3-wire system.

(A) Lighting, Small-Appliance, and Laundry Load.

(1) Lighting Volt-Amperes.

Length times width of mobile home floor (outside dimensions) times 33 volt-amperes/m^2 (3 VA/ft^2)— for example, length × width × 3 = lighting volt-amperes.

(2) Small-Appliance Volt-Amperes.

Number of circuits times 1500 volt-amperes for each 20-ampere appliance receptacle circuit — for example, number of circuits × 1500 = small-appliance volt-amperes.

(3) Laundry Area Circuit Volt-Amperes.

1500 volt-amperes.

(4) Total Volt-Amperes.

Lighting volt-amperes plus small-appliance volt-amperes plus laundry area volt-amperes equals total volt-amperes.

(5) Net Volt-Amperes.

First 3000 total volt-amperes at 100 percent plus remainder at 35 percent equals volt-amperes to be divided by 240 volts to obtain current (amperes) per leg.

(B) Total Load for Determining Power Supply.

Total load for determining power supply is the sum of the following:

(1) Lighting and small-appliance load as calculated in 550.18(A)(5).

(2) Nameplate amperes for motors and heater loads (exhaust fans, air conditioners, electric, gas, or oil heating). Omit smaller of the heating and cooling loads, except include blower motor if used as air-conditioner evaporator motor. Where an air conditioner is not installed and a 40-ampere power-supply cord is provided, allow 15 amperes per leg for air conditioning.

(3) Twenty-five percent of current of largest motor in 550.18(B)(2).

(4) Total of nameplate amperes for waste disposer, dishwasher, water heater, clothes dryer, wall-mounted oven, cooking units. Where the number of these appliances exceeds three, use 75 percent of total.

(5) Derive amperes for freestanding range (as distinguished from separate ovens and cooking units) by dividing the following values by 240 volts as shown in Table 550.18(B).

(6) If outlets or circuits are provided for other than factory-installed appliances, include the anticipated load.

Informational Note: See Informative Annex D, Example D11, for an illustration of the application of this calculation.

Table 550.18(B) Freestanding Range Load

Nameplate Rating (watts)	Use (volt-amperes)
0–10,000	80 percent of rating
Over 10,000–12,500	8,000
Over 12,500–13,500	8,400
Over 13,500–14,500	8,800
Over 14,500–15,500	9,200
Over 15,500–16,500	9,600
Over 16,500–17,500	10,000

(C) Optional Method of Calculation for Lighting and Appliance Load.

The optional method for calculating lighting and appliance load shown in 120.82 shall be permitted.

550.19 Interconnection of Multiple-Section Mobile or Manufactured Home Units.

(A) Wiring Methods.

Approved and listed fixed-type wiring methods shall be used to join portions of a circuit that must be electrically joined and are located in adjacent sections after the home is installed on its support foundation. The circuit's junction shall be accessible for disassembly when the home is prepared for relocation.

Informational Note: See 550.15(K) for component interconnections.

(B) Disconnecting Means.

Expandable or multiunit manufactured homes, not having permanently installed feeders, that are to be moved from one location to another shall be permitted to have disconnecting means with branch-circuit protective equipment in each unit when so located that after assembly or joining together of units, the requirements of 550.10 will be met.

550.20 Outdoor Outlets, Luminaires, Air-Cooling Equipment, and So Forth.

(A) Listed for Outdoor Use.

Outdoor luminaires and equipment shall be listed for wet locations or outdoor use. Outdoor receptacles shall comply with 406.9. Where located on the underside of the home or located under roof extensions or similarly protected locations, outdoor luminaires and equipment shall be listed for use in damp locations.

(B) Outside Heating Equipment, Air-Conditioning Equipment, or Both.

A mobile home provided with a branch circuit designed to energize outside heating equipment, air-conditioning equipment, or both, located outside the mobile home, other than room air conditioners, shall have such branch-circuit conductors terminate in a listed outlet box, or disconnecting means, located on the outside of the mobile home. A label shall be permanently affixed adjacent to the outlet box and shall contain the following information:

THIS CONNECTION IS FOR HEATING
AND/OR AIR-CONDITIONING EQUIPMENT.
THE BRANCH CIRCUIT IS RATED AT NOT MORE THAN
_____ AMPERES, AT _____ VOLTS, 60 HERTZ,
_____ CONDUCTOR AMPACITY.
A DISCONNECTING MEANS SHALL BE LOCATED
WITHIN SIGHT OF THE EQUIPMENT.

The correct voltage and ampere rating shall be given. The tag shall be not less than 0.51 mm (0.020 in.) thick etched brass, stainless steel, anodized or alclad aluminum, or equivalent. The tag shall not be less than 75 mm by 45 mm (3 in. by 1¾ in.) minimum size.

550.25 Arc-Fault Circuit-Interrupter Protection.

All 120-volt, single-phase, 15- and 20-ampere branch circuits supplying outlets or devices installed in mobile homes and manufactured homes shall comply with 210.12

Part III. Services and Feeders

550.30 Distribution System.

The mobile home park secondary electrical distribution system to mobile home lots shall be single-phase, 120/240 volts, nominal.

550.31 Allowable Demand Factors.

Park electrical wiring systems shall be calculated (at 120/240 volts) on the larger of the following:

(1) 16,000 volt-amperes for each mobile home lot

(2) The load calculated in accordance with 550.18 for the largest typical mobile home that each lot will accept

It shall be permissible to calculate the feeder or service load in accordance with Table 550.31. No demand factor shall be allowed for any other load, except as provided in this *Code*.

Table 550.31 Demand Factors for Services and Feeders

Number of Mobile Homes	Demand Factor (%)
1	100
2	55
3	44
4	39
5	33
6	29
7–9	28
10–12	27
13–15	26
16–21	25
22–40	24
41–60	23
61 and over	22

550.32 Service Equipment.

(A) Mobile Home Service Equipment.

Mobile home service equipment shall not be mounted in or on mobile homes. The service equipment shall be rated not less than that required by 550.32(C) and mounted within sight from the mobile home it serves. The installation of the service equipment shall comply with Article 230, Part I through Part VII. The mobile home service disconnect shall be permitted to be used as the emergency disconnect in accordance with 230.70(A)(2) and 230.70(B)(2).

(B) Manufactured Home Service Equipment.

Manufactured home service equipment shall be permitted to be installed in or on manufactured homes if all of the following conditions are met:

(1) The manufacturer shall include, in its written installation instructions, information requiring that the home be secured in place by an anchoring system or installed on and secured to a permanent foundation.

(2) The installation of the service shall comply with Article 230, Part I through Part VII.

(3) Means shall be provided for the connection of a grounding electrode conductor to the service equipment and routing it outside the structure.

(4) Bonding and grounding of the service shall comply with Article 250, Part I through Part V.

(5) The manufacturer shall include, in its written installation instructions, one method of grounding the service equipment at the installation site. The instructions shall clearly state that other methods of grounding are found in Article 250.

(6) The minimum size grounding electrode conductor shall be specified in the instructions.

(7) A warning label, meeting the requirements in 110.21(B) and stating the following, shall be mounted on or adjacent to the service equipment:

WARNING
DO NOT PROVIDE ELECTRICAL POWER
UNTIL THE GROUNDING ELECTRODE(S)
IS INSTALLED AND CONNECTED
(SEE INSTALLATION INSTRUCTIONS).

Where the service equipment is not installed in or on the unit, the installation shall comply with the other requirements of this section.

(C) Rating.

Mobile home service equipment shall be rated at not less than 100 amperes at 120/240 volts, and provisions shall be made for connecting a mobile home feeder assembly by a permanent wiring method. Power outlets used as mobile home service equipment shall also be permitted to contain receptacles rated up to 50 amperes with appropriate overcurrent protection. Fifty-ampere receptacles shall conform to the configuration shown in Figure 550.10(C).

Informational Note: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*, Figure 14-50, for complete details of the 50-ampere plug and receptacle configuration.

(D) Additional Outside Electrical Equipment.

Means for connecting a mobile home accessory building or structure or additional electrical equipment located outside a mobile home by a fixed wiring method shall be provided in either the mobile home service equipment or the local external disconnecting means permitted in 550.32(A).

(E) Replacement Home.

When existing service equipment is reconnected to a replacement mobile or manufactured home, the service shall be provided with a surge protective device in accordance with 230.67.

(F) Additional Receptacles on Service Equipment.

Receptacles located outside mobile or manufactured homes shall be provided with ground-fault circuit-interrupter protection as specified by 210.8(A). Where receptacles provide power to mobile or manufactured homes in accordance with 550.10, ground-fault circuit-interrupter protection shall not be required.

(G) Mounting Height.

Outdoor mobile home disconnecting means shall be installed so the bottom of the enclosure containing the disconnecting means is not less than 600 mm (2 ft) above finished grade or working platform. The disconnecting means shall be installed so that the center of the grip of the operating handle, when in the highest position, is not more than 2.0 m (6 ft 7 in.) above the finished grade or working platform.

(H) Marking.

Where a 125/250-volt receptacle is used in mobile home service equipment, the service equipment shall be marked as follows:

TURN DISCONNECTING SWITCH OR
CIRCUIT BREAKER OFF BEFORE INSERTING
OR REMOVING PLUG. PLUG MUST BE FULLY
INSERTED OR REMOVED.

The marking shall be located on the service equipment adjacent to the receptacle outlet.

550.33 Feeder.

(A) Feeder Equipment.

The feeder assembly, including the disconnecting means, shall not be mounted in or on the mobile home. A manufactured home feeder disconnecting means shall be permitted to be installed in or on the manufactured home in accordance with the requirements of 550.32(B). The feeder equipment shall be rated not less than that required in 550.32(C), mounted in a readily accessible outdoor location, and within sight from the mobile home or manufactured home it serves. Grounding of the disconnecting means shall be in accordance with 250.32.

(B) Feeder Conductors.

Feeder conductors shall comply with the following:

(1) Feeder conductors shall consist of either a listed cord, factory installed in accordance with 550.10(B), or a permanently installed feeder consisting of four insulated, color-coded conductors that shall be identified by the factory or field marking of the conductors in compliance with 310.6. Equipment grounding conductors shall not be identified by stripping the insulation.

(2) Feeder conductors shall be installed in compliance with 250.32(B).

Exception: An existing feeder installed without an equipment grounding conductor shall be permitted to comply with 250.32(B)(1) Exception No. 1.

(C) Feeder Capacity.

Mobile home and manufactured home feeder circuit conductors shall have a capacity not less than the loads supplied, shall have an ampacity of not less than 100 amperes, and shall be permitted to be sized in accordance with 310.12.

Additional Proposed Changes

File Name	Description	Approved
CN_275.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 275 appeared in the First Draft Report.

The Correlating Committee directs CMP-7 to create a task group during the Public Comment period to develop public comments to complete the revisions to Article 550. A member of the Correlating Committee Usability Task Group is to be appointed to the
task group.

Related Item

- Correlating Committee Note No. 275

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Wed Jul 31 17:07:10 EDT 2024
Committee: NEC-P07

Correlating Committee Note No. 275-NFPA 70-2024 [Article 550]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 21:50:21 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs CMP-7 to create a task group during the Public Comment period to develop public comments to complete the revisions to Article 550. A member of the Correlating Committee Usability Task Group is to be appointed to the task group.

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 588-NFPA 70-2024 [Section No. 550.1]

550.1 Scope.

This article covers electrical conductors and equipment installed within or on mobile and manufactured homes, conductors that connect mobile and manufactured homes to a supply of electricity, and installation of electrical wiring, luminaires, equipment, and appurtenances related to electrical installations within a mobile home park up to the mobile home service-entrance conductors or, if none, the mobile home service equipment.

Informational Note: See 24 CFR 3280, *Manufactured Home Construction and Safety Standards*, of the Federal Department of Housing and Urban Development for additional information on manufactured housing.

Additional Proposed Changes

File Name	Description	Approved
CN_285.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 285 appeared in the First Draft Report on First Revision No. 8444.

The Correlating Committee directs that CMP-7 to review FR 8444 and consider removal of general requirements, such as “qualified testing agency” and “connected in an approved manner when installed”.

Related Item

• First Revision No. 8444 •

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Thu Aug 01 20:14:07 EDT 2024
Committee: NEC-P07

Correlating Committee Note No. 285-NFPA 70-2024 [New Section after 550.1]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 22:22:02 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs that CMP-7 to review FR 8444 and consider removal of general requirements, such as “qualified testing agency” and “connected in an approved manner when installed”.

First Revision No. 8444-NFPA 70-2024 [New Section after 550.1]

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 561-NFPA 70-2024 [Section No. 550.10]

550.10 Power Supply.

(A) Feeder.

The power supply to the mobile home shall be a feeder assembly consisting of not more than one listed 50-ampere mobile home power-supply cord or a permanently installed feeder.

Exception No. 1: A mobile home that is factory equipped with gas or oil-fired central heating equipment and cooking appliances shall be permitted to be provided with a listed mobile home power-supply cord rated 40 amperes.

Exception No. 2: A feeder assembly shall not be required for manufactured homes constructed in accordance with 550.32(B).

(B) Power-Supply Cord.

If the mobile home has a power-supply cord, it shall be permanently attached to the panelboard's enclosure, or to a junction box permanently connected to the panelboard, with the free end terminating in an attachment plug cap.

Cords with adapters and pigtail ends, extension cords, and similar items shall not be attached to, or shipped with, mobile homes.

A suitable clamp or the equivalent shall be provided at the panelboard knockout to afford strain relief for the cord to prevent strain from being transmitted to the terminals when the power-supply cord is handled in its intended manner.

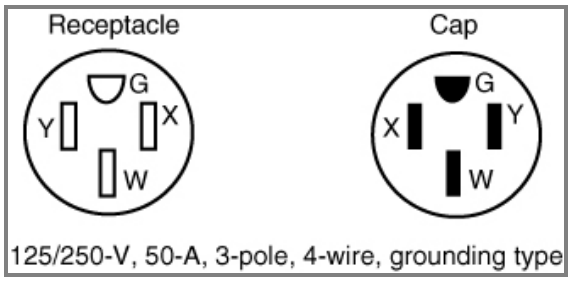
Cords shall be a listed type with four conductors, one of which shall be identified by a continuous green color or a continuous green color with one or more yellow stripes for use as the equipment grounding conductor.

(C) Attachment Plug Cap.

The attachment plug cap shall be a 3-pole, 4-wire, grounding type, rated 50 amperes, 125/250 volts with a configuration as shown in Figure 550.10(C) and intended for use with the 50-ampere, 125/250-volt receptacle configuration shown in Figure 550.10(C). It shall be listed, by itself or as part of a power-supply cord assembly, for the purpose and shall be molded to or installed on the flexible cord so that it is secured tightly to the cord at the point where the cord enters the attachment plug cap. If a right-angle cap is used, the configuration shall be oriented so that the grounding member is farthest from the cord.

Informational Note: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*, Figure 14-50, for complete details of the 50-ampere plug and receptacle configuration.

Figure 550.10(C) 50-Ampere, 125/250-Volt Receptacle and Attachment Plug Cap Configurations, 3-Pole, 4-Wire, Grounding-Types, Used for Mobile Home Supply Cords and Mobile Home Parks.



(D) Overall Length of a Power-Supply Cord.

The overall length of a power-supply cord, measured from the end of the cord, including bared leads, to the face of the attachment plug cap shall not be less than 6.4 m (21 ft) and shall not exceed 11 m (36½ ft). The length of the cord from the face of the attachment plug cap to the point where the cord enters the mobile home shall not be less than 6.0 m (20 ft).

(E) Marking.

The power-supply cord shall bear the following marking:

FOR USE WITH MOBILE HOMES — 40 AMPERES

or

FOR USE WITH MOBILE HOMES — 50 AMPERES

(F) Point of Entrance.

The point of entrance of the feeder assembly to the mobile home shall be in the exterior wall, floor, or roof.

(G) Protected.

Where the cord passes through walls or floors, it shall be protected by means of conduits and bushings or equivalent. The cord shall be permitted to be installed within the mobile home walls, provided a continuous raceway having a maximum size of 32 mm (1¼ in.) is installed from the branch-circuit panelboard to the underside of the mobile home floor.

(H) Protection Against Corrosion and Mechanical Damage.

Permanent provisions shall be made for the protection of the attachment plug cap of the power-supply cord and any connector cord assembly or receptacle against corrosion and mechanical damage if such devices are in an exterior location while the mobile home is in transit.

(I) Mast Weatherhead or Raceway.

Where the calculated load exceeds 50 amperes or where a permanent feeder is used, the supply shall be by means of either of the following:

(1) One mast weatherhead installation, installed in accordance with Article 230, Part II, containing four continuous, insulated, color-coded feeder conductors, one of which shall be an equipment grounding conductor.

(2) Raceways from the disconnecting means in the mobile home to the underside of the mobile home, with provisions for attachment to a suitable junction box or fitting to the raceway on the underside of the mobile home [with or without conductors as in 550.10(I)(1)], which shall be one of the following:

a. Rigid metal conduit

b. Intermediate metal conduit

c. Rigid polyvinyl chloride conduit

d. Other raceways identified for the location

The manufacturer shall provide written installation instructions stating the proper feeder conductor sizes for the raceway and the size of the junction box to be used.

Additional Proposed Changes

File Name	Description	Approved
CN_276.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 276 appeared in the First Draft Report on First Revision No. 8461.

The Correlating Committee directs CMP 7 to review FR 8461 and reconsider the use of the parenthetical phrase “(with or without conductors as in 550.10(I)(1))” as parenthetical expressions create confusion and misunderstanding and shall be avoided. Refer to NEC Style Manual Section 3.5.1.1. In addition, review the use of the terms
“suitable” and “proper”.

Related Item

• First Revision No. 8461

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Wed Jul 31 17:08:33 EDT 2024
Committee: NEC-P07

Correlating Committee Note No. 276-NFPA 70-2024 [Section No. 550.10(I)]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 21:52:59 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs CMP 7 to review FR 8461 and reconsider the use of the parenthetical phrase “(with or without conductors as in 550.10(I)(1))” as parenthetical expressions create confusion and misunderstanding and shall be avoided. Refer to NEC Style Manual Section 3.5.1.1. In addition, review the use of the terms “suitable” and “proper”.

First Revision No. 8461-NFPA 70-2024 [Section No. 550.10(I)]

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 562-NFPA 70-2024 [Section No. 550.13(B)]

(B) Ground-Fault Circuit Interrupters (GFCIs).

Ground-fault circuit-interrupter protection shall be provided as required in 210.8.

Additional Proposed Changes

File Name	Description	Approved
CN_277.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 277 appeared in the First Draft Report on First Revision No. 8465.

The Corelating Committee directs CMP-7 to review this first revision and consider the deletion of the section in accordance with NEC Style Manual Section 4.1.1 because 210.8 already applies and is not being modified by this section.

Related Item

- First Revision No. 8465

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Wed Jul 31 17:09:53 EDT 2024
Committee: NEC-P07

Correlating Committee Note No. 277-NFPA 70-2024 [Section No. 550.13(B)]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 21:54:56 EDT 2024

Committee Statement

Committee Statement: The Corelating Committee directs CMP-7 to review this first revision and consider the deletion of the section in accordance with NEC Style Manual Section 4.1.1 because 210.8 already applies and is not being modified by this section.

First Revision No. 8465-NFPA 70-2024 [Section No. 550.13(B)]

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 1726-NFPA 70-2024 [Section No. 550.18]

550.18 Calculations.

The method detailed in 550.18(A) through 550.18(C) shall be employed in calculating the supply-cord and distribution-panelboard load for each feeder assembly for each mobile home in lieu of the procedure shown in Article 120 , Parts I through IV, and be based on a 3-wire, 120/240-volt ac only supply with 120-volt loads balanced between the two ungrounded conductors of the 3-wire system.

(A) Lighting, Small-Appliance, and Laundry Load.

(1) Lighting Volt-Amperes.

Length times width of mobile home floor (outside dimensions) times 33 volt-amperes/m ^{2} (3 VA/ft ^{2}) — for example, length × width × 3 = lighting volt-amperes.

(2) Small-Appliance Volt-Amperes.

Number of circuits times 1500 volt-amperes for each 20-ampere appliance receptacle circuit — for example, number of circuits × 1500 = small-appliance volt-amperes.

(3) Laundry Area Circuit Volt-Amperes.

1500 volt-amperes.

(4) Total Volt-Amperes.

Lighting volt-amperes plus small-appliance volt-amperes plus laundry area volt-amperes equals total volt-amperes.

(5) Net Volt-Amperes.

First 3000 total volt-amperes at 100 percent plus remainder at 35 percent equals volt-amperes to be divided by 240 volts to obtain current (amperes) per leg.

(B) Total Load for Determining Power Supply.

Total load for determining power supply is the sum of the following:

(1) Lighting and small-appliance load as calculated in 550.18(A)(5) .

(2) Nameplate amperes for motors and heater loads (exhaust fans, air conditioners, electric, gas, or oil heating). Omit smaller of the heating and cooling loads, except include blower motor if used as air-conditioner evaporator motor. Where an air conditioner is not installed and a 40-ampere power-supply cord is provided, allow 15 amperes per leg for air conditioning.

(3) Twenty-five percent of current of largest motor in 550.18(B)(2) .

(4) Total of nameplate amperes for waste disposer, dishwasher, water heater, clothes dryer, wall-mounted oven, cooking units. Where the number of these appliances exceeds three, use 75 percent of total.

(5) Derive amperes for freestanding range (as distinguished from separate ovens and cooking units) by dividing the following values by 240 volts as shown in Table 550.18(B) .

(6) If outlets or circuits are provided for other than factory-installed appliances, include the anticipated load.

Informational Note: See Informative Annex D , Example D11, for an illustration of the application of this calculation.

Table 550.18(B) Freestanding Range Load

~~Nameplate Rating~~

~~(watts)~~ ~~Use~~

~~(volt-amperes)~~ ~~0–10,000~~ ~~80 percent of rating~~ ~~Over 10,000–12,500~~ ~~8,000~~ ~~Over 12,500–13,500~~ ~~8,400~~ ~~Over 13,500–14,500~~ ~~8,800~~ ~~Over 14,500–15,500~~ ~~9,200~~ ~~Over 15,500–16,500~~ ~~9,600~~ ~~Over 16,500–17,500~~ ~~10,000~~

~~**(C)**~~ ~~Optional Method of Calculation for Lighting and Appliance Load.~~

~~The optional method for calculating lighting and appliance load shown in~~ ~~120.82~~ ~~shall be permitted.~~

Statement of Problem and Substantiation for Public Comment

This public comment is being submitted by a CMP-7 task group consisting of Ryan Hyer, David Smith, and Dean Hunter, to relocate Article 550, Part III, Mobile and Manufactured Home calculations to Article 120, Part IX, titled Mobile and Manufactured Home Calculations. The relocation is consistent with all the calculations being in one article in accordance with section 2.3.1 of the NEC Style manual.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 1725-NFPA 70-2024 [Section No. 550.31]	

Related Item

- CI-8794-NFPA 70-2024 • CCN- 275

Submitter Information Verification

Submitter Full Name: Dean Hunter
Organization: Minnesota Department of Labor
Street Address:
City:
State:
Zip:

Submittal Date: Mon Aug 26 17:12:05 EDT 2024
Committee: NEC-P07

Public Comment No. 586-NFPA 70-2024 [Section No. 550.30]

550.30 Distribution System.

The mobile home park secondary electrical distribution system to mobile home lots shall be single-phase, 120/240 volts, nominal.

Additional Proposed Changes

File Name	Description	Approved
CN_283.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 283 appeared in the First Draft Report on First Revision No. 8333.

The Correlating Committee directs CMP 7 to review FR 8333 and reconsider the use of the parenthetical phrase (excluding wiring methods) as parenthetical expressions create confusion and misunderstanding and shall be avoided. Refer to NEC Style Manual Section 3.5.1.1.

Related Item

- First Revision No. 8333

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Thu Aug 01 20:06:39 EDT 2024
Committee: NEC-P07

Correlating Committee Note No. 283-NFPA 70-2024 [Section No. 555.30]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 22:16:03 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs CMP 7 to review FR 8333 and reconsider the use of the parenthetical phrase (excluding wiring methods) as parenthetical expressions create confusion and misunderstanding and shall be avoided. Refer to NEC Style Manual Section 3.5.1.1.

First Revision No. 8333-NFPA 70-2024 [Section No. 555.30]

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 1725-NFPA 70-2024 [Section No. 550.31]

~~**550.31** Allowable Demand Factors.~~

~~Park electrical wiring systems shall be calculated (at 120/240 volts) on the larger of the following:~~

(1) ~~16,000 volt-amperes for each mobile home lot~~

(2) ~~The load calculated in accordance with 550.18 for the largest typical mobile home that each lot will accept~~

~~It shall be permissible to calculate the feeder or service load in accordance with Table 550.31 . No demand factor shall be allowed for any other load, except as provided in this *Code* .~~

~~Table 550.31 Demand Factors for Services and Feeders~~

~~Number of~~

~~Mobile Homes Demand~~

~~Factor (%) 1 100 2 55 3 44 4 39 5 33 6 29 7–9 28 10–12 27 13–15 26 16–21 25 22–40 24 41–60 23 61 and over 22~~

Statement of Problem and Substantiation for Public Comment

Substantiation: This public comment is being submitted by a CMP-7 task group consisting of Ryan Hyer, David Smith, and Dean Hunter. This comment relocates section 550.51 to a subpart for “Demand Factor Calculations for Services and Feeders” at mobile home parks – in Article 120, Part IX. The relocation is consistent with all the calculations being in one article in accordance with section 2.3.1 of the NEC Style manual.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 1726-NFPA 70-2024 [Section No. 550.18]	

Related Item

• CI-8794-NFPA 70-2024 • CCN- 275

Submitter Information Verification

Submitter Full Name: Dean Hunter
Organization: Minnesota Department of Labor
Street Address:
City:
State:
Zip:

Submittal Date: Mon Aug 26 17:09:41 EDT 2024
Committee: NEC-P07

Public Comment No. 563-NFPA 70-2024 [Section No. 550.32]

550.32 Service Equipment.

(A) Mobile Home Service Equipment.

Mobile home service equipment shall not be mounted in or on mobile homes. The service equipment shall be rated not less than that required by 550.32(C) and mounted within sight from the mobile home it serves. The installation of the service equipment shall comply with Article 230, Part I through Part VII. The mobile home service disconnect shall be permitted to be used as the emergency disconnect in accordance with 230.70(A)(2) and 230.70(B)(2).

(B) Manufactured Home Service Equipment.

Manufactured home service equipment shall be permitted to be installed in or on manufactured homes if all of the following conditions are met:

(1) The manufacturer shall include, in its written installation instructions, information requiring that the home be secured in place by an anchoring system or installed on and secured to a permanent foundation.

(2) The installation of the service shall comply with Article 230, Part I through Part VII.

(3) Means shall be provided for the connection of a grounding electrode conductor to the service equipment and routing it outside the structure.

(4) Bonding and grounding of the service shall comply with Article 250, Part I through Part V.

(5) The manufacturer shall include, in its written installation instructions, one method of grounding the service equipment at the installation site. The instructions shall clearly state that other methods of grounding are found in Article 250.

(6) The minimum size grounding electrode conductor shall be specified in the instructions.

(7) A warning label, meeting the requirements in 110.21(B) and stating the following, shall be mounted on or adjacent to the service equipment:

WARNING
DO NOT PROVIDE ELECTRICAL POWER
UNTIL THE GROUNDING ELECTRODE(S)
IS INSTALLED AND CONNECTED
(SEE INSTALLATION INSTRUCTIONS).

Where the service equipment is not installed in or on the unit, the installation shall comply with the other requirements of this section.

(C) Rating.

Mobile home service equipment shall be rated at not less than 100 amperes at 120/240 volts, and provisions shall be made for connecting a mobile home feeder assembly by a permanent wiring method. Power outlets used as mobile home service equipment shall also be permitted to contain receptacles rated up to 50 amperes with appropriate overcurrent protection. Fifty-ampere receptacles shall conform to the configuration shown in Figure 550.10(C).

Informational Note: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*, Figure 14-50, for complete details of the 50-ampere plug and receptacle configuration.

(D) Additional Outside Electrical Equipment.

Means for connecting a mobile home accessory building or structure or additional electrical equipment located outside a mobile home by a fixed wiring method shall be provided in either the mobile home service equipment or the local external disconnecting means permitted in 550.32(A).

(E) Replacement Home.

When existing service equipment is reconnected to a replacement mobile or manufactured home, the service shall be provided with a surge protective device in accordance with 230.67.

(F) Additional Receptacles on Service Equipment.

Receptacles located outside mobile or manufactured homes shall be provided with ground-fault circuit-interrupter protection as specified by 210.8(A). Where receptacles provide power to mobile or manufactured homes in accordance with 550.10, ground-fault circuit-interrupter protection shall not be required.

(G) Mounting Height.

Outdoor mobile home disconnecting means shall be installed so the bottom of the enclosure containing the disconnecting means is not less than 600 mm (2 ft) above finished grade or working platform. The disconnecting means shall be installed so that the center of the grip of the operating handle, when in the highest position, is not more than 2.0 m (6 ft 7 in.) above the finished grade or working platform.

(H) Marking.

Where a 125/250-volt receptacle is used in mobile home service equipment, the service equipment shall be marked as follows:

TURN DISCONNECTING SWITCH OR
CIRCUIT BREAKER OFF BEFORE INSERTING
OR REMOVING PLUG. PLUG MUST BE FULLY
INSERTED OR REMOVED.

The marking shall be located on the service equipment adjacent to the receptacle outlet.

Additional Proposed Changes

File Name	Description	Approved
CN_278.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 278 appeared in the First Draft Report on First Revision No. 8518.

The Correlating Committee directs CMP-7 to correct the reference to Article 230, Part I through Part VII. There are only VII parts to this article and the reference is not complaint with NEC Style Manual Section 4.1.4, “references to all parts of an article shall not be permitted”.

Related Item

• First Revision No. 8518

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:

State:
Zip:
Submittal Date: Wed Jul 31 17:11:25 EDT 2024
Committee: NEC-P07

Correlating Committee Note No. 278-NFPA 70-2024 [Section No. 550.32]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 21:56:42 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs CMP-7 to correct the reference to Article 230, Part I through Part VII. There are only VII parts to this article and the reference is not complaint with NEC Style Manual Section 4.1.4, “references to all parts of an article shall not be permitted”.

First Revision No. 8518-NFPA 70-2024 [Section No. 550.32(A)]

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 564-NFPA 70-2024 [Section No. 550.32(B)]

(B) Manufactured Home Service Equipment.

Manufactured home service equipment shall be permitted to be installed in or on manufactured homes if all of the following conditions are met:

(1) The manufacturer shall include, in its written installation instructions, information requiring that the home be secured in place by an anchoring system or installed on and secured to a permanent foundation.

(2) The installation of the service shall comply with Article 230, Part I through Part VII.

(3) Means shall be provided for the connection of a grounding electrode conductor to the service equipment and routing it outside the structure.

(4) Bonding and grounding of the service shall comply with Article 250, Part I through Part V.

(5) The manufacturer shall include, in its written installation instructions, one method of grounding the service equipment at the installation site. The instructions shall clearly state that other methods of grounding are found in Article 250.

(6) The minimum size grounding electrode conductor shall be specified in the instructions.

(7) A warning label, meeting the requirements in 110.21(B) and stating the following, shall be mounted on or adjacent to the service equipment:

WARNING
DO NOT PROVIDE ELECTRICAL POWER
UNTIL THE GROUNDING ELECTRODE(S)
IS INSTALLED AND CONNECTED
(SEE INSTALLATION INSTRUCTIONS).

Where the service equipment is not installed in or on the unit, the installation shall comply with the other requirements of this section.

Additional Proposed Changes

File Name	Description	Approved
CN_279.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 279 appeared in the First Draft Report on First Revision No. 8523.

The Correlating Committee directs CMP-7 to correct the reference to Article 230, Part I through Part VII. There are only VII parts to this article and the reference is not complaint with NEC Style Manual Section 4.4.4, “references to all parts of an article shall not be permitted”.

Related Item

• First Revision No. 8523

Submitter Information Verification

Submitter Full Name: CC Notes

Organization:	NEC Correlating Committee
Street Address:	
City:	
State:	
Zip:	
Submittal Date:	Wed Jul 31 17:13:12 EDT 2024
Committee:	NEC-P07

Correlating Committee Note No. 279-NFPA 70-2024 [Section No. 550.32(B)]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 21:58:03 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs CMP-7 to correct the reference to Article 230, Part I through Part VII. There are only VII parts to this article and the reference is not complaint with NEC Style Manual Section 4.4.4, “references to all parts of an article shall not be permitted”.

First Revision No. 8523-NFPA 70-2024 [Section No. 550.32(B)]

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 243-NFPA 70-2024 [Section No. 551.20]

551.20 Combination Electrical Systems.

(A) General.

Vehicle wiring suitable for connection to a battery or dc supply source shall be permitted to be connected to a 120-volt source, provided the entire wiring system and equipment are rated and installed in full conformity with the requirements of Article 551, Parts I, II, III, IV, and V, covering 120-volt electrical systems. Circuits fed from ac transformers shall not supply dc appliances.

(B) Voltage Converters (120-Volt Alternating Current to Low-Voltage Direct Current).

The 120-volt ac side of the voltage converter shall be wired in full conformity with the requirements of Article 551, Parts I, II, and IV, for 120-volt electrical systems.

Exception: Converters supplied as an integral part of a listed appliance shall not be subject to 551.20(B).

All converters and transformers shall be listed for use in recreational vehicles and designed or equipped to provide overtemperature protection.

Exception: A low-voltage appliance that is controlled by a momentary switch (normally open) that has no means for holding in the closed position or refrigerators with a 120-volt function shall not be considered a connected load when determining the required converter rating. Momentarily energized appliances shall be limited to those used to prepare the vehicle for occupancy or travel.

(C) Bonding Voltage Converter Enclosures.

The non–current-carrying metal enclosure of the voltage converter shall be connected to the frame of the vehicle with a minimum 8 AWG copper conductor. The voltage converter shall be provided with a separate chassis bonding conductor that shall not be used as a current-carrying conductor.

(D) Dual-Voltage Fixtures, Including Luminaires or Appliances.

Fixtures, including luminaires, or appliances having both 120-volt and low-voltage connections shall be listed for dual voltage.

(E) Autotransformers.

Autotransformers shall not be used.

(F) Receptacles and Plug Caps.

Where a recreational vehicle is equipped with an ac system, a low-voltage system, or both, receptacles and plug caps of the low-voltage system shall differ in configuration from those of the ac system. Where a vehicle equipped with a battery or other low-voltage system has an external connection for low-voltage power, the connector shall have a configuration that will not accept ac power.

Statement of Problem and Substantiation for Public Comment

Following text should be added back to the section regarding converter sizing.

The first 20 amperes of load at 100 percent plus
The second 20 amperes of load at 50 percent plus
All loads above 40 amperes at 25 percent.

This text is needed for sizing of a converter.

Related Item

- FR 8552

Submitter Information Verification

Submitter Full Name: Curt Richardson
Organization: Recreation Vehicle Industry As
Street Address:
City:
State:
Zip:
Submittal Date: Thu Jul 25 10:51:57 EDT 2024
Committee: NEC-P07

Public Comment No. 1624-NFPA 70-2024 [Section No. 551.40(D)]

(D) Grounding Monitor Interrupter.

Recreational vehicles with a 30- or 50-ampere feeder assembly shall have ~~a listed~~ a permanently installed grounding monitor interrupter~~- permanently installed between the feeder assembly connection to the vehicle and before either a~~ with Listing to monitor the grounding circuit, detecting the potential between the grounded current carrying conductors and the non-current carrying grounded conductor and when greater than 30 volts rms, shall inhibit or interrupt the current carrying conductors of the feeder assembly connection into either the vehicle transfer switch if installed or the panelboard. This requirement shall become effective January 1, 2026.

Statement of Problem and Substantiation for Public Comment

Section No. 551.40(D) needs allowance of the GMI to be incorporated in a panel board or transfer switch as well as specify the principal requirement of the GMI. The newly published UL2299 Outline of Investigation of GMI Issue Number 1 dated January 26, 2024 contains Grounding integrity requirements that are not consistent with the safety basis or the intention of 551.40(D) and compliance would prohibit the operation of recreational vehicles on GFCI protected receptacles.

The proposed Section No. 551.40(D) language above concisely defines requirements for GMIs with implementations being a standalone device or integrated into existing RV components, requiring Listing and means compatible for RVs to plug-in and operate from GFCI protected receptacles and providing Grounding protection. This proposed language above is consistent with proven Ground protection implementations of existing products that have been used for over 20 years without incidence.

The UL2299 Outline currently contains the addition of a Ground integrity requirement with an unestablished impedance value and Ground reference point that does not add absolute protection from “Hot Skin” in either Type I or Type II GMI devices, for example the hazard that occurs with a non-compliant conversion of a three-wire dryer outlet is used to power RVs. Extremely important, the Outline Ground integrity requirement further make RVs incompatible with GFCI protected receptacles on all 15- and 20-amp exterior mounted residential, commercial and industrial receptacles where RVs are commonly plugged in to, that do protect from Hot Skin. If 551.40(D) dictates to the UL2299 Outline and future Standard to use 30 Vrms for Ground performance metric, then RVs will be Grounding protected and compatible with GFCIs.

Related Item

- First Draft Report

Submitter Information Verification

Submitter Full Name: David Bailey
Organization: dB Technologies Inc
Street Address:
City:
State:
Zip:
Submittal Date: Sun Aug 25 12:01:50 EDT 2024
Committee: NEC-P07

Public Comment No. 716-NFPA 70-2024 [Section No. 551.40(D)]

(D) Grounding Monitor Interrupter.

Recreational vehicles with a 30- or 50-ampere feeder assembly shall have a listed ~~grounding~~ Type II grounding monitor interrupter permanently installed between the feeder assembly connection to the vehicle and before either of the following:

1. The panelboard if not provided with a transfer switch ~~if installed or~~ ahead of the panelboard. ~~This requirement shall become effective January 1, 2026.~~

2. The transfer switch ahead of the panelboard, if provided.

Alternatively, the grounding monitor interrupter shall be permitted to be integral to the utility supply side of the transfer switch.

Informational Note: A Type II grounding monitor interrupter (GMI) Listed in accordance with UL 2299, the Outline of Investigation for Grounding Monitor Interrupters, meets the requirements of a Type I GMI that monitors and interrupts the ungrounded conductors if grounding is lost, and additionally monitors and interrupts the grounding conductor if a potential is present on the grounding conductor.

Statement of Problem and Substantiation for Public Comment

Many recreational vehicle parks are wired with each campsite pedestal connected to a feeder that is daisy chained from one site to the next. In this configuration, if there is a loss in continuity of the EGC back to the service panel, then a line -to-chassis fault (hot skin condition) in one RV will be "reflected" to other RVs connected to the feeder on that daisy chained loop. A Type II grounding monitor interrupter Listed in accordance with UL 2299 the Outline of Investigation for Grounding Monitor Interrupters, is provided with a switched equipment grounding interrupter that meets the requirements of a Type I GMI, and additionally monitors and interrupts the grounding conductor if a potential is present on the grounding conductor. This will open the circuit including the ground, and deny power to the RV if a potential is present on the grounding conductor preventing a reflective hot skin condition on the other RV's connected to the feeder circuit loop.

Related Item

• FR 8565

Submitter Information Verification

Submitter Full Name: Thomas Lichtenstein
Organization: UL Solutions
Street Address:
City:
State:
Zip:

Submittal Date: Fri Aug 02 18:20:59 EDT 2024
Committee: NEC-P07

Public Comment No. 793-NFPA 70-2024 [Section No. 551.40(D)]

(D) Grounding Monitor Interrupter.

Recreational vehicles with a 30- or 50-ampere feeder assembly shall have a listed grounding monitor interrupter permanently installed between the feeder assembly connection to the vehicle and before either a transfer switch if installed or the panelboard. ~~This requirement shall become effective January 1, 2026.~~

Statement of Problem and Substantiation for Public Comment

The 2026 edition of the NEC is not likely to be adopted before January 1, 2026.

Related Item

• FR 8565

Submitter Information Verification

Submitter Full Name: Ryan Jackson
Organization: Self-employed
Street Address:
City:
State:
Zip:

Submittal Date: Mon Aug 05 12:29:44 EDT 2024
Committee: NEC-P07

Public Comment No. 794-NFPA 70-2024 [Section No. 551.47(A)]

(A) Wiring Systems.

Except as otherwise specified in this article, only the following wiring methods shall be permitted to be installed within a recreational vehicle:

(1) Type AC
(2) Type FC
(3) Type MC
(4) Type UF
(5) Type IMC
(6) Type ENT
(7) Surface metal raceways
(8) Surface nonmetallic raceways

The wiring method shall include an equipment grounding conductor in accordance with 250.118.

Statement of Problem and Substantiation for Public Comment

The phrase "shall be permitted" is permissive, not mandatory. Section 110.8 allows any wiring method in any building unless otherwise prohibitted. This section makes no such prohibition, as it is written permissively. See 90.5(A) and (B). Adding the word "only" solves this problem.

Related Item

• FR 8583

Submitter Information Verification

Submitter Full Name: Ryan Jackson
Organization: Self-employed
Street Address:
City:
State:
Zip:

Submittal Date: Mon Aug 05 12:32:39 EDT 2024
Committee: NEC-P07

Public Comment No. 565-NFPA 70-2024 [Section No. 551.71]

551.71 Type Receptacles Provided.

(A) Recreational Vehicle Sites.

Every recreational vehicle site with electrical supply shall be equipped with recreational vehicle site supply equipment containing receptacles conforming to the configurations identified in Figure 551.46(C)(1). These receptacles shall meet the weather-resistant requirements in accordance with 406.9(B)(1) and 406.9(B)(2). These receptacles, when used in recreational vehicle site electrical equipment, shall not be required to be tamper-resistant in accordance with 406.26.

Receptacles shall be listed to meet the following:

(1) A 20-ampere, 125-volt receptacle at all sites

(2) A 30-ampere, 125-volt receptacle at a minimum of 70 percent of the sites

(3) A 50-ampere, 125/250-volt receptacle at a minimum of 40 percent of new sites and 20 percent of existing sites

Every recreational vehicle site equipped with a 50-ampere receptacle shall also be equipped with a 30-ampere, 125-volt receptacle.

Additional receptacles in accordance with 551.81 shall be permitted to be added.

(B) Tent Sites.

Dedicated tent sites with a 15- or 20-ampere electrical supply shall be permitted to be excluded when determining the percentage of recreational vehicle sites with 30- or 50-ampere receptacles.

(C) Additional Receptacles.

Additional receptacles within the recreational vehicle park shall be permitted for the connection of electrical equipment outside of recreational vehicles.

(D) GFCI Protection.

(1) Receptacles Installed in Other Than Recreational Vehicle Site Equipment.

GFCI protection shall be provided as required in 210.8(B).

(2) Receptacles Installed in Recreational Vehicle Site Equipment.

GFCI protection shall only be required for 125-volt, single-phase, 15- and 20-ampere receptacles.

Informational Note No. 1: Appliances used within recreational vehicles can create leakage current levels at the supply receptacle(s) that could exceed the limits of a Class A GFCI device.

Informational Note No. 2: The definition of *feeder assembly* clarifies that power supply cords to recreational vehicles are considered feeders.

Additional Proposed Changes

File Name	Description	Approved
CN_280.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 280 appeared in the First Draft Report on First Revision No. 8657.

The Correlating Committee directs CMP 7 to review FR 8657 and identify where the words “AC only” were added in 551.71 as described in the committee statement for
Global PI 4287. Revise the requirement accordingly.

Related Item

• First Revision No. 8657

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Wed Jul 31 17:27:31 EDT 2024
Committee: NEC-P07

Correlating Committee Note No. 280-NFPA 70-2024 [Section No. 551.71]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 22:00:40 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs CMP 7 to review FR 8657 and identify where the words “AC only” were added in 551.71 as described in the committee statement for Global PI 4287. Revise the requirement accordingly.

First Revision No. 8657-NFPA 70-2024 [Section No. 551.71]

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 795-NFPA 70-2024 [Section No. 551.71(A)]

(A) Recreational Vehicle Sites.

Every recreational vehicle site with electrical supply shall be equipped with recreational vehicle site supply equipment containing receptacles conforming to the configurations identified in Figure 551.46(C)(1). These receptacles shall meet the weather-resistant requirements in accordance with 406.9(B)(1) and 406.9(B)(2). These receptacles, when used in recreational vehicle site electrical equipment, shall not be required to be tamper-resistant in accordance with 406.26.

Receptacles shall be ~~listed to meet~~ provided in accordance with the following:

(1) A 20-ampere, 125-volt receptacle at all sites

(2) A 30-ampere, 125-volt receptacle at a minimum of 70 percent of the sites

(3) A 50-ampere, 125/250-volt receptacle at a minimum of 40 percent of new sites and 20 percent of existing sites

Every recreational vehicle site equipped with a 50-ampere receptacle shall also be equipped with a 30-ampere, 125-volt receptacle.

Additional receptacles in accordance with 551.81 shall be permitted to be added.

Statement of Problem and Substantiation for Public Comment

The word "listed" is misused in this section. Receptacles are not "listed to meet the following," they are listed in accordance with a product standard. I am thinking that the intent is that this section indactes the types of receptacle(s) that must be installed.

Related Item

• FR 8657

Submitter Information Verification

Submitter Full Name: Ryan Jackson
Organization: Self-employed
Street Address:
City:
State:
Zip:

Submittal Date: Mon Aug 05 12:37:31 EDT 2024
Committee: NEC-P07

Public Comment No. 566-NFPA 70-2024 [Section No. 551.74]

551.74 Overcurrent Protection.

Overcurrent protection shall be provided as required elsewhere in this code.

Additional Proposed Changes

File Name	Description	Approved
CN_281.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 281 appeared in the First Draft Report on First Revision No. 8592.

The Corelating Committee directs CMP-7 to review this revision and consider the deletion of the section in accordance with NEC Style Manual Section 4.1.1 because Chapters 1 through 4 of the NEC already apply and are not being modified by this requirement.

Related Item

- First Revision No. 8592

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Wed Jul 31 17:28:53 EDT 2024
Committee: NEC-P07

Correlating Committee Note No. 281-NFPA 70-2024 [Section No. 551.74]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 22:02:10 EDT 2024

Committee Statement

Committee Statement: The Corelating Committee directs CMP-7 to review this revision and consider the deletion of the section in accordance with NEC Style Manual Section 4.1.1 because Chapters 1 through 4 of the NEC already apply and are not being modified by this requirement.

First Revision No. 8592-NFPA 70-2024 [Section No. 551.74]

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 589-NFPA 70-2024 [Article 552]

Article 552 Park Trailers

Part I. General

552.1 Scope.

This article covers the electrical conductors and equipment installed within or on park trailers not covered fully under Articles 550 and 551.

552.4 General Requirements.

A park trailer is intended for seasonal use. It is not intended as a permanent dwelling unit or for commercial uses such as banks, clinics, offices, or similar. Units designed for such purposes are classified as relocatable structures and are covered in Article 545, Part II.

552.5 Labels.

Labels required by this article shall be made of etched, metal-stamped, or embossed brass or stainless steel; plastic laminates not less than 0.13 mm (0.005 in.) thick; or anodized or alclad aluminum not less than 0.5 mm (0.020 in.) thick or the equivalent.

Informational Note: See ANSI Z535.4-2011, *Product Safety Signs and Labels*, for guidance on other label criteria used in the park trailer industry.

Part II. Low-Voltage Systems

552.10 Low-Voltage Systems.

(A) Low-Voltage Circuits.

Low-voltage circuits furnished and installed by the park trailer manufacturer, other than those related to braking, shall be subject to this *Code*. Circuits supplying lights subject to federal or state regulations shall comply with applicable government regulations and this *Code*.

(B) Low-Voltage Wiring.

(1) Material.

Copper conductors shall be used for low-voltage circuits.

Exception: A metal chassis or frame shall be permitted as the return path to the source of supply.

(2) Conductor Types.

Conductors shall conform to the requirements for Type GXL, HDT, SGT, SGR, or Type SXL or shall have insulation in accordance with Table 310.4(1) or the equivalent. Conductor sizes 6 AWG through 18 AWG or SAE shall be listed. Single-wire, low-voltage conductors shall be of the stranded type.

Informational Note: See SAE J1128-2015, *Low Voltage Primary Cable,* for Types GXL, HDT, and SXL, and SAE J1127-2015, *Low Voltage Battery Cable,* for Types SGT and SGR.

(3) Marking.

All insulated low-voltage conductors shall be surface marked at intervals not greater than 1.2 m (4 ft) as follows:

(1) Listed conductors shall be marked as required by the listing agency.

(2) SAE conductors shall be marked with the name or logo of the manufacturer, specification designation, and wire gauge.

(3) Other conductors shall be marked with the name or logo of the manufacturer, temperature rating, wire gauge, conductor material, and insulation thickness.

(C) Low-Voltage Wiring Methods.

(1) Physical Protection.

Conductors shall be protected against physical damage and shall be secured. Where insulated conductors are clamped to the structure, the conductor insulation shall be supplemented by an additional wrap or layer of equivalent material, except that jacketed cables shall not be required to be so protected. Wiring shall be routed away from sharp edges, moving parts, or heat sources.

(2) Splices.

Conductors shall be spliced or joined with splicing devices that provide a secure connection or by brazing, welding, or soldering with a fusible metal or alloy. Soldered splices shall first be spliced or joined to be mechanically and electrically secure without solder, and then soldered. All splices, joints, and free ends of conductors shall be covered with an insulation equivalent to that on the conductors.

(3) Separation.

Battery and other low-voltage circuits shall be physically separated by at least a 13-mm (½-in.) gap or other approved means from circuits of a different power source. Acceptable methods shall be by clamping, routing, or equivalent means that ensure permanent total separation. Where circuits of different power sources cross, the external jacket of the nonmetallic-sheathed cables shall be deemed adequate separation.

(4) Ground Connections.

Ground connections to the chassis or frame shall be made in an accessible location and shall be mechanically secure. Ground connections shall be by means of copper conductors and copper or copper-alloy terminals of the solderless type identified for the size of wire used. The surface on which ground terminals make contact shall be cleaned and be free from oxide or paint or shall be electrically connected through the use of a cadmium, tin, or zinc-plated internal/external-toothed lockwasher or locking terminals. Ground terminal attaching screws, rivets or bolts, nuts, and lockwashers shall be cadmium, tin, or zinc-plated except rivets shall be permitted to be unanodized aluminum where attaching to aluminum structures.

The chassis-grounding terminal of the battery shall be connected to the unit chassis with a minimum 8 AWG copper conductor. In the event the unbonded lead from the battery exceeds 8 AWG, the bonding conductor size shall be not less than that of the unbonded lead.

(D) Battery Installations.

Storage batteries subject to this *Code* shall be securely attached to the unit and installed in an area vaportight to the interior and ventilated directly to the exterior of the unit. Where batteries are installed in a compartment, the compartment shall be ventilated with openings having a minimum area of 1100 mm^2 (1.7 $in.^2$) at both the top and at the bottom. Where compartment doors are equipped for ventilation, the openings shall be within 50 mm (2 in.) of the top and bottom. Batteries shall not be installed in a compartment containing spark- or flame-producing equipment.

(E) Overcurrent Protection.

(1) Rating.

Low-voltage circuit wiring shall be protected by overcurrent protective devices rated not in excess of the ampacity of copper conductors, in accordance with Table 552.10(E)(1).

Table 552.10(E)(1) Low-Voltage Overcurrent Protection

Wire Size (AWG)	Ampacity	Wire Type
18	6	Stranded only
16	8	Stranded only
14	15	Stranded or solid
12	20	Stranded or solid
10	30	Stranded or solid

(2) Type.

Circuit breakers or fuses shall be of an approved type, including automotive types. Fuseholders shall be clearly marked with maximum fuse size and shall be protected against shorting and physical damage by a cover or equivalent means.

> Informational Note: See ANSI/SAE J554-1987, *Standard for Electric Fuses (Cartridge Type)*; SAE J1284-1988, *Standard for Blade Type Electric Fuses*; and UL 275-2005, *Standard for Automotive Glass Tube Fuses*, for further information.

(3) Appliances.

Appliances such as pumps, compressors, heater blowers, and similar motor-driven appliances shall be installed in accordance with the manufacturer's instructions.

Motors that are controlled by automatic switching or by latching-type manual switches shall be protected in accordance with 430.32(B).

(4) Location.

The overcurrent protective device shall be installed in an accessible location on the unit within 450 mm (18 in.) of the point where the power supply connects to the unit circuits. If located outside the park trailer, the device shall be protected against weather and physical damage.

Exception: External low-voltage supply shall be permitted to have the overcurrent protective device within 450 mm (18 in.) after entering the unit or after leaving a metal raceway.

(F) Switches.

Switches shall have a dc rating not less than the connected load.

(G) Luminaires.

All low-voltage interior luminaires rated more than 4 watts, employing lamps rated more than 1.2 watts, shall be listed.

Part III. Combination Electrical Systems

552.20 Combination Electrical Systems.

(A) General.

Unit wiring suitable for connection to a battery or other low-voltage supply source shall be permitted to be connected to a 120-volt source, provided that the entire wiring system and equipment are rated and installed in full conformity with the requirements of Article 552, Parts I, III, IV, and V, covering 120-volt electrical systems. Circuits fed from ac transformers shall not supply dc appliances.

(B) Voltage Converters (120-Volt Alternating Current to Low-Voltage Direct Current).

The 120-volt ac side of the voltage converter shall be wired in full conformity with the requirements of Article 552, Parts I and IV, for 120-volt electrical systems.

Exception: Converters supplied as an integral part of a listed appliance shall not be subject to 552.20(B).

All converters and transformers shall be listed for use in recreation units and designed or equipped to provide over-temperature protection. To determine the converter rating, the following percentages shall be applied to the total connected load, including average battery-charging rate, of all 12-volt equipment:

The first 20 amperes of load at 100 percent plus

The second 20 amperes of load at 50 percent plus

All load above 40 amperes at 25 percent

Exception: A low-voltage appliance that is controlled by a momentary switch (normally open) that has no means for holding in the closed position shall not be considered as a connected load when determining the required converter rating. Momentarily energized appliances shall be limited to those used to prepare the unit for occupancy or travel.

(C) Bonding Voltage Converter Enclosures.

The non–current-carrying metal enclosure of the voltage converter shall be connected to the frame of the unit with an 8 AWG copper conductor minimum. The equipment grounding conductor for the battery and the metal enclosure shall be permitted to be the same conductor.

(D) Dual-Voltage Fixtures Including Luminaires or Appliances.

Fixtures, including luminaires, or appliances having both 120-volt and low-voltage connections shall be listed for dual voltage.

(E) Autotransformers.

Autotransformers shall not be used.

(F) Receptacles and Plug Caps.

Where a park trailer is equipped with a 120-volt or 120/240-volt ac system, a low-voltage system, or both, receptacles and plug caps of the low-voltage system shall differ in configuration from those of the 120-volt or 120/240-volt system. Where a unit equipped with a battery or dc system has an external connection for low-voltage power, the connector shall have a configuration that will not accept 120-volt power.

Part IV. Nominal 120-Volt or 120/240-Volt Systems

552.40 120-Volt or 120/240-Volt, Nominal, Systems.

(A) General Requirements.

The electrical equipment and material of park trailers indicated for connection to a wiring system rated 120 volts, nominal, 2-wire with an equipment grounding conductor, or a wiring system rated 120/240 volts, nominal, 3-wire with an equipment grounding conductor, shall be listed and installed in accordance with Article 552, Parts I, III, IV, and V.

(B) Materials and Equipment.

Electrical materials, devices, appliances, fittings, and other equipment installed, intended for use in, or attached to the park trailer shall be listed. All products shall be used only in the manner in which they have been tested and found suitable for the intended use.

552.41 Receptacle Outlets Required.

(A) Spacing.

Receptacle outlets shall be installed at wall spaces 600 mm (2 ft) wide or more so that no point along the floor line is more than 1.8 m (6 ft), measured horizontally, from an outlet in that space.

Exception No. 1: Bath and hallway areas shall not be required to comply with 552.41(A).

Exception No. 2: Wall spaces occupied by kitchen cabinets, wardrobe cabinets, built-in furniture; behind doors that could open fully against a wall surface; or similar facilities.

(B) Location.

Receptacle outlets shall be installed as follows:

(1) Adjacent to countertops in the kitchen [at least one on each side of the sink if countertops are on each side and are 300 mm (12 in.) or over in width and depth]

(2) Adjacent to the refrigerator and gas range space, except where a gas-fired refrigerator or cooking appliance, requiring no external electrical connection, is factory-installed

(3) Adjacent to countertop spaces of 300 mm (12 in.) or more in width and depth that cannot be reached from a receptacle required in 552.41(B)(1) by a cord of 1.8 m (6 ft) without crossing a traffic area, cooking appliance, or sink

(C) Ground-Fault Circuit-Interrupter Protection.

Each 125-volt, single-phase, 15- or 20-ampere receptacle shall have ground-fault circuit-interrupter protection for personnel in the following locations:

(1) Where the receptacles are installed to serve kitchen countertop surfaces

(2) Within 1.8 m (6 ft) of any lavatory or sink

Exception: Receptacles installed for appliances in dedicated spaces, such as for dishwashers, disposals, refrigerators, freezers, and laundry equipment.

(3) In the area occupied by a toilet, shower, tub, or any combination thereof

(4) On the exterior of the unit

Exception: Receptacles that are located inside of an access panel that is installed on the exterior of the unit to supply power for an installed appliance shall not be required to have ground-fault circuit-interrupter protection.

The receptacle outlet shall be permitted in a listed luminaire. A receptacle outlet shall not be installed in a tub or combination tub–shower compartment.

(D) Pipe Heating Cable Outlet.

Where a pipe heating cable outlet is installed, the outlet shall be as follows:

(1) Located within 600 mm (2 ft) of the cold water inlet

(2) Connected to an interior branch circuit, other than a small-appliance branch circuit

(3) On a circuit where all of the outlets are on the load side of the ground-fault circuit-interrupter protection for personnel

(4) Mounted on the underside of the park trailer and shall not be considered to be the outdoor receptacle outlet required in 552.41(E)

(E) Outdoor Receptacle Outlets.

At least one receptacle outlet shall be installed outdoors. A receptacle outlet located in a compartment accessible from the outside of the park trailer shall be considered an outdoor receptacle. Outdoor receptacle outlets shall be protected as required in 552.41(C)(4).

(F) Receptacle Outlets Not Permitted.

(1) Shower or Bathtub Space.

Receptacle outlets shall not be installed in or within reach [750 mm (30 in.)] of a shower or bathtub space.

(2) Face-Up Position.

A receptacle shall not be installed in a face-up position in any countertop or other similar horizontal surface.

552.42 Branch-Circuit Protection.

(A) Rating.

The branch-circuit overcurrent devices shall be rated as follows:

(1) Not more than the circuit conductors

(2) Not more than 150 percent of the rating of a single appliance rated 13.3 amperes or more and supplied by an individual branch circuit

(3) Not more than the overcurrent protection size marked on an air conditioner or other motor-operated appliances.

(B) Protection for Smaller Conductors.

A 20-ampere fuse or circuit breaker shall be permitted for protection for fixtures, including luminaires, leads, cords, or small appliances, and 14 AWG tap conductors, not over 1.8 m (6 ft) long for recessed luminaires.

(C) Fifteen-Ampere Receptacle Considered Protected by 20 Amperes.

If more than one receptacle or load is on a branch circuit, 15-ampere receptacles shall be permitted to be protected by a 20-ampere fuse or circuit breaker.

552.43 Power Supply.

(A) Feeder.

The power supply to the park trailer shall be a feeder assembly consisting of not more than one listed 30-ampere or 50-ampere park trailer power-supply cord, with an integrally molded or securely attached cap, or a permanently installed feeder.

(B) Power-Supply Cord.

If the park trailer has a power-supply cord, it shall be permanently attached to the panelboard's enclosure, or to a junction box permanently connected to the panelboard's enclosure, with the free end terminating in a molded-on attachment plug cap.

Cords with adapters and pigtail ends, extension cords, and similar items shall not be attached to, or shipped with, park trailers.

A suitable clamp or the equivalent shall be provided at the panelboard's enclosure knockout to afford strain relief for the cord to prevent strain from being transmitted to the terminals when the power-supply cord is handled in its intended manner.

Cords shall be a listed type with 3-wire, 120-volt or 4-wire, 120/240-volt conductors, one of which shall be identified by a continuous green color or a continuous green color with one or more yellow stripes for use as the equipment grounding conductor.

(C) Mast Weatherhead or Raceway.

Where the calculated load exceeds 50 amperes or where a permanent feeder is used, the supply shall be by means of one of the following:

(1) One mast weatherhead installation, installed in accordance with Article 230, Part II, containing four continuous, insulated, color-coded feeder conductors, one of which is an equipment grounding conductor

(2) A rigid metal conduit, intermediate metal conduit, rigid polyvinyl chloride conduit, or other raceways identified for the location from the disconnecting means in the park trailer to the underside of the park trailer

552.44 Cord.

(A) Permanently Connected.

Each feeder assembly shall be factory supplied or factory installed and connected directly to the terminals of the panelboard or conductors within a junction box and provided with means to prevent strain from being transmitted to the terminals. The ampacity of the conductors between each junction box and the terminals of each panelboard shall be at least equal to the ampacity of the feeder cord. The supply end of the assembly shall be equipped with an attachment plug of the type described in 552.44(C). Where the cord passes through the walls or floors, it shall be protected by means of conduit and bushings or equivalent. The cord assembly shall have permanent provisions for protection against corrosion and mechanical damage while the unit is in transit.

(B) Cord Length.

The cord-exposed usable length shall be measured from the point of entrance to the park trailer or the face of the flanged surface inlet (motor-base attachment plug) to the face of the attachment plug at the supply end.

The cord-exposed usable length, measured to the point of entry on the unit exterior, shall be a minimum of 7.0 m (23 ft) where the point of entrance is at the side of the unit, or shall be a minimum 8.5 m (28 ft) where the point of entrance is at the rear of the unit. The maximum length shall not exceed 11 m (36½ ft).

Where the cord entrance into the unit is more than 900 mm (3 ft) above the ground, the minimum cord lengths above shall be increased by the vertical distance of the cord entrance heights above 900 mm (3 ft).

(C) Attachment Plugs.

(1) Units with Two to Five 15- or 20-Ampere Branch Circuits.

Park trailers wired in accordance with 552.46(A) shall have an attachment plug that shall be 2-pole, 3-wire grounding type, rated 30 amperes, 125 volts, conforming to the configuration shown in Figure 552.44(C)(1) intended for use with units rated at 30 amperes, 125 volts.

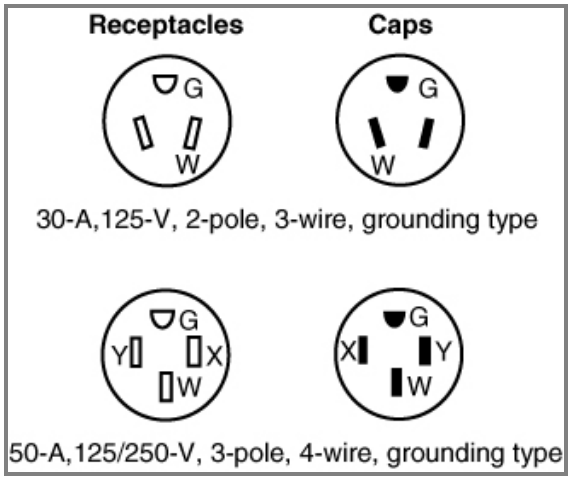
> Informational Note: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*, Figure TT, for complete details of this configuration.

(2) Units with 50-Ampere Feeder Assembly.

Park trailers having a feeder assembly rated 50 amperes as permitted by 552.43(B) shall have a 3-pole, 4-wire grounding-type attachment plug rated 50 amperes, 125/250 volts, conforming to the configuration shown in Figure 552.44(C)(1).

> Informational Note: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*, Figure 14-50, for complete details of this configuration.

Figure 552.44(C)(1) Attachment Cap and Receptacle Configurations.



(D) Labeling at Electrical Entrance.

Each park trailer shall have a safety label with the signal word WARNING in minimum 6 mm (¼ in.) high letters and body text in minimum 3 mm (⅛ in.) high letters on a contrasting background. The safety label shall be affixed to the exterior skin, at or near the point of entrance of the feeder assembly and shall read, as appropriate:

WARNING:
THIS CONNECTION IS FOR 110–125-VOLT AC,
60 HZ, 30-AMPERE SUPPLY

or

WARNING:
THIS CONNECTION IS FOR 208Y/120-VOLT OR 120/240-VOLT AC, 3-POLE, 4-WIRE, 60 HZ, _____-AMPERE SUPPLY.

followed by

DO NOT EXCEED THE CIRCUIT RATING. EXCEEDING THE CIRCUIT RATING CAN CAUSE A FIRE AND RESULT IN DEATH OR SERIOUS INJURY.

The correct ampere rating shall be marked in the blank space and the label shall meet the requirements in 110.21(B).

(E) Location.

The point of entrance of a feeder assembly shall be located on either side or the rear, within 450 mm (18 in.), of an outside wall.

552.45 Panelboard.

(A) Listed and Appropriately Rated.

A listed and appropriately rated panelboard shall be used. The grounded conductor termination bar shall be insulated from the enclosure as provided in 552.55(C). An equipment grounding terminal bar shall be attached inside the metal enclosure of the panelboard.

(B) Location.

The panelboard shall be installed in a readily accessible location. Working clearance for the panelboard shall be not less than 600 mm (24 in.) wide and 750 mm (30 in.) deep.

Exception: Where the panelboard cover is exposed to the inside aisle space, one of the working clearance dimensions shall be permitted to be reduced to a minimum of 550 mm (22 in.). A panelboard shall be considered exposed where the panelboard cover is within 50 mm (2 in.) of the aisle's finished surface or not more than 25 mm (1 in.) from the backside of doors that enclose the space.

(C) Dead-Front Type.

The panelboard shall be of the dead-front type. A main disconnecting means shall be provided where fuses are used or where more than two circuit breakers are employed. A main overcurrent protective device not exceeding the feeder assembly rating shall be provided where more than two branch circuits are employed.

552.46 Branch Circuits.

Branch circuits shall be determined in accordance with 552.46(A) and 552.46(B).

(A) Two to Five 15- or 20-Ampere Circuits.

A maximum of five 15- or 20-ampere circuits to supply lights, receptacle outlets, and fixed appliances shall be permitted. Such park trailers shall be permitted to be equipped with panelboards rated at 120 volts maximum or 120/240 volts maximum and listed for a 30-ampere-rated feeder assembly. Not more than two 120-volt thermostatically controlled appliances shall be installed in such systems unless appliance isolation switching, energy management systems, or similar methods are used.

Exception No. 1: Additional 15- or 20-ampere circuits shall be permitted where a listed energy management system rated at 30 amperes maximum is employed within the system.

Exception No. 2: Six 15- or 20-ampere circuits shall be permitted without employing an energy management system, provided that the added sixth circuit serves only the power converter, and the combined load of all six circuits does not exceed the allowable load that was designed for use by the original five circuits.

Informational Note: See 210.23(B) for permissible loads. See 552.45(C) for main disconnect and overcurrent protection requirements.

(B) More Than Five Circuits.

Where more than five circuits are needed, they shall be determined in accordance with 552.46(B)(1), 552.46(B)(2), and 552.46(B)(3).

(1) Lighting.

Based on 33 volt-amperes/m^2 (3 VA/ft^2) multiplied by the outside dimensions of the park trailer (coupler excluded) divided by 120 volts to determine the number of 15- or 20-ampere lighting area circuits, for example,

$$\frac{3 \times \text{length} \times \text{width}}{120 \times 15 \text{ (or } 20)} = \text{No. of 15- (or 20-) ampere circuits} \quad \textbf{[552.46(B)(1)}$$

The lighting circuits shall be permitted to serve listed cord-connected kitchen waste disposers and to provide power for supplemental equipment and lighting on gas-fired ranges, ovens, or counter-mounted cooking units.

(2) Small Appliances.

Small-appliance branch circuits shall be installed in accordance with 210.11(C)(1).

(3) General Appliances.

For general appliances, including furnaces, water heaters, space heaters, ranges, and central or room air conditioners, an individual branch circuit shall be permitted to supply any load for which it is rated. There shall be one or more circuits of adequate rating in accordance with 552.46(B)(3)(a) through 552.46(B)(3)(d).

Informational Note No. 1: See 210.11(C)(2) for laundry branch circuits.

Informational Note No. 2: See Article 440, Parts I through VI, for central air conditioning.

(a) The total rating of fixed appliances shall not exceed 50 percent of the circuit rating if lighting outlets, general-use receptacles, or both are also supplied.

(b) For fixed appliances with a motor(s) larger than ⅛ horsepower, the total calculated load shall be based on 125 percent of the largest motor plus the sum of the other loads. Where a branch circuit supplies a continuous load(s) or any combination of continuous and noncontinuous loads, the branch-circuit conductor size shall comply with 210.19(A).

(c) The rating of a single cord- and plug-connected appliance supplied by other than an individual branch circuit shall not exceed 80 percent of the circuit rating.

(d) The rating of a range branch circuit shall be based on the range demand as specified for ranges in 552.47(B)(5).

552.47 Calculations.

The following method shall be employed in computing the supply-cord and distribution-panelboard load for each feeder assembly for each park trailer in lieu of the procedure shown in Article 120 and shall be based on a 3-wire, 208Y/120-volt or 120/240-volt supply with 120-volt loads balanced between the two phases of the 3-wire system.

(A) Lighting and Small-Appliance Load.

Lighting Volt-Amperes: Length times width of park trailer floor (outside dimensions) times 33 volt-amperes/m^2 (3 VA/ft^2). For example,

Length × width × 3 = lighting volt-amperes

Small-Appliance Volt-Amperes: Number of circuits times 1500 volt-amperes for each 20-ampere appliance receptacle circuit (see definition of *Appliance, Portable* with fine print note) including 1500 volt-amperes for laundry circuit. For example,

No. of circuits × 1500 = small-appliance volt-amperes

Total: Lighting volt-amperes plus small-appliance volt-amperes = total volt-amperes

First 3000 total volt-amperes at 100 percent plus remainder at 35 percent = volt-amperes to be divided by 240 volts to obtain current (amperes) per leg.

(B) Total Load for Determining Power Supply.

Total load for determining power supply is the sum of the following:

(1) Lighting and small-appliance load as calculated in 552.47(A).

(2) Nameplate amperes for motors and heater loads (exhaust fans, air conditioners, electric, gas, or oil heating). Omit smaller of the heating and cooling loads, except include blower motor if used as air-conditioner evaporator motor. Where an air conditioner is not installed and a 50-ampere power-supply cord is provided, allow 15 amperes per phase for air conditioning.

(3) Twenty-five percent of current of largest motor in 552.47(B)(2).

(4) Total of nameplate amperes for disposal, dishwasher, water heater, clothes dryer, wall-mounted oven, cooking units. Where the number of these appliances exceeds three, use 75 percent of total.

(5) Derive amperes for freestanding range (as distinguished from separate ovens and cooking units) by dividing the following values by 240 volts as shown in Table 552.47(B).

(6) If outlets or circuits are provided for other than factory-installed appliances, include the anticipated load.

Informational Note: See Informative Annex D, Example D12, for an illustration of the application of this calculation.

Table 552.47(B) Minimum Loads for Freestanding Electric Ranges

Nameplate Rating (watts)	Use (volt-amperes)
0–10,000	80 percent of rating
Over 10,000–12,500	8,000
Over 12,500–13,500	8,400
Over 13,500–14,500	8,800
Over 14,500–15,500	9,200
Over 15,500–16,500	9,600
Over 16,500–17,500	10,000

(C) Optional Method of Calculation for Lighting and Appliance Load.

For park trailers, the optional method for calculating lighting and appliance load shown in 120.82 shall be permitted.

552.48 Wiring Methods.

(A) Wiring Systems.

Cables and raceways installed in accordance with Articles 320, 322, 330 through 340, 342 through 362, 386, and 388 shall be permitted in accordance with their applicable article, except as otherwise specified in this article. An equipment grounding means shall be provided in accordance with 250.118.

(B) Conduit and Tubing.

Where rigid metal conduit or intermediate metal conduit is terminated at an enclosure with a locknut and bushing connection, two locknuts shall be provided, one inside and one outside of the enclosure. All cut ends of conduit and tubing shall be reamed or otherwise finished to remove rough edges.

(C) Nonmetallic Boxes.

Nonmetallic boxes shall be acceptable only with nonmetallic-sheathed cable or nonmetallic raceways.

(D) Boxes.

In walls and ceilings constructed of wood or other combustible material, boxes and fittings shall be flush with the finished surface or project therefrom.

(E) Mounting.

Wall and ceiling boxes shall be mounted in accordance with 314.23.

Exception No. 1: Snap-in-type boxes or boxes provided with special wall or ceiling brackets that securely fasten boxes in walls or ceilings shall be permitted.

Exception No. 2: A wooden plate providing a 38-mm (1½-in.) minimum width backing around the box and of a thickness of 13 mm (½ in.) or greater (actual) attached directly to the wall panel shall be considered as approved means for mounting outlet boxes.

(F) Cable Sheath.

The sheath of nonmetallic-sheathed cable, and the armor of metal-clad cable and Type AC cable, shall be continuous between outlet boxes and other enclosures.

(G) Protected.

Metal-clad, Type AC, or nonmetallic-sheathed cables and electrical nonmetallic tubing shall be permitted to pass through the centers of the wide side of 2 by 4 wood studs. However, they shall be protected where they pass through 2 by 2 wood studs or at other wood studs or frames where the cable or tubing would be less than 32 mm (1¼ in.) from the inside or outside surface. Steel plates on each side of the cable or tubing, or a steel tube, with not less than 1.35 mm (0.053 in.) wall thickness, shall be installed to protect the cable or tubing. These plates or tubes shall be securely held in place. Where nonmetallic-sheathed cables pass through punched, cut, or drilled slots or holes in metal members, the cable shall be protected by bushings or grommets securely fastened in the opening prior to installation of the cable.

(H) Cable Supports.

Where connected with cable connectors or clamps, cables shall be secured and supported within 300 mm (12 in.) of outlet boxes, panelboards, and splice boxes on appliances. Supports and securing shall be provided at intervals not exceeding 1.4 m (4½ ft) at other places.

(I) Nonmetallic Box Without Cable Clamps.

Nonmetallic-sheathed cables shall be secured and supported within 200 mm (8 in.) of a nonmetallic outlet box without cable clamps. Where wiring devices with integral enclosures are employed with a loop of extra cable to permit future replacement of the device, the cable loop shall be considered as an integral portion of the device.

(J) Physical Damage.

Where subject to physical damage, exposed nonmetallic cable shall be protected by covering boards, guard strips, raceways, or other means.

(K) Receptacle Faceplates.

Metal faceplates shall comply with 406.16(A). Nonmetallic faceplates shall comply with 406.16(C).

(L) Metal Faceplates Grounded.

Where metal faceplates are used, they shall be grounded.

(M) Moisture or Physical Damage.

Where outdoor or under-chassis wiring is 120 volts, nominal, or over and is exposed to moisture or physical damage, the wiring shall be protected by rigid metal conduit, by intermediate metal conduit, by electrical metallic tubing, by rigid polyvinyl chloride conduit, by other raceways identified for the location, or by Type MI cable that is closely routed against frames and equipment enclosures or other raceway or cable identified for the application.

(N) Component Interconnections.

Fittings and connectors that are intended to be concealed at the time of assembly shall be listed and identified for the interconnection of building components. Such fittings and connectors shall be equal to the wiring method employed in insulation, temperature rise, and fault-current withstanding, and shall be capable of enduring the vibration and shock occurring in park trailers.

(O) Method of Connecting Expandable Units.

The method of connecting expandable units to the main body of the park trailer shall comply with 552.48(O)(1) and 552.48(O)(2) as applicable.

(1) Cord- and Plug-Connected.

Cord and plug connections shall comply with 552.48(O)(1)(a) through 552.48(O)(1)(d).

(a) The portion of a branch circuit that is installed in an expandable unit shall be permitted to be connected to the portion of the branch circuit in the main body of the vehicle by means of an attachment plug and cord listed for hard usage. The cord and its connections shall comply with Article 400, Parts I and II, and be considered as a permitted use under 400.10. Where the attachment plug and cord are located within the park trailer's interior, use of plastic thermoset or elastomer parallel cord Type SPT-3, Type SP-3, or Type SPE shall be permitted.

(b) Where the receptacle provided for connection of the cord to the main circuit is located on the outside of the park trailer, it shall be protected with a ground-fault circuit interrupter for personnel and be listed for wet locations. A cord located on the outside of a park trailer shall be identified for outdoor use.

(c) Unless removable or stored within the park trailer interior, the cord assembly shall have permanent provisions for protection against corrosion and mechanical damage while the park trailer is in transit.

(d) The attachment plug and cord shall be installed so as not to permit exposed live attachment plug pins.

(2) Direct Wires Connected.

That portion of a branch circuit that is installed in an expandable unit shall be permitted to be connected to the portion of the branch circuit in the main body of the park trailer by means of flexible cord installed in accordance with 552.48(O)(2)(a) through 552.48(O)(2)(f) or other approved wiring method.

(a) The flexible cord shall be listed for hard usage and for use in wet locations.

(b) The flexible cord shall be permitted to be exposed on the underside of the vehicle.

(c) The flexible cord shall be permitted to pass through the interior of a wall or floor assembly or both a maximum concealed length of 600 mm (24 in.) before terminating at an outlet or junction box.

(d) Where concealed, the flexible cord shall be installed in nonflexible conduit or tubing that is continuous from the outlet or junction box inside the park trailer to a weatherproof outlet box, junction box, or strain relief fitting listed for use in wet locations that is located on the underside of the park trailer. The outer jacket of flexible cord shall be continuous into the outlet or junction box.

(e) Where the flexible cord passes through the floor to an exposed area inside of the park trailer, it shall be protected by means of conduit and bushings or equivalent.

(f) Where subject to physical damage, the flexible cord shall be protected with RMC, IMC, Schedule 80 PVC, reinforced thermosetting resin conduit (RTRC) listed for exposure to physical damage, or other approved means and shall extend at least 150 mm (6 in.) above the floor. A means shall be provided to secure the flexible cord where it enters the park trailer.

(P) Prewiring for Air-Conditioning Installation.

Prewiring installed for the purpose of facilitating future air-conditioning installation shall comply with the applicable portions of this article and the following:

(1) An overcurrent protective device with a rating compatible with the circuit conductors shall be installed in the panelboard and wiring connections completed.

(2) The load end of the circuit shall terminate in a junction box with a blank cover or other listed enclosure. Where a junction box with a blank cover is used, the free ends of the conductors shall be adequately capped or taped.

(3) A safety label with the word WARNING in minimum 6 mm (¼ in.) high letters and body text in minimum 3 mm (⅛ in.) high letters on a contrasting background shall be affixed on or adjacent to the junction box and shall read as follows:

WARNING
AIR-CONDITIONING CIRCUIT.
THIS CONNECTION IS FOR AIR CONDITIONERS
RATED 110–125-VOLT AC, 60 HZ,
____ AMPERES MAXIMUM.
DO NOT EXCEED CIRCUIT RATING.
EXCEEDING THE CIRCUIT RATING MAY
CAUSE A FIRE AND RESULT IN
DEATH OR SERIOUS INJURY

An ampere rating not to exceed 80 percent of the circuit rating shall be legibly marked in the blank space.

(4) The circuit shall serve no other purpose.

(Q) Prewiring for Other Circuits.

Prewiring installed for the purpose of installing other appliances or devices shall comply with the applicable portions of this article and the following:

(1) An overcurrent protection device with a rating compatible with the circuit conductors shall be installed in the panelboard with wiring connections completed.

(2) The load end of the circuit shall terminate in a junction box with a blank cover or a device listed for the purpose. Where a junction box with blank cover is used, the free ends of the conductors shall be adequately capped or taped.

(3) A safety label with the signal word WARNING in minimum 6 mm (¼ in.) high letters and body text in minimum 3 mm (⅛ in.) high letters on a contrasting background shall be affixed on or adjacent to the junction box or device listed for the purpose and shall read as follows:

WARNING
THIS CONNECTION IS FOR _____ RATED _____ VOLT AC, 60 HZ, _____ AMPERES MAXIMUM. DO NOT EXCEED CIRCUIT RATING. EXCEEDING THE CIRCUIT RATING MAY CAUSE A FIRE AND RESULT IN DEATH OR SERIOUS INJURY.

An ampere rating not to exceed 80 percent of the circuit rating shall be legibly marked in the blank space.

552.49 Maximum Number of Conductors in Boxes.

The maximum number of conductors permitted in boxes shall be in accordance with 314.16.

552.50 Grounded Conductors.

The identification of grounded conductors shall be in accordance with 200.7.

552.51 Connection of Terminals and Splices.

Conductor splices and connections at terminals shall be in accordance with 110.14.

552.52 Switches.

Switches shall be rated as required by 552.52(A) and 552.52(B).

(A) Lighting Circuits.

For lighting circuits, switches shall be rated not less than 10 amperes, 120/125 volts, and in no case less than the connected load.

(B) Motors or Other Loads.

For motors or other loads, switches shall have ampere or horsepower ratings, or both, adequate for loads controlled. (An ac general-use snap switch shall be permitted to control a motor 2 hp or less with full-load current not over 80 percent of the switch ampere rating.)

(C) Location.

Switches shall not be installed within wet locations in tub or shower spaces unless installed as part of a listed tub or shower assembly.

552.53 Receptacles.

All receptacle outlets shall be of the grounding type and installed in accordance with 210.21 and 406.12.

552.54 Luminaires.

(A) General.

Any combustible wall or ceiling finish exposed between the edge of a canopy or pan of a luminaire or ceiling suspended (paddle) fan and the outlet box shall be covered with noncombustible material or a material identified for the purpose.

(B) Shower Luminaires.

If a luminaire is provided over a bathtub or in a shower stall, it shall be of the enclosed and gasketed type and listed for the type of installation, and it shall be ground-fault circuit-interrupter protected.

(C) Outdoor Outlets, Luminaires, Air-Cooling Equipment, and So On.

Outdoor luminaires and other equipment shall be listed for outdoor use or wet locations.

552.55 Grounding.

(See also 552.57 on bonding of non–current-carrying metal parts.)

(A) Power-Supply Grounding.

The equipment grounding conductor in the supply cord or feeder shall be connected to the equipment grounding bus or other approved equipment grounding means in the panelboard.

(B) Panelboard.

The panelboard shall have an equipment grounding bus with sufficient terminals for all equipment grounding conductors or other approved grounding means.

(C) Insulated Grounded Conductor.

The grounded circuit conductor shall be insulated from the equipment grounding conductors and from equipment enclosures and other grounded parts. The grounded circuit conductor terminals in the panelboard and in ranges, clothes dryers, counter-mounted cooking units, and wall-mounted ovens shall be insulated from the equipment enclosure. Bonding screws, straps, or buses in the panelboard or in appliances shall be removed and discarded. Connection of electric ranges and electric clothes dryers utilizing a grounded conductor, if cord-connected, shall be made with 4-conductor cord and 3-pole, 4-wire, grounding-type plug caps and receptacles.

552.56 Interior Equipment Grounding.

(A) Exposed Metal Parts.

In the electrical system, all exposed metal parts, enclosures, frames, luminaire canopies, and so forth, shall be effectively bonded to the grounding terminals or enclosure of the panelboard.

(B) Equipment Grounding Conductors.

Bare conductors or conductors with insulation or individual covering that is green or green with one or more yellow stripes shall be used for equipment grounding conductors only.

(C) Grounding of Electrical Equipment.

Where grounding of electrical equipment is specified, it shall be permitted as follows:

(1) Connection of metal raceway (conduit or electrical metallic tubing), the sheath of Type MC and Type MI cable where the sheath is identified for grounding, or the armor of Type AC cable to metal enclosures.

(2) A connection between the one or more equipment grounding conductors and a metal box by means of a grounding screw, which shall be used for no other purpose, or a listed grounding device.

(3) The equipment grounding conductor in nonmetallic-sheathed cable shall be permitted to be secured under a screw threaded into the luminaire canopy other than a mounting screw or cover screw or attached to a listed grounding means (plate) in a nonmetallic outlet box for luminaire mounting (grounding means shall also be permitted for luminaire attachment screws).

(D) Grounding Connection in Nonmetallic Box.

A connection between the one or more grounding conductors brought into a nonmetallic outlet box shall be arranged so that a connection can be made to any fitting or device in that box that requires grounding.

(E) Grounding Continuity.

Where more than one equipment grounding conductor of a branch circuit enters a box, all such conductors shall be in good electrical contact with each other, and the arrangement shall be such that the disconnection or removal of a receptacle, fixture, including a luminaire, or other device fed from the box will not interfere with or interrupt the grounding continuity.

(F) Cord-Connected Appliances.

Cord-connected appliances, such as washing machines, clothes dryers, refrigerators, and the electrical system of gas ranges, and so on, shall be grounded by means of an approved cord with equipment grounding conductor and grounding-type attachment plug.

552.57 Bonding of Non–Current-Carrying Metal Parts.

(A) Required Bonding.

All exposed non–current-carrying metal parts that are likely to become energized shall be effectively bonded to the grounding terminal or enclosure of the panelboard.

(B) Bonding Chassis.

A bonding conductor shall be connected between any panelboard and an accessible terminal on the chassis. Bonding terminations shall be suitable for the environment in which the conductors and terminations are installed.

Exception: Any park trailer that employs a unitized metal chassis-frame construction to which the panelboard is securely fastened with a bolt(s) and nut(s) or by welding or riveting shall be considered to be bonded.

(C) Bonding Conductor Requirements.

Grounding terminals shall be of the solderless type and listed as pressure terminal connectors recognized for the wire size used. The bonding conductor shall be solid or stranded, insulated or bare, and shall be 8 AWG copper minimum or equivalent.

(D) Metallic Roof and Exterior Bonding.

The metal roof and exterior covering shall be considered bonded where both of the following conditions apply:

(1) The metal panels overlap one another and are securely attached to the wood or metal frame parts by metal fasteners.

(2) The lower panel of the metal exterior covering is secured by metal fasteners at each cross member of the chassis, or the lower panel is connected to the chassis by a metal strap.

(E) Gas, Water, and Waste Pipe Bonding.

The gas, water, and waste pipes shall be considered grounded if they are bonded to the chassis.

(F) Furnace and Metal Air Duct Bonding.

Furnace and metal circulating air ducts shall be bonded.

552.58 Appliance Accessibility and Fastening.

Every appliance shall be accessible for inspection, service, repair, and replacement without removal of permanent construction. Means shall be provided to securely fasten appliances in place when the park trailer is in transit.

552.59 Outdoor Outlets, Fixtures, Including Luminaires, Air-Cooling Equipment, and So On.

(A) Listed for Outdoor Use.

Outdoor fixtures, including luminaires, and equipment shall be listed for outdoor use. Outdoor receptacle outlets shall be in accordance with 406.9(A) and 406.9(B). Switches and circuit breakers installed outdoors shall comply with 404.6.

(B) Outside Heating Equipment, Air-Conditioning Equipment, or Both.

A park trailer provided with a branch circuit designed to energize outside heating equipment or air-conditioning equipment, or both, located outside the park trailer, other than room air conditioners, shall have such branch-circuit conductors terminate in a listed outlet box or disconnecting means located on the outside of the park trailer. A safety label with the word WARNING in minimum 6 mm (¼ in.) high letters and body text in minimum 3 mm (⅛ in.) high letters on a contrasting background shall be affixed within 150 mm (6 in.) from the listed box or disconnecting means and shall read as follows:

WARNING
THIS CONNECTION IS FOR HEATING
AND/OR AIR-CONDITIONING EQUIPMENT.
THE BRANCH CIRCUIT IS RATED AT NOT MORE THAN _____ AMPERES, AT _____ VOLTS, 60 HZ, _____ CONDUCTOR AMPACITY.
A DISCONNECTING MEANS SHALL BE
LOCATED WITHIN SIGHT OF THE EQUIPMENT.
EXCEEDING THE CIRCUIT RATING MAY CAUSE A FIRE AND RESULT IN DEATH OR SERIOUS INJURY.

The correct voltage and ampere rating shall be given.

Part V. Factory Tests

552.60 Factory Tests (Electrical).

Each park trailer shall be subjected to the tests required by 552.60(A) and 552.60(B).

(A) Circuits of 120 Volts or 120/240 Volts.

Each park trailer designed with a 120-volt or a 120/240-volt electrical system shall withstand the applied voltage without electrical breakdown of a 1 minute, 900-volt dielectric strength test, or a 1 second, 1080-volt dielectric strength test, with all switches closed, between ungrounded and grounded conductors and the park trailer ground. During the test, all switches and other controls shall be in the “on” position. Fixtures, including luminaires, and permanently installed appliances shall not be required to withstand this test.

Each park trailer shall be subjected to the following:

(1) A continuity test to ensure that all metal parts are properly bonded

(2) Operational tests to demonstrate that all equipment is properly connected and in working order

(3) Polarity checks to determine that connections have been properly made

(4) Receptacles requiring GFCI protection shall be tested for correct function by the use of a GFCI testing device

(B) Low-Voltage Circuits.

An operational test of low-voltage circuits shall be conducted to demonstrate that all equipment is connected and in electrical working order. This test shall be performed in the final stages of production after all outer coverings and cabinetry have been secured.

Additional Proposed Changes

File Name	Description	Approved
CN_286.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 286 appeared in the First Draft Report.

The Correlating Committee directs CMP 7 to review Article 552 regarding equipment required to be

listed that is unique to this Article and consider creation of a Section 552.2 in accordance with Section 2.2.1 of the NEC Style Manual.

Related Item

• Correlating Committee Note No. 286

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Thu Aug 01 20:18:17 EDT 2024
Committee: NEC-P07

Correlating Committee Note No. 286-NFPA 70-2024 [Global Input]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 22:36:34 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs CMP 7 to review Article 552 regarding equipment required to be listed that is unique to this Article and consider creation of a Section 552.2 in accordance with Section 2.2.1 of the NEC Style Manual.

Ballot Results

This item has passed ballot

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 567-NFPA 70-2024 [Section No. 552.1]

552.1 Scope.

This article covers the electrical conductors and equipment installed within or on park trailers not covered fully under Articles 550 and 551.

Additional Proposed Changes

File Name	Description	Approved
CN_282.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 282 appeared in the First Draft Report on First Revision No. 8595.

The Correlating Committee directs CMP 7 to review FR 8595 with respect to clarifying the scope section and specify what is covered under Articles 550 and 551 or, remove the reference(s) as applicable or, verify why it is necessary for context.

Related Item

- First Revision No. 8595

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Wed Jul 31 17:30:07 EDT 2024
Committee: NEC-P07

Correlating Committee Note No. 282-NFPA 70-2024 [Section No. 552.1]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 22:05:49 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs CMP 7 to review FR 8595 with respect to clarifying the scope section and specify what is covered under Articles 550 and 551 or, remove the reference(s) as applicable or, verify why it is necessary for context.

First Revision No. 8595-NFPA 70-2024 [Section No. 552.1]

Ballot Results

This item has passed ballot

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 587-NFPA 70-2024 [Section No. 552.45]

552.45 Panelboard.

(A) Listed and Appropriately Rated.

A listed and appropriately rated panelboard shall be used. The grounded conductor termination bar shall be insulated from the enclosure as provided in 552.55(C). An equipment grounding terminal bar shall be attached inside the metal enclosure of the panelboard.

(B) Location.

The panelboard shall be installed in a readily accessible location. Working clearance for the panelboard shall be not less than 600 mm (24 in.) wide and 750 mm (30 in.) deep.

Exception: Where the panelboard cover is exposed to the inside aisle space, one of the working clearance dimensions shall be permitted to be reduced to a minimum of 550 mm (22 in.). A panelboard shall be considered exposed where the panelboard cover is within 50 mm (2 in.) of the aisle's finished surface or not more than 25 mm (1 in.) from the backside of doors that enclose the space.

(C) Dead-Front Type.

The panelboard shall be of the dead-front type. A main disconnecting means shall be provided where fuses are used or where more than two circuit breakers are employed. A main overcurrent protective device not exceeding the feeder assembly rating shall be provided where more than two branch circuits are employed.

Additional Proposed Changes

File Name	Description	Approved
CN_284.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 284 appeared in the First Draft Report.

The Correlating Committee directs CMP-7 to review all the listing requirements in Article 552 for relocation to 552.2 to comply with the NEC Style Manual Section 2.2.1for parallel numbering. In addition, review the use of "appropriately".

Related Item

• Correlating Committee Note No. 284

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Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
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Correlating Committee Note No. 284-NFPA 70-2024 [Section No. 552.45]

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Committee Statement

Committee Statement: The Correlating Committee directs CMP-7 to review all the listing requirements in Article 552 for relocation to 552.2 to comply with the NEC Style Manual Section 2.2.1 for parallel numbering. In addition, review the use of “appropriately”.

Ballot Results

This item has passed ballot

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 590-NFPA 70-2024 [Article 555]

Article 555 Marinas, Boatyards, Floating Buildings, and Docking Facilities

Part I. General

555.1 Scope.

This article covers the installation of wiring and equipment in the areas comprising fixed or floating piers, wharves, docks, floating buildings, and other areas in marinas, boatyards, boat basins, boathouses, yacht clubs, boat condominiums, docking facilities associated with one-family dwellings, two-family dwellings, multifamily dwellings, and residential condominiums; any multiple docking facility or similar occupancies; and facilities that are used, or intended for use, for the purpose of repair, berthing, launching, storage, or fueling of small craft and the moorage of floating buildings.

Informational Note No. 1: See NFPA 303-2021, *Fire Protection Standard for Marinas and Boatyards,* for additional information.

Informational Note No. 2: Where boats, floating buildings, docks, and similar structures are connected to an electrical source or a supply of electricity, hazardous voltages and currents may create serious safety concerns.

555.5 Maximum Voltage — ac Only.

Pier power distribution systems shall not exceed 600 volts phase to phase.

555.6 Load Calculations for Service and Feeder Conductors.

General lighting and other loads shall be calculated in accordance with Article 120, Part III. The demand factors set forth in 120.120 shall be permitted for each service and/or feeder circuit supplying receptacles that provide shore power for boats.

555.7 Transformers.

(A) General.

Transformers and enclosures shall be identified for wet locations. The bottom of transformer enclosures shall not be located below the electrical datum plane.

(B) Replacements.

Transformers and enclosures shall be identified for wet locations where replacements are made.

555.8 Marine Hoists, Railways, Cranes, and Monorails.

Motors and controls for marine hoists, railways, cranes, and monorails shall not be located below the electrical datum plane. Where it is necessary to provide electric power to a mobile crane or hoist in the yard and a trailing cable is utilized, it shall be a listed portable power cable rated for the conditions of use and be provided with an outer jacket of distinctive color for safety.

555.9 Engineered Design.

Documentation of the engineered electrical design of the pier distribution system shall be provided upon request of the AHJ.

555.10 Signage.

Permanent safety signs shall be installed to give notice of electrical shock hazard risks to persons using or swimming near a docking facility, boatyard, or marina and shall comply with all of the following:

(1) The signage shall comply with 110.21(B)(1) and be of sufficient durability to withstand the environment.

(2) The signs shall be clearly visible from all approaches to a marina, docking facility, or boatyard facility.

(3) The signs shall state “WARNING — POTENTIAL SHOCK HAZARD — ELECTRICAL CURRENTS MAY BE PRESENT IN THE WATER.”

555.11 Motor Fuel Dispensing Stations — Hazardous (Classified) Locations.

Electrical wiring and equipment located at or serving motor fuel dispensing locations shall comply with Article 514 in addition to the requirements of this article.

555.12 Repair Facilities — Hazardous (Classified) Locations.

Electrical wiring and equipment located at facilities for the repair of marine craft containing flammable or combustible liquids or gases shall comply with Article 511 in addition to the requirements of this article.

555.13 Bonding of Non-Current-Carrying Metal Parts.

All metal parts in contact with the water, all metal piping, and all non-current-carrying metal parts that are likely to become energized shall be connected to one of the following:.

(1) The branch circuit or feeder equipment grounding conductor

(2) The grounding bus in the panelboard using solid copper conductors; insulated, covered, or bare; not smaller than 8 AWG

Connections to bonded parts shall be made in accordance with 250.8.

555.14 Equipotential Planes and Bonding of Equipotential Planes.

Equipotential planes shall be installed adjacent to all outdoor service equipment or disconnecting means that control equipment in or on water where the following conditions exist:

(1) Where the system voltage exceeds 250 volts to ground

(2) Where the equipment is located within 3 m (10 ft) of the body of water

(A) Equipotential Plane Construction.

Equipotential planes shall encompass the area around outdoor service equipment and extend from the area directly below the equipment out not less than 900 mm (36 in.) in all directions from which a person would be able to stand and come in contact with the equipment. Bonding to equipotential planes shall be provided as specified in 555.14(A)(1) or 555.14(A)(2) and be attached to metallic enclosures that are likely to become energized with a solid copper conductor, insulated, covered or bare, and not smaller than 8 AWG.

(1) Structural Reinforcing Steel.

Unencapsulated structural reinforcing steel shall be bonded together by steel tie wires or the equivalent.

(2) Copper Grid.

Copper grid shall comply with the following requirements:

(1) Be constructed of minimum 8 AWG bare solid copper conductors bonded to each other at all points of crossing in accordance with 250.8 or other approved means

(2) Be arranged in a 300 mm (12 in.) by 300 mm (12 in.) network of conductors in a uniformly spaced perpendicular grid pattern with a tolerance of 100 mm (4 in.)

(3) Only listed splicing devices or exothermic welding permitted to be used

(B) Areas Not Requiring Equipotential Planes.

Equipotential planes shall not be required for the controlled utilization equipment on the docking facility or floating building supplied by the service equipment or disconnecting means.

555.15 Servicing and Replacing of Equipment.

Servicing or replacing of electrical enclosures, devices, or wiring methods shall be done in accordance with 555.15(A) or 555.15(B).

(A) Servicing.

Equipment that has been damaged shall be recognized, documented, and serviced by a qualified person to the edition of this code to which it was originally installed.

(B) Replacing.

When replacement of equipment is necessary, a qualified person shall document and replace the equipment in accordance with the requirements of this code. The installation shall require an inspection of the circuit. Any servicing necessary to address issues discovered during the inspection shall be done in accordance with 555.15(A).

> Informational Note: NFPA 303-2021, *Fire Protection Standard for Marinas and Boatyards*, is a resource for guiding the electrical inspection of a marina.

555.16 Electrical Datum Plane Distances.

(A) Floating Piers.

The electrical datum plane for floating piers and boat landing stages that is (1) installed to permit rise and fall response to water level and without lateral movement, and (2) so equipped that piers and landing stages can rise to the datum plane established for 555.16(B) or 555.16(C), shall be a horizontal plane 762 mm (30 in.) above the water level at the floating pier or boat landing stage and a minimum of 305 mm (12 in.) above the level of the deck.

(B) Areas Subject to Tidal Fluctuations.

In land areas subject to tidal fluctuation, the electrical datum plane shall be a horizontal plane that is 606 mm (2 ft) above the highest tide level for the area occurring under normal circumstances, based on the highest high tide.

(C) Areas Not Subject to Tidal Fluctuations.

In land areas not subject to tidal fluctuation, the electrical datum plane shall be a horizontal plane that is 606 mm (2 ft) above the highest water level for the area occurring under normal circumstances.

555.17 Location of Service Equipment.

The service equipment for a floating building, dock, or marina shall be located on land no closer than 1.5 m (5 ft) horizontally from and adjacent to the structure served, but not on or in the structure itself or any other floating structure. Service equipment shall be elevated a minimum of 300 mm (12 in.) above the electrical datum plane.

Part II. Marinas, Boatyards, and Docking Facilities

555.30 Electrical Equipment and Connections.

(A) General.

(1) Location.

All electrical components within electrical equipment (excluding wiring methods) and connections not intended for operation while submerged shall be located at least 305 mm (12 in.) above the deck of a fixed or floating structure, but not below the electrical datum plane.

(2) Wiring Connectors.

Conductor splices, within junction boxes identified for wet locations, utilizing sealed wire connector systems listed and identified for submersion shall be required for floating structures where located above the waterline but below the electrical datum plane.

(B) Replacements.

(1) Location.

Replacement electrical connections shall be located at least 305 mm (12 in.) above the deck of a floating or fixed structure.

(2) Wiring Connectors.

Conductor splices, within junction boxes identified for wet locations, utilizing sealed wire connector systems listed and identified for submersion shall be required where located above the waterline but below the electrical datum plane.

555.31 Electrical Equipment Enclosures.

(A) Securing and Supporting.

Electrical equipment enclosures installed on piers above deck level shall be securely and substantially supported by structural members, independent of any conduit connected to them. If enclosures are not attached to mounting surfaces by means of external ears or lugs, the internal screw heads shall be sealed to prevent seepage of water through mounting holes.

(B) Location.

Electrical equipment enclosures on piers shall be located so as not to interfere with mooring lines.

555.32 Circuit Breakers, Switches, Panelboards, and Marina Power Outlets.

Circuit breakers and switches installed in gasketed enclosures shall be arranged to permit required manual operation without exposing the interior of the enclosure. All such enclosures shall be arranged with a weep hole to discharge condensation.

555.33 ac Only Receptacles.

Receptacles shall be mounted not less than 305 mm (12 in.) above the deck surface of the pier and not below the electrical datum plane on a fixed pier.

(A) Shore Power Receptacles.

(1) Enclosures.

Receptacles intended to supply shore power to boats shall be enclosed in listed marina power outlets, enclosures listed for wet locations, or be installed in listed enclosures protected from the weather. The integrity of the assembly shall not be affected when the receptacles are in use with any type of booted or nonbooted attachment plug/cap inserted.

(2) Strain Relief.

Means shall be provided where necessary to reduce the strain on the plug and receptacle caused by the weight and catenary angle of the shore power cord.

(3) Branch Circuits.

Each single receptacle that supplies shore power to boats shall be supplied from a marina power outlet or panelboard by an individual branch circuit of the voltage class and rating corresponding to the rating of the receptacle.

> Informational Note: Supplying receptacles at voltages other than the voltages marked on the receptacle may cause overheating or malfunctioning of connected equipment, for example, supplying single-phase, 120/240-volt, 3-wire loads from a 208Y/120-volt, 3-wire source.

(4) Ratings.

Shore power for boats shall be provided by single receptacles rated not less than 30 amperes.

Informational Note: See NFPA 303-2021, *Fire Protection Standard for Marinas and Boatyards*, for locking- and grounding-type receptacles for auxiliary power to boats.

(a) Receptacles rated 30 amperes and 50 amperes shall be the locking and grounding type.

Informational Note: See ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*, for various configurations and ratings of locking- and grounding-type receptacles and caps.

(b) Receptacles rated 60 amperes or higher shall be the pin and sleeve type.

Informational Note: See ANSI/UL 1686, *UL Standard for Safety Pin and Sleeve Configurations*, for various configurations and ratings of pin and sleeve receptacles.

(B) Other Than Shore Power.

Receptacles other than those supplying shore power to boats shall be permitted to be enclosed in marina power outlets with the receptacles that provide shore power to boats if the receptacles are marked to clearly indicate that they are not to be used to supply power to boats.

(C) Replacement Receptacles.

The requirements in 555.33 shall apply to the replacement of marina receptacles.

555.34 Wiring Methods and Installation.

(A) Wiring Methods.

(1) General.

Wiring methods of Chapter 3 shall be permitted where identified for use in wet locations and shall contain a wire-type insulated equipment grounding conductor.

(2) Portable Power Cables.

Extra-hard usage cord and extra-hard usage portable power cables rated not less than 75°C (167°F) and 600 volts, listed for use in the environment within which it is installed, shall be permitted as follows:

(1) As permanent wiring on the underside of piers (floating or fixed)

(2) Where flexibility is necessary as on piers composed of floating sections

(B) Installation.

(1) Overhead Wiring.

Overhead wiring shall be installed to avoid possible contact with masts and other parts of boats being moved in the yard.

Conductors and cables shall be routed to avoid wiring closer than 6.0 m (20 ft) from the outer edge or any portion of the yard that can be used for moving vessels or stepping or unstepping masts.

(2) Outdoor Branch Circuits and Feeders.

Multiple feeders and branch circuits shall be permitted and clearances for overhead branch-circuit and feeder wiring in locations of the boatyard other than those described in 555.34(B)(1) shall be located not less than 5.49 m (18 ft) above grade. Only Article 225, Part I, shall apply to marina installations.

(3) Portable Power Cables.

(a) Where portable power cables are permitted by 555.34(A)(2), the installation shall comply with the following:

(1) Cables shall be properly supported.

(2) Cables shall be located on the underside of the pier.

(3) Cables shall be securely fastened by nonmetallic clips to structural members other than the deck planking.

(4) Cables shall not be installed where subject to physical damage.

(5) Where cables pass through structural members, they shall be protected against chafing by a permanently installed oversized sleeve of nonmetallic material.

(b) Where portable power cables are used as permitted in 555.34(A)(2)(2), there shall be a junction box of corrosion-resistant construction with permanently installed terminal blocks on each pier section to which the feeders and feeder extensions are to be connected. A listed marina power outlet employing terminal blocks/bars shall be permitted in lieu of a junction box. Metal junction boxes and covers, and metal screws and parts that are exposed externally to the boxes, shall be of corrosion-resistant materials or protected by material resistant to corrosion.

(4) Protection.

Rigid metal conduit, intermediate metal conduit, reinforced thermosetting resin conduit (RTRC) listed for aboveground use, or rigid polyvinyl chloride (PVC) conduit suitable for the location shall be used to protect wiring to a point at least 2.5 m (8 ft) above docks, decks of piers, and landing stages. The conduit shall be connected to the enclosure by full standard threads or fittings listed for use in damp or wet locations, as applicable.

555.35 Ground-Fault Protection of Equipment (GFPE) and Ground-Fault Circuit Interrupters (GFCIs).

Ground-fault protection of equipment (GFPE) serving docking facilities and piers shall be provided in accordance with 555.35(A) through 555.35(E).

(A) Feeders and Branch Circuits.

Feeders and branch circuits shall be provided with listed GFPE rated not more than 100 milliamperes (mA).

Exception No. 1: The load side conductors of a separately derived system and circuit supplying ground-fault monitoring equipment that do not exceed 3 m (10 ft) and are installed in a raceway shall be permitted to be installed without ground-fault protection. This exception shall also apply to the supply terminals of the equipment supplied by the transformer secondary conductors.

Exception No. 2: Feeders for fire pumps shall be permitted to use ground-fault monitoring without disconnecting power to the fire pump in accordance with the following:

(1) The ground-fault monitor alarm shall notify upon ground faults exceeding 100 mA.

(2) The alarm shall be audible and visual.

(3) The alarm shall be located where it can be monitored by qualified personnel.

(B) Receptacles and Outlets.

(1) Receptacles Providing Shore Power.

Listed GFPE, rated not more than 30 mA, shall be provided for receptacles installed in accordance with 555.33(A).

(2) Outlets for Other than Shore Power.

GFCI protection for personnel shall be provided for outlets under the following conditions:

(1) The branch circuit is single-phase, does not exceed 150 volts to ground, and is rated 60 amperes or less.

(2) The branch circuit is 3-phase, does not exceed 150 volts to ground, and is rated 100 amperes or less.

Exception to (1) and (2): Low-voltage circuits not requiring grounding, not exceeding the low-voltage contact limit, and supplied by listed transformers or power supplies that comply with 680.23(A)(2) shall be permitted to be installed without ground-fault protection.

(C) Boat Hoists.

GFCI protection for personnel shall be provided for outlets not exceeding 240 volts that supply boat hoists installed at docking facilities. GFCI-protected receptacles for other than shore power shall be permitted to supply boat hoists.

(D) Leakage Current Measurement Device.

Where more than three receptacles supply shore power to boats, a listed leakage current measurement device for use in marina applications shall be available and be used to determine leakage current from each boat that will use shore power. The listing requirement for the leakage current measurement device for use in marina applications shall become effective January 1, 2026.

Informational Note No. 1: Leakage current measurement will provide the capability to determine when an individual boat has defective wiring or other problems contributing to hazardous voltage and current. The use of a test device will allow the facility operator to identify a boat that is creating problems. In some cases a single boat could cause an upstream GFPE device protecting a feeder to operate even though multiple boats are supplied from the same feeder. The use of a test device will help the facility operator prevent a particular boat from contributing to hazardous voltage and current in the marina area.

Informational Note No. 2: An annual test of each boat with the leakage current measurement device is a prudent step toward determining if a boat has defective wiring that could be contributing hazardous voltage and current. Where the leakage current measurement device reveals that a boat is contributing hazardous voltage and current, repairs should be made to the boat before it is permitted to use shore power.

Exception: Where shore power equipment includes a leakage indicator and leakage alarm, a separate leakage test device shall not be required.

(E) Coordination and Performance Testing.

GFPE protection systems shall be coordinated and performance tested by an approved method when first installed on site. This testing shall be conducted by a qualified person(s) in accordance with the manufacturer's instructions. A written record of this testing shall be made available to the authority having jurisdiction.

555.36 Disconnecting Means for Shore Power Connection(s).

Disconnecting means shall be provided to isolate each boat from its supply connection(s).

(A) Type.

The disconnecting means shall consist of a circuit breaker, switch, or both, and shall be properly identified as to which receptacle it controls.

(B) Location.

The disconnecting means shall be readily accessible, located not more than 762 mm (30 in.) from the receptacle it controls, and located in the supply circuit ahead of the receptacle. Circuit breakers or switches located in marina power outlets complying with this section shall be permitted as the disconnecting means.

(C) Emergency Electrical Disconnects.

Emergency electrical disconnects shall comply with the following:

(1) Each marina power outlet or enclosure that provides shore power to boats shall be provided with a listed emergency shutoff device or electrical disconnect that is clearly marked “Emergency Shutoff” in accordance with 110.22(A).

(2) The emergency shutoff device or electrical disconnect shall be within sight of the marina power outlet or other enclosure that provides shore power to boats, readily accessible, externally operable, manually resettable, and listed for use in wet locations.

(3) The emergency shutoff device or electrical disconnect shall de-energize the power supply to all circuits supplied by the marina power outlet(s) or enclosure(s) that provide shore power to boats. A circuit breaker handle shall not be used for this purpose.

555.37 Equipment Grounding Conductor.

(A) Equipment to Be Connected to Equipment Grounding Conductor.

The following items shall be connected to an equipment grounding conductor run with the circuit conductors in the same raceway, cable, or trench:

(1) Metal boxes, metal cabinets, and all other metal enclosures

(2) Metal frames of utilization equipment

(3) Grounding terminals of grounding-type receptacles

(B) Type of Equipment Grounding Conductor.

An equipment grounding conductor shall be of the wire-type, insulated, and sized in accordance with 250.122 but not smaller than 12 AWG.

(C) Feeder Equipment Grounding Conductor.

Where a feeder supplies a remote enclosed panelboard or other distribution equipment, an insulated equipment grounding conductor shall extend from a grounding terminal in the service to a grounding terminal and busbar in the remote enclosed panelboard or other distribution equipment.

(D) Branch-Circuit Equipment Grounding Conductor.

The insulated equipment grounding conductor for branch circuits shall terminate at a grounding terminal in a remote panelboard, in other distribution equipment, or in the main service equipment.

(E) Cord-and-Plug-Connected Appliances.

Unless double-insulated, cord-and-plug-connected appliances shall be grounded by means of an equipment grounding conductor in the cord and a grounding-type attachment plug.

Exception: An equipment grounding conductor shall be permitted to be uninsulated if a part of a listed cable assembly identified for the environment and not subject to atmospheres or environments such as, but not limited to, storm water basins, sewage treatment ponds, and natural bodies of water containing salt water.

555.38 Luminaires.

(A) General.

Luminaires and their supply connections shall be secured to structural elements of the marina to limit damage from watercraft and prevent entanglement of and interaction with sea life.

Informational Note: See 410.2 for requirements related to listing and retrofit requirements for luminaires.

(B) Underwater Luminaires.

Luminaires installed below the highest high tide level or electrical datum plane and likely to be periodically submersed shall be limited to those luminaires that comply with the following:

(1) Identified as submersible

(2) Operate below the low-voltage contact limit defined in Article 100

(3) Supplied by an isolating transformer or power supply in accordance with 680.23(A)(2)

Part III. Floating Buildings

555.50 Service Conductors.

One set of service conductors shall be permitted to serve more than one set of service equipment.

555.51 Feeder Conductors.

Each floating building shall be supplied by a single set of feeder conductors from its service equipment.

Exception: Where the floating building has multiple occupancy, each occupant shall be permitted to be supplied by a single set of feeder conductors extended from the occupant's service equipment to the occupant's panelboard.

555.52 Installation of Services and Feeders.

(A) Flexibility.

Flexibility of the wiring system shall be maintained between floating buildings and the supply conductors. All wiring shall be installed so that motion of the water surface and changes in the water level will not result in unsafe conditions.

(B) Wiring Methods.

Liquidtight flexible metal conduit or liquidtight flexible nonmetallic conduit with approved fittings shall be permitted for feeders and where flexible connections are required for services. Extra-hard usage portable power cable listed for both wet locations and sunlight resistance shall be permitted for a feeder to a floating building where flexibility is required. Other raceways suitable for the location shall be permitted to be installed where flexibility is not required.

555.53 Ground-Fault Protection.

The main overcurrent protective device that feeds the floating building shall have ground-fault protection not exceeding 100 mA. Ground-fault protection of each individual branch or feeder circuit shall be permitted as a suitable alternative. Outdoor outlets, shore power outlets, and boat hoists located at floating buildings shall comply with 555.35(B) and 555.35(C).

555.54 Grounding.

Grounding at floating buildings shall comply with 555.54(A) through 555.54(D).

(A) Grounding of Electrical and Nonelectrical Parts.

Grounding of both electrical and nonelectrical parts in a floating building shall be through connection to a grounding bus in the building enclosed panelboard.

(B) Installation and Connection of Equipment Grounding Conductor.

The equipment grounding conductor shall be installed with the feeder conductors and connected to a grounding terminal in the service equipment.

(C) Identification of Equipment Grounding Conductor.

The equipment grounding conductor shall be an insulated copper conductor with a continuous outer finish that is either green or green with one or more yellow stripes. For conductors larger than 6 AWG, or where multiconductor cables are used, re-identification of conductors allowed in 250.119(B)(2)b. and (B)(2)c. shall be permitted.

(D) Grounding Electrode Conductor Connection.

The grounding terminal in the service equipment shall be grounded by connection through an insulated grounding electrode conductor to a grounding electrode on shore.

555.55 Insulated Neutral.

The grounded circuit conductor (neutral) shall be an insulated conductor identified in compliance with 200.7. The neutral conductor shall be connected to the equipment grounding terminal in the service equipment, and, except for that connection, it shall be insulated from the equipment grounding conductors, equipment enclosures, and all other grounded parts. The neutral conductor terminals in the panelboard and in ranges, clothes dryers, counter-mounted cooking units, and the like shall be insulated from the enclosures.

555.56 Equipment Grounding.

(A) Electrical Systems.

All enclosures and exposed metal parts of electrical systems shall be connected to the grounding bus.

(B) Cord-Connected Appliances.

Where required to be grounded, cord-connected appliances shall be grounded by means of an equipment grounding conductor in the cord and a grounding-type attachment plug.

Additional Proposed Changes

File Name	Description	Approved
CN_287.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 287 appeared in the First Draft Report.

The Correlating Committee directs CMP 7 to review Article 555 regarding equipment required to be listed that is unique to this Article and consider creation of a Section 555.2 in accordance with Section 2.2.1 of the NEC Style Manual.

Related Item

• Correlating Committee Note No. 287

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Thu Aug 01 20:20:00 EDT 2024
Committee: NEC-P07

Correlating Committee Note No. 287-NFPA 70-2024 [Global Input]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 22:37:06 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs CMP 7 to review Article 555 regarding equipment required to be listed that is unique to this Article and consider creation of a Section 555.2 in accordance with Section 2.2.1 of the NEC Style Manual.

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 797-NFPA 70-2024 [Section No. 555.9]

~~**555.9** Engineered Design.~~

~~Documentation of the engineered electrical design of the pier distribution system shall be provided upon request of the AHJ.~~

Statement of Problem and Substantiation for Public Comment

There is no requirement for a design to be engineered, so what is "the" engineered design that this section is refering to? Perhaps a requirement for the design to be engineered is warranted, but without such a requirement the language of 555.9 does not make sense. If the CMP decides to make a requirement for an engineered design, I hope the scope's inclusion of small residential facilities is considered. Requiring an engineered deisgn for a 20A branch circuit in a person's backyard seems excessive.
Language such as "installations excceding 240V nominal shall be designed by a qualified engineer. Documentation of the design shall be available upon the request of the authority having jurisdiction" or similar such language could perhpas satisfy the intent of the CMP.

Related Item

• FR 8382

Submitter Information Verification

Submitter Full Name: Ryan Jackson
Organization: Self-employed
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Submittal Date: Mon Aug 05 13:04:36 EDT 2024
Committee: NEC-P07

Public Comment No. 156-NFPA 70-2024 [Section No. 555.13]

555.13 Bonding of Non-Current-Carrying Metal Parts.

All ~~metal parts in contact with the water, all metal piping, and all~~ non-current-carrying metal parts that are likely to become energized shall be connected to one of the following:.

(1) The branch circuit or feeder equipment grounding conductor

(2) The grounding bus in the panelboard using solid or stranded copper conductors; insulated, covered, or bare; not smaller than 8 AWG and sized to the largest overcurrent device associated with the circuit feeding the dock or floating building.

Connections to bonded parts shall be made in accordance with 250.8.

Additional Proposed Changes

File Name	Description	Approved
.1721678518829	Backup material.	
2026_Article_555.13_proposed_change_clarification.pdf		

Statement of Problem and Substantiation for Public Comment

Confusion in the wording of "likely to be energized" in 555.13. Detailed description of the issue is in the attached letter.

Related Item

• Public Input from Mike Holt #3258

Submitter Information Verification

Submitter Full Name: Robert Greco
Organization: Acra Electric Inc
Street Address:
City:
State:
Zip:

Submittal Date: Mon Jul 22 15:35:57 EDT 2024
Committee: NEC-P07

ACRA ELECTRIC INC.

State Certified Electrical Contractors

EC 0000346

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239-542-1624
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July 22, 2024

Proposed change to NEC 555.13

The 2020 NEC changes included the deletion of Article 553 – "Floating Buildings" and integrating Article 553 into Article 555 – "Marinas, Boatyards, **Floating Buildings**, and Commercial and Noncommercial Docking Facilities."

2017 Article 553.11 stated, "All metal parts in contact with the water, all metal piping, and all non-current-carrying metal parts that are likely to become energized shall be connected to the grounding buss in the panelboard." I researched this section and found that it was first seen in the 1987 NEC, when Article 553 Floating Buildings was introduced. My assumption was that a floating building back in '87 was typically a structure built on a steel barge with power from shore feeding a panel in the floating structure. It would make perfect sense to bond all metal parts associated with the floating building to the panelboard in the floating building.

Article 553.11 did not change through 8 code cycles until in 2011 the words "may become energized" changed to "are likely to become energized."

Fast forward to 2020 NEC and 553.11 becomes 555.13, with the addition of the caveat "using solid copper conductors" … "not smaller than #8 AWG."

I have spoken to two members of NEC Code Panel 7 and also a number of electrical engineers who concur that the words "likely to become energized" should apply to all metal parts on a dock, in or out of the water. They agree that items such as ladders, dock hardware and other dock accessories mounted on a wood or composite dock are certainly NOT likely to become energized, and connecting them to the equipment grounding conductor increases the likelihood of them becoming energized and potentially dangerous. These changes have, what I consider to be, unintended consequences when trying to apply the code to residential wood docks, which are the majority of the installations we see on a day-to-day basis.

The confusion is in the structure of the sentence. All metal parts in contact with the water and all metal piping comes before "likely to be energized", and some jurisdictions are interpreting the code to say that All metal parts in the water are to be bonded, even if they are not likely to be energized, as in the case of an aluminum ladder mounted to a wood or composite dock.

There is always a difference of potential voltage between remote earth (the canal) and the electrical ground from the utility. We have observed from .35 volts to over 1 volt AC. It is never 0. This is NEV, Neutral Earth Voltage, and it is caused by voltage drop on the neutral from the

utility. This constant voltage causes the metal to degrade prematurely due to electrolysis, plus increases the possibility of electric shock from someone in the water using the ladder. In the case of a “floating neutral” or lost neutral either in the home or on the utility side, the danger increases dramatically as a potentially lethal amount of current takes all available paths to return to the source.

The overriding issue here is electrical safety on docks. One cannot compare grounding and bonding of metal parts on docks to the requirements in Article 680 for pools. In a swimming pool scenario, the goal is to create an equipotential plane among ALL metal parts including ladders, screen enclosures, lights, pumps, the water, the deck, so that there is no touch potential difference. In the case where the utility had a failed neutral, the entire pool area would rise at the same potential, and you could compare that scenario to a “bird on a wire.” This scenario could not be duplicated on a boat dock since the water will never be at the same potential as the electrical ground, and so the rules that apply to pools cannot be applied to docks. It should also be noted that a GFCI circuit breaker will not save you from any amount of NEV. The breaker will not trip because there is no imbalance in the circuit. This is also why it is important to avoid swimming onto a boat lift from the canal. It is an invisible danger that lurks beyond all safety mechanisms. We don’t want the ladder to be subject to the same danger.

Sincerely,

Robert Greco
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Public Comment No. 799-NFPA 70-2024 [Section No. 555.13]

555.13 Bonding of Non-Current-Carrying Metal Parts.

~~All metal parts in contact with the water~~ If they are likely to become energized , all metal ~~piping,~~ parts and all ~~non-current-carrying metal parts that are likely to become energized~~ metal piping shall be connected to one of the following:.

(1) The branch circuit or feeder equipment grounding conductor

(2) The grounding bus in the panelboard using solid copper conductors; insulated, covered, or bare; not smaller than 8 AWG

Connections to bonded parts shall be made in accordance with 250.8.

Statement of Problem and Substantiation for Public Comment

If the current sentence is diagramed, the rule requires every metal object touching water to be bonded, not just those that are likely to become energized. This means that literally hundreds of isolated nuts, bolts, and washers need to be bonded together. This does not increase electrical safety, nor is it warranted.

Related Item

• FR 8315

Submitter Information Verification

Submitter Full Name: Ryan Jackson
Organization: Self-employed
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Submittal Date: Mon Aug 05 13:16:09 EDT 2024
Committee: NEC-P07

Public Comment No. 798-NFPA 70-2024 [Section No. 555.14]

555.14 Equipotential Planes and Bonding of Equipotential Planes.

Equipotential planes shall be installed adjacent to all outdoor service equipment or disconnecting means that control equipment in or on water ~~where~~ if the following conditions exist:

(1) ~~Where the~~ The system voltage exceeds 250 volts to ground

(2) ~~Where the~~ The equipment is located within 3 m (10 ft) of the body of water

(A) Equipotential Plane Construction.

Equipotential planes shall encompass the area around outdoor service equipment or disconnecting means and extend from the area directly below the equipment out not less than 900 mm (36 in.) in all directions from which a person would be able to stand and come in contact with the equipment. Bonding to equipotential planes shall be provided as specified in 555.14(A)(1) or 555.14(A)(2) and be attached to metallic enclosures that are likely to become energized with a solid copper conductor, insulated, covered or bare, and not smaller than 8 AWG.

(1) Structural Reinforcing Steel.

Unencapsulated structural reinforcing steel shall be bonded together by steel tie wires or the equivalent.

(2) Copper Grid.

Copper grid shall comply with the following requirements:

(1) Be constructed of minimum 8 AWG bare solid copper conductors bonded to each other at all points of crossing in accordance with 250.8 or other approved means

(2) Be arranged in a 300 mm (12 in.) by 300 mm (12 in.) network of conductors in a uniformly spaced perpendicular grid pattern with a tolerance of 100 mm (4 in.)

(3) Only listed splicing devices or exothermic welding permitted to be used

(B) Areas Not Requiring Equipotential Planes.

Equipotential planes shall not be required for the controlled utilization equipment on the docking facility or floating building supplied by the service equipment or disconnecting means.

Statement of Problem and Substantiation for Public Comment

The language in (A), as written, applies only to the service equipment. The charging language in 555.14 and the language in 555.14(B) both refer to other disconnecting means, but the language in (A) does not.
The "where" to "if" language change is just editorial to comply with the style manual.

Related Item

• FR 8321

Submitter Information Verification

Submitter Full Name: Ryan Jackson
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City:
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Submittal Date: Mon Aug 05 13:12:16 EDT 2024
Committee: NEC-P07

Public Comment No. 1337-NFPA 70-2024 [New Section after 555.14(A)(2)]

TITLE OF NEW CONTENT

(3) Unencapsulated steel structural welded wire reinforcement, bonded together by steel tie wires or the equivalent and fully embedded within the surface material.

If the structural reinforcing steel is absent, or is encapsulated in a nonconductive compound, or if embedding is not possible, unencapsulated welded wire steel reinforcement or a copper conductor grid shall be provided and shall be secured directly under the paving, and not more than 150 mm (6 in.) below finished grade.

Statement of Problem and Substantiation for Public Comment

This comment is being submitted on behalf of the Minnesota Department of Labor and Industry. Currently, the Department's inspection staff includes 14-office/field staff, 50-state field inspectors, 4-virtual inspectors and 22 plus contract electrical inspectors that complete over 170,000 electrical inspections annually.

Added a new (3) to correlate with the changes in 680.26 regarding pool bonding for consistency. This comment will also be submitted for First Revision No. 8722-NFPA 70-2024 Section No. 547.44, and First Revision No. 8420-NFPA 70-2024 Section No. 682.33.

Related Item

• First Revision No. 8321-NFPA 70-2024 Section No. 555.14

Submitter Information Verification

Submitter Full Name: Dean Hunter
Organization: Minnesota Department of Labor
Street Address:
City:
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Submittal Date: Tue Aug 20 17:19:57 EDT 2024
Committee: NEC-P07

Public Comment No. 29-NFPA 70-2024 [Section No. 555.15]

555.15 Servicing and Replacing of Equipment.

Servicing or replacing of ~~electrical enclosures, devices, or wiring methods shall~~ equipment shall be done in accordance with 555.15(A) or 555.15(B).

(A) Servicing.

Equipment that has been damaged shall be recognized, documented, and serviced by a qualified person to the edition of this code to which it was originally installed.

(B) Replacing.

When replacement of equipment is necessary, a qualified person shall document and replace the equipment in accordance with the requirements of this code. The installation shall require an inspection of the circuit. Any servicing necessary to address issues discovered during the inspection shall be done in accordance with 555.15(A).

Informational Note: NFPA 303-2021, *Fire Protection Standard for Marinas and Boatyards*, is a resource for guiding the electrical inspection of a marina.

Statement of Problem and Substantiation for Public Comment

This PC proposes to use the defined term "equipment" in the requirement. This will correlate with the title of the section and the requirements in (A) and (B).

Related Item

• FR 8410

Submitter Information Verification

Submitter Full Name: Vincent Della Croce
Organization: Siemens
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Submittal Date: Wed Jul 10 18:37:23 EDT 2024
Committee: NEC-P07

Public Comment No. 802-NFPA 70-2024 [Section No. 555.35(A)]

(A) Feeders and Branch Circuits.

Feeders and branch circuits shall be provided with listed GFPE rated not more than 100 milliamperes (mA).

Exception No. 1: The load side conductors of a separately derived system and circuit supplying ground-fault monitoring equipment that do not exceed 3 m (10 ft) and are installed in a raceway shall be permitted to be installed without ground-fault protection. This exception shall also apply to the supply terminals of the equipment supplied by the transformer secondary conductors.

Exception No. 2: Feeders for fire pumps shall ~~be permitted to~~ use ground-fault monitoring without disconnecting power to the fire pump in accordance with the following:

(1) The ground-fault monitor alarm shall notify upon ground faults exceeding 100 mA.

(2) The alarm shall be audible and visual.

(3) The alarm shall be located where it can be monitored by qualified personnel.

Statement of Problem and Substantiation for Public Comment

I don't think the added language was substantiated, but if we are going to have it it needs to be right. As written, the language is permissive, not mandatory. Is the intent to require it or just allow it? It was clear beofre (Article 695 prohibits it), but now the CMP has modifed that section with a permission instead of a requirement.

Related Item

• FR 9038

Submitter Information Verification

Submitter Full Name: Ryan Jackson
Organization: Self-employed
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Submittal Date: Mon Aug 05 13:41:25 EDT 2024
Committee: NEC-P07

Public Comment No. 2049-NFPA 70-2024 [Section No. 555.35(B)(1)]

(1) Receptacles Providing Shore Power.

Listed GFPE or EGFPD , rated not more than 30 mA, shall be provided for receptacles installed in accordance with 555.33(A).

Statement of Problem and Substantiation for Public Comment

EGFPDs are different devices than GFPE. While officially they cannot be considered personnel level protection, because of their adjustable settings, they are tested and certified to follow the personnel protection curve of UL 943. These devices ensure that fault currents above 100 mA will react quickly within the personnel protection level. By adding EGFPDs as an option at the shore power receptacle level, it does not interfere with the coordination.

Related Item

• PI4403

Submitter Information Verification

Submitter Full Name: Mark Pollock
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City:
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Submittal Date: Wed Aug 28 16:57:24 EDT 2024
Committee: NEC-P07

Public Comment No. 803-NFPA 70-2024 [Section No. 555.35(E)]

(E) ~~Coordination and~~ Selective Coordination. GFPE protection systems shall be selectively coordinated

(F) Performance Testing.

~~- GFPE protection systems shall be coordinated and performance tested by an approved method when first installed on site. This testing shall be conducted by a qualified person(s) in accordance with the manufacturer's instructions. A written record of this testing shall be made available to the authority having jurisdiction.~~

Statement of Problem and Substantiation for Public Comment

"Coordination" is not a defined term, "selective coordination" is. If the intent is that the overcurrent protective devices be selectively coordinated, we need to say that.
This comment also breaks up two very different requirements into to subsections, as required by the Style Manual. Performance testing of the GFPE system is not the same as selectively coordinating overcurrent protective devices.

Related Item

• FR 9037

Submitter Information Verification

Submitter Full Name: Ryan Jackson
Organization: Self-employed
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City:
State:
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Submittal Date: Mon Aug 05 13:46:12 EDT 2024
Committee: NEC-P07

Public Comment No. 1358-NFPA 70-2024 [Sections 604.100(A)(1), 604.100(A)(2)]

Sections 604.100(A)(1), 604.100(A)(2)

(1) Cables.

Cables shall be listed Type AC cables or listed Type MC cables containing nominal 600-volt, 8 AWG to 12 AWG insulated copper conductors or 6 AWG to 10 AWG insulated copper -clad aluminum ~~or copper~~ conductors. .

Other cables specified in 794.135, 800.113, and830.179 shall be permitted in manufactured wiring systems for wiring of equipment within the scope of their respective articles.

(2) Conduits and Tubing.

Conduits and tubing shall comply with the requirements of 604.100(A)(2)(a) and 604.100(A)(2)(b).

(a) Conduits and tubing shall be listed and one of the following types:

(2) Flexible metal conduit (FMC)

(3) Liquidtight flexible metal conduit (LFMC)

(4) Liquidtight flexible nonmetallic conduit (LFNC)

(5) Electrical metallic tubing (EMT)

(f) The wiring method shall contain nominal 600-volt, 8 AWG to 12 AWG insulated copper conductors or 6 AWG to 10 AWG insulated copper -clad aluminum ~~or copper conductors with~~ conductors with a bare or insulated copper-clad aluminum or copper equipment grounding conductor equivalent in size to the ungrounded conductor.

Exception No. 1 to (1) and (2): Tap conductors for a luminaire no longer than 1.8 m (6 ft) and intended for connection to a single luminaire shall be permitted to contain conductors smaller than 12 AWG but not smaller than 18 AWG.

Exception No. 2 to (1) and (2): Listed manufactured wiring assemblies containing conductors smaller than 12 AWG shall be permitted for remote-control, signaling, or communications circuits.

Exception No. 3 to (2): Listed manufactured wiring systems containing unlisted flexible metal conduit of noncircular cross section or trade sizes smaller than permitted by 348.20(A), or both, shall be permitted where the wiring systems are supplied with fittings and conductors at the time of manufacture.

Statement of Problem and Substantiation for Public Comment

To maintain consistency throughout the code, the size range for copper-clad aluminum cables should be set between 6 AWG and 10 AWG to align with the ampacity requirements for copper.

Related Item

• FR 8749

Submitter Information Verification

Submitter Full Name: Sam Muhamed
Organization: The Aluminum Association
Affiliation: The Aluminum Association
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Submittal Date: Wed Aug 21 12:39:34 EDT 2024
Committee: NEC-P07

Public Comment No. 1261-NFPA 70-2024 [Section No. 682.33]

682.33 Equipotential Planes and Bonding of Equipotential Planes.

Equipotential planes shall be installed adjacent to all outdoor service equipment or disconnecting means that control equipment in or on water where the following conditions exist:

(1) Where the system voltage exceeds ~~250 volts~~ 120 volts nominal, to ground

(2) Where the equipment is located within 3 m (10 ft) of the body of water

(A) Equipotential Plane Construction.

Equipotential planes shall encompass the area around outdoor service equipment and extend from the area directly below the equipment out not less than 900 mm (36 in.) in all directions from which a person would be able to stand and come in contact with the equipment. Bonding to equipotential planes shall be provided as specified in 682.33(A)(1) or 682.33(A)(2) and be attached to metallic enclosures that are likely to become energized with a solid copper conductor, insulated, covered or bare, and not smaller than 8 AWG.

(1) Structural Reinforcing Steel.

Unencapsulated structural reinforcing steel shall be bonded together by steel tie wires or the equivalent.

(2) Copper Grids.

Copper grids shall comply with the following requirements:

(1) Be constructed of minimum 8 AWG bare solid copper conductors bonded to each other at all points of crossing in accordance with 250.8 or other approved means

(2) Be arranged in a 300 mm (12 in.) by 300 mm (12 in.) network of conductors in a uniformly spaced perpendicular grid pattern with a tolerance of 100 mm (4 in.)

(3) Only listed splicing devices or exothermic welding are permitted to be used

(B) Areas Not Requiring Equipotential Planes.

Equipotential planes shall not be required for the controlled equipment supplied by the service equipment or disconnecting means.

(C) Bonding.

(1) Bonded Parts.

The parts specified in 682.33(C)(1) through 682.33(C)(3) shall be bonded together and to the electrical grounding system. Bonding conductors shall be solid copper, insulated, covered or bare, and not smaller than 8 AWG. Connections shall be made by exothermic welding or by listed pressure connectors or clamps that are labeled as being suitable for the purpose and are stainless steel, brass, copper, or copper alloy.

(2) Outdoor Service Equipment and Disconnects.

Outdoor service equipment or disconnecting means that control equipment in or on water, that have metallic enclosures and controls accessible to personnel, and that are likely to become energized shall be bonded to equipotential planes.

(3) Walking Surfaces.

Surfaces directly below the equipment specified in 682.33(C)(2) but not less than 900 mm (36 in.) in all directions from the equipment from which a person would be able to stand and come in contact with the equipment shall be bonded to equipotential planes with wire mesh or other conductive elements on, embedded in, or placed under the walk surface within 75 mm (3 in.).

Statement of Problem and Substantiation for Public Comment

682.33 (1) Should include systems of 120 volt, nominal to ground as this would include a large number of installations where public safety could be at risk. This would then include 208 volt or 240 volt which are very common.

Related Item

• FR8420

Submitter Information Verification

Submitter Full Name: Clay Carroll
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Affiliation: IEC
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Submittal Date: Sun Aug 18 19:42:21 EDT 2024
Committee: NEC-P07

Public Comment No. 1336-NFPA 70-2024 [New Section after 682.33(A)(2)]

TITLE OF NEW CONTENT

(3) Unencapsulated steel structural welded wire reinforcement, bonded together by steel tie wires or the equivalent and fully embedded within the surface material.

If the structural reinforcing steel is absent, or is encapsulated in a nonconductive compound, or if embedding is not possible, unencapsulated welded wire steel reinforcement or a copper conductor grid shall be provided and shall be secured directly under the paving, and not more than 150 mm (6 in.) below finished grade.

Statement of Problem and Substantiation for Public Comment

This comment is being submitted on behalf of the Minnesota Department of Labor and Industry. Currently, the Department's inspection staff includes 14-office/field staff, 50-state field inspectors, 4-virtual inspectors and 22 plus contract electrical inspectors that complete over 170,000 electrical inspections annually.

Added a new (3) to correlate with the changes in 680.26 regarding pool bonding for consistency. This comment will also be submitted for First Revision No. 8722-NFPA 70-2024 Section No. 547.44, and First Revision No. 8321-NFPA 70-2024 Section No. 555.14.

Related Item

• First Revision No. 8420-NFPA 70-2024 Section No. 682.33

Submitter Information Verification

Submitter Full Name: Dean Hunter
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State:
Zip:

Submittal Date: Tue Aug 20 17:13:46 EDT 2024
Committee: NEC-P07

Public Comment No. 836-NFPA 70-2024 [Section No. 682.33(A) [Excluding any Sub-Sections]]

Equipotential planes shall encompass the area around outdoor service equipment and disconnecting means and extend from the area directly below the equipment out not less than 900 mm (36 in.) in all directions from which a person would be able to stand and come in contact with the equipment. Bonding to equipotential planes shall be provided as specified in 682.33(A)(1) or 682.33(A)(2) and be attached to metallic enclosures that are likely to become energized with a solid copper conductor, insulated, covered or bare, and not smaller than 8 AWG.

Statement of Problem and Substantiation for Public Comment

682.33 addresses disconnecting means that are not service equipment, but 682.33(A) only discusses the service equipment.

Related Item

• FR 8420

Submitter Information Verification

Submitter Full Name: Ryan Jackson
Organization: Self-employed
Street Address:
City:
State:
Zip:

Submittal Date: Tue Aug 06 12:09:16 EDT 2024
Committee: NEC-P07

Public Comment No. 711-NFPA 70-2024 [Part VII.]

Part VII. Marinas, Boatyards, Floating Buildings, and Commercial and Noncommercial Docking Facilities

Additional Proposed Changes

File Name	Description	Approved
CN_214.pdf		

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 214 appeared in the First Draft Report.

The Correlating Committee directs CMP 7 to review the title to Article 220 Part VII and Section 220.120. The phrase “commercial and noncommercial” was removed from the title of Article 555 and also should be deleted from these locations.

Related Item

• Correlating Committee Note No. 214

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Fri Aug 02 14:13:26 EDT 2024
Committee: NEC-P07

Correlating Committee Note No. 214-NFPA 70-2024 [Part VII.]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 12:02:46 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs CMP 7 to review the title to Article 220 Part VII and Section 220.120. The phrase “commercial and noncommercial” was removed from the title of Article 555 and also should be deleted from these locations.

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 1340-NFPA 70-2024 [New Section after 547.44(C)(2)]

TITLE OF NEW CONTENT

(3) Unencapsulated steel structural welded wire reinforcement, bonded together by steel tie wires or the equivalent and fully embedded within the surface material.

If the structural reinforcing steel is absent, or is encapsulated in a nonconductive compound, or if embedding is not possible, unencapsulated welded wire steel reinforcement or a copper conductor grid shall be provided and shall be secured directly under the paving, and not more than 150 mm (6 in.) below finished grade.

Statement of Problem and Substantiation for Public Comment

This comment is being submitted on behalf of the Minnesota Department of Labor and Industry. Currently, the Department's inspection staff includes 14-office/field staff, 50-state field inspectors, 4-virtual inspectors and 22 plus contract electrical inspectors that complete over 170,000 electrical inspections annually.

Added a new (3) to correlate with the changes in 680.26 regarding pool bonding for consistency. This comment will also be submitted for First Revision No. 8321-NFPA 70-2024 Section No. 555.14, and First Revision No. 8420-NFPA 70-2024 Section No. 682.33.

Related Item

• First Revision No. 8722-NFPA 70-2024 Section No. 547.44

Submitter Information Verification

Submitter Full Name: Dean Hunter
Organization: Minnesota Department of Labor
Street Address:
City:
State:
Zip:

Submittal Date: Tue Aug 20 17:23:02 EDT 2024
Committee: NEC-P07

Public Comment No. 327
Assigned to CMP - 1 Referred to CMPs 2 - 17

Public Comment No. 327-NFPA 70-2024 [Global Input]

CMP 1 has deleted the definition for “In Sight From”, and the requirements that were part of that definition are now located in 110.29. This global Correlating Committee Note directs all CMP’s to review occurrences of the phrase “in sight from”, “within sight from”, and “within sight” and consider whether references to 110.29 or 110.39 should be included.

Additional Proposed Changes

File Name	Description	Approved
CN_26.pdf	NEC_CN26	✓

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 26 appeared in the First Draft Report on First Revision No. 9187.

CMP 1 has deleted the definition for “In Sight From”, and the requirements that were part of that definition are now located in 110.29. This global Correlating Committee Note directs all CMP’s to review occurrences of the phrase “in sight from”, “within sight from”, and “within sight” and consider whether references to 110.29 or 110.39 should be included.

Related Item

• First Revision No. 9187

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jul 29 17:05:29 EDT 2024
Committee: NEC-P01

Correlating Committee Note No. 26-NFPA 70-2024 [Global Input]

Submitter Information Verification

Committee: NEC-AAC

Submittal Date: Tue May 07 14:23:07 EDT 2024

Committee Statement and Meeting Notes

Committee Statement: CMP 1 has deleted the definition for “In Sight From”, and the requirements that were part of that definition are now located in 110.29. This global Correlating Committee Note directs all CMP’s to review occurrences of the phrase “in sight from”, “within sight from”, and “within sight” and consider whether references to 110.29 or 110.39 should be included.

First Revision No. 9187-NFPA 70-2024 [Section No. 225.41]

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.

Bowmer, Trevor N.

Hickman, Palmer L.

Holub, Richard A.

Jackson, Peter D.

Kendall, David H.

Manche, Alan

Osborne, Robert D.

Porter, Christine T.

Schultheis, Timothy James

Williams, David A.

Public Comment No. 443-NFPA 70-2024 [Global Input]

The Correlating Committee directs all Code-Making Panels to verify cross-references to Article 200 are accurate due to the renumbering of the article.

Additional Proposed Changes

File Name	Description	Approved
CN_84.pdf		✓

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 84 appeared in the First Draft Report.

The Correlating Committee directs all Code-Making Panels to verify cross-references to Article 200 are accurate due to the renumbering of the article.

Related Item

• Correlating Committee Note No. 84

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 30 17:35:49 EDT 2024
Committee: NEC-P05

Correlating Committee Note No. 84-NFPA 70-2024 [Global Input]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Wed May 08 08:49:53 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs all Code-Making Panels to verify cross-references to Article 200 are accurate due to the renumbering of the article.

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 491
Assigned to CMP-17, Referred to CMP-7

Public Comment No. 491-NFPA 70-2024 [Definition: Low-Voltage Contact Limit.]

Low-Voltage Contact Limit.

A voltage not exceeding the following values:

(1) 15 volts (RMS) for sinusoidal ac

(2) 21.2 volts peak for nonsinusoidal ac

(3) 30 volts for continuous dc

(4) 12.4 volts peak for dc that is interrupted at a rate of 10 to 200 Hz

(CMP-17)

Additional Proposed Changes

File Name	Description	Approved
CN_138.pdf		✓

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 138 appeared in the First Draft Report on First Revision No. 9010.

The Correlating Committee directs CMP-17 to review the definition “low-voltage contact limit” regarding the term having requirements and not complying with the NEC Style Manual 2.1.2.5. This needs to be sent to CMP-7 for correlation.

Related Item

- First Revision No. 9010

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 30 19:56:38 EDT 2024
Committee: NEC-P17

Correlating Committee Note No. 138-NFPA 70-2024 [Definition: Low-Voltage Contact Limit.]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Wed May 08 15:50:08 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs CMP-17 to review the definition “low-voltage contact limit” regarding the term having requirements and not complying with the NEC Style Manual 2.1.2.5. This needs to be sent to CMP-7 for correlation.

First Revision No. 9010-NFPA 70-2024 [Definition: Low-Voltage Contact Limit.]

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 503
Assigned to CMP-10, Referred to CMP 7 & 9

Public Comment No. 503-NFPA 70-2024 [Definition: Transformer Secondary Conductor.]

Transformer Secondary Conductor.

A conductor, other than a service conductor, that originates at the secondary winding terminals of a transformer. (CMP-10)

Additional Proposed Changes

File Name	Description	Approved
CN_156.pdf		✓

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 156 appeared in the First Draft Report on First Revision No. 8885.

The Correlating Committee directs CMP 10 to review FR 8885 and ensure the new definition is appropriate for the places in the NEC where the term is used. Additionally, CMPs 7 and 9 (having purview for requirements where the proposed new term is used) are requested to review the new definition to ensure it is accurate with respect to the requirements under their purview.

Related Item

- First Revision No. 8885

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 30 22:27:10 EDT 2024
Committee: NEC-P10

Correlating Committee Note No. 156-NFPA 70-2024 [Definition: Transformer Secondary Conductor.]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Thu May 09 08:40:17 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs CMP 10 to review FR 8885 and ensure the new definition is appropriate for the places in the NEC where the term is used. Additionally, CMPs 7 and 9 (having purview for requirements where the proposed new term is used) are requested to review the new definition to ensure it is accurate with respect to the requirements under their purview.

First Revision No. 8885-NFPA 70-2024 [New Definition after Definition: Transformer.]

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James

Williams, David A.

Public Comment No. 504
Assigned to CMP-18, Referred to CMPs 1 - 17

Public Comment No. 504-NFPA 70-2024 [Global Input]

The Correlating Committee directs the CMPs to review the revision of the title of Article406 (Wiring Devices) and the new definition for the term "wiring device" in Article 100 forcorrelation of existing terminology using the newly define term in their articles.

Additional Proposed Changes

File Name	Description	Approved
CN_157.pdf		✓

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 157 appeared in the First Draft Report on First Revision No. 7965.

The Correlating Committee directs the CMPs to review the revision of the title of Article 406 (Wiring Devices) and the new definition for the term "wiring device" in Article 100 for correlation of existing terminology using the newly define term in their articles.

Related Item

• First Revision No. 7965

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 30 22:29:14 EDT 2024
Committee: NEC-P18

Correlating Committee Note No. 157-NFPA 70-2024 [Global Input]

Submitter Information Verification

Committee: NEC-AAC

Submittal Date: Thu May 09 08:59:03 EDT 2024

Committee Statement and Meeting Notes

Committee Statement: The Correlating Committee directs the CMPs to review the revision of the title of Article 406 (Wiring Devices) and the new definition for the term "wiring device" in Article 100 for correlation of existing terminology using the newly define term in their articles.

First Revision No. 7965-NFPA 70-2024 [New Definition after Definition: Wireways, Nonmetallic. (No...]

Ballot Results

This item has passed ballot

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.

Bowmer, Trevor N.

Hickman, Palmer L.

Holub, Richard A.

Jackson, Peter D.

Kendall, David H.

Manche, Alan

Osborne, Robert D.

Porter, Christine T.

Schultheis, Timothy James

Williams, David A.

Public Comment No. 527
Assigned to CMP- 2, Referred to CMPs 1 - 18

Public Comment No. 527-NFPA 70-2024 [Global Input]

The CMPs are directed to review references to Article 220 in the articles under their purview and make necessary revisions based on Article 220 being relocated to Article120.

Additional Proposed Changes

File Name	Description	Approved
CN_212.pdf		✓

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 212 appeared in the First Draft Report.

The CMPs are directed to review references to Article 220 in the articles under their purview and make necessary revisions based on Article 220 being relocated to Article 120.

Related Item

• Correlating Committee Note No. 212

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 30 23:08:41 EDT 2024
Committee: NEC-P02

Correlating Committee Note No. 212-NFPA 70-2024 [Global Input]

Submitter Information Verification

Committee: NEC-AAC

Submittal Date: Thu May 09 11:53:08 EDT 2024

Committee Statement and Meeting Notes

Committee Statement: The CMPs are directed to review references to Article 220 in the articles under their purview and make necessary revisions based on Article 220 being relocated to Article 120.

Ballot Results

✔ **This item has passed ballot**

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 542
Assigned to CMP-3, Referred to CMPs 1 - 18

Public Comment No. 542-NFPA 70-2024 [Global Input]

The Correlating Committee directs the CMPs to review all references to requirements in Chapters 7 & 8 for accuracy in light of the relocation of requirements occurring in the First Draft.

Additional Proposed Changes

File Name	Description	Approved
CN_401.pdf		✓

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 401 appeared in the First Draft Report.

The Correlating Committee directs the CMPs to review all references to requirements in Chapters 7 & 8 for accuracy in light of the relocation of requirements occurring in the First Draft.

Related Item

• Correlating Committee Note No. 401

Submitter Information Verification

Submitter Full Name: CC Notes
Organization: NEC Correlating Committee
Street Address:
City:
State:
Zip:
Submittal Date: Tue Jul 30 23:39:04 EDT 2024
Committee: NEC-P03

Correlating Committee Note No. 401-NFPA 70-2024 [Global Input]

Submitter Information Verification

Committee: NEC-AAC
Submittal Date: Fri May 10 12:35:51 EDT 2024

Committee Statement

Committee Statement: The Correlating Committee directs the CMPs to review all references to requirements in Chapters 7 & 8 for accuracy in light of the relocation of requirements occurring in the First Draft.

Ballot Results

This item has passed ballot

12 Eligible Voters
1 Not Returned
11 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

McDaniel, Roger D.

Affirmative All

Ayer, Lawrence S.
Bowmer, Trevor N.
Hickman, Palmer L.
Holub, Richard A.
Jackson, Peter D.
Kendall, David H.
Manche, Alan
Osborne, Robert D.
Porter, Christine T.
Schultheis, Timothy James
Williams, David A.

Public Comment No. 649-NFPA 70-2024 [Global Input]

Delete the words, "to be installed" everywhere they appear in the First Draft.

Statement of Problem and Substantiation for Public Comment

The term "to be installed" is always redundant. 90.2(C) says, "This code covers the installation and removal of electrical conductors, equipment, and raceways...". Every requirement of the NEC is about installation or removal (and requirements about removal are a very small minority). "Shall be permitted" and "shall not be permitted," as applied to equipment, mean that the subject equipment either is or is not allowed to be installed.
The new First Draft restrictions on reconditioned equipment seem to have overlooked the scope and purpose of the NEC. Adding the superfluous term "to be installed" also does not conform to 3.1.1, 3.1.2, and 3.5.1.1 of the NEC Style Manual.

Related Item

• FR-9197 • FR-9236 • FR-7868 • PI-3713 • FR-8938 • FR-7970 • FR-8831 • FR-8941 • FR-8944 • FR-8947 • FR-7925 • FR-7585 • FR-8136 • FR-8148 • FR-8984 • FR-8293 • FR-8362 • FR-8348 • FR-8360 • FR-7614 • FR-7658 • FR-7734 • FR-7746 • FR-8150 • FR-7717

Submitter Information Verification

Submitter Full Name: William Fiske
Organization: Intertek Testing Services
Street Address:
City:
State:
Zip:
Submittal Date: Fri Aug 02 09:19:44 EDT 2024
Committee: NEC-P01