



Second Revision No. 8623-NFPA 70-2021 [Detail]

604.100

(A) Cable, ~~or~~ Conduit, and Tubing Types.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 11:15:50 EDT 2021

Committee Statement

Committee Statement: The CMP agrees that the title of 604.100 should be revised to include tubing now that EMT has been added.

Response Message: SR-8623-NFPA 70-2021

[Public Comment No. 769-NFPA 70-2021 \[Section No. 604.100\]](#)



Second Revision No. 8504-NFPA 70-2021 [Definition: Air-Conditioning or Comfort-Cooling Equipment.]

~~Air-Conditioning or Comfort-Cooling Equipment.~~

~~All of that equipment intended or installed for the purpose of processing the treatment of air so as to control simultaneously or individually its temperature, humidity, cleanliness, and distribution to meet the requirements of the conditioned space. (555) (CMP-7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 11:06:38 EDT 2021

Committee Statement

Committee Statement: The definition is deleted, in accordance with action recommended by the NEC Correlating Committee, because the term is commonly understood and doesn't add clarity or usability to the NEC.

Response Message: SR-8504-NFPA 70-2021

[Public Comment No. 1981-NFPA 70-2021 \[Definition: Air-Conditioning or Comfort-Cooling Equipment.\]](#)



Second Revision No. 8558-NFPA 70-2021 [Definition: Appliance, Fixed. (Fixed Appliance)]

~~Appliance, Fixed. (Fixed Appliance)~~

~~An appliance that is fastened or otherwise secured at a specific location. (CMP-7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 13:35:38 EDT 2021

Committee Statement

Committee Statement: This definition is deleted as the generic definition for “Appliance” found in Article 100 is sufficient to cover all uses of the term throughout the code, including within Article 550.

Response Message: SR-8558-NFPA 70-2021



Second Revision No. 8559-NFPA 70-2021 [Definition: Appliance, Portable.

(Portable Appliance)]

~~Appliance, Portable. (Portable Appliance)~~

~~An appliance that is actually moved or can easily be moved from one place to another in normal use. (550) (CMP-7)~~

~~Informational Note: For the purpose of this article, the following major appliances, other than built-in, are considered portable if cord connected: refrigerators, range equipment, clothes washers, dishwashers without booster heaters, or other similar appliances.~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 13:37:56 EDT 2021

Committee Statement

Committee Statement: This definition is deleted as the generic definition for “Appliance” found in Article 100 is sufficient to cover all uses of the term throughout the code, including within Article 550.

Response Message: SR-8559-NFPA 70-2021



Second Revision No. 8582-NFPA 70-2021 [Definition: Berth.]

Berth.

The water space to be occupied by a boat or other vessel alongside or between bulkheads, piers, piles, fixed and floating docks, or any similar access structure. ~~(See also Slip.)~~
[303:3.3.4 3.3.2] (555) (CMP-7)

Informational Note: See the definition of Slip for additional information.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 16:09:02 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated. A new informational note has been added pointing the users of the code to the definition of Slip and the term was removed from the definition as the industry uses “Berth” and “Slip” terms separately.

Response Message: SR-8582-NFPA 70-2021



Second Revision No. 8583-NFPA 70-2021 [Definition: Boatyard.]

Boatyard.

A facility used for constructing, repairing, servicing, hauling from the water, storing (on land and in water), and launching of boats. [~~303:3-3.2~~ 3.3.3] (555) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 16:10:28 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated.

Response Message: SR-8583-NFPA 70-2021



Second Revision No. 8502-NFPA 70-2021 [Definition: Building, Floating. (Floating Building)]

Building, Floating. (Floating Building)

A building unit, ~~as defined in Article 100,~~ that floats on water, is moored in a permanent location, and has a premises wiring system served through connection by permanent wiring to an electrical supply system not located on the premises. ~~(555)~~ (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 10:58:25 EDT 2021

Committee Statement

Committee Statement: The definition is moved to Article 100 in accordance with action recommended by the NEC Correlating Committee. The reference to Article 555 is deleted because the definition is also found elsewhere in the Code. The phrase “as defined in Article 100” is deleted as it is now a redundant statement.

Response Message: SR-8502-NFPA 70-2021

[Public Comment No. 347-NFPA 70-2021 \[Definition: Building, Floating. \(Floating Building\)\]](#)

[Public Comment No. 1983-NFPA 70-2021 \[Definition: Building, Floating. \(Floating Building\)\]](#)



Second Revision No. 8584-NFPA 70-2021 [Definition: Bulkhead.]

Bulkhead.

A vertical structural wall, usually of stone, timber, metal, concrete, or synthetic material, constructed along, and generally parallel to, the shoreline to retain earth as an extension of the upland, and often to provide suitable water depth at the waterside face. [303:3-3.4 3.3.5] (555) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 16:11:56 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated.

Response Message: SR-8584-NFPA 70-2021



Second Revision No. 8576-NFPA 70-2021 [Definition: Converter.]

Converter.

~~A device that changes electrical energy from one form to another, as from alternating current to direct current. (551) (CMP-7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 15:50:59 EDT 2021

Committee Statement

Committee Statement: The definitions were revised, deleted, and/or moved to Article 100 for the 2023 NEC with FR 9274 and the Correlating Committee PC 820. CMP-7 has reviewed the definitions under their purview for compliance with the NEC Style Manual. This definition is deleted as the generic definition for converter found in Article 100 is sufficient to cover all uses of the term throughout the code including the use in Article 551.

Response Message: SR-8576-NFPA 70-2021



Second Revision No. 8585-NFPA 70-2021 [Definition: Crane.]

Crane.

A mechanical device used for lifting or moving boats. [303:3.3.5 3.3.6] (555) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 16:12:55 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated.

Response Message: SR-8585-NFPA 70-2021



Second Revision No. 8507-NFPA 70-2021 [Definition: Dead Front (as applied to switches, circuit bre...]

~~Dead Front (as applied to switches, circuit breakers, switchboards, and panelboards).~~
~~Designed, constructed, and installed so that no current-carrying parts are normally exposed on the front. (551) (CMP-7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 11:09:37 EDT 2021

Committee Statement

Committee Statement: The definition is deleted because the existing definition in Article 100 is sufficiently generic to cover all uses of the term throughout the Code, including within Article 551.

Response Message: SR-8507-NFPA 70-2021

[Public Comment No. 303-NFPA 70-2021 \[Definition: Dead Front \(as applied to switches, circuit bre...\]](#)

[Public Comment No. 1260-NFPA 70-2021 \[Definition: Dead Front \(as applied to switches, circuit bre...\]](#)



Second Revision No. 8513-NFPA 70-2021 [Definition: Disconnecting Means, Recreational Vehicle. (Rec...]

~~Disconnecting Means, Recreational Vehicle. (Recreational Vehicle Disconnecting Means)~~

~~The necessary equipment usually consisting of a circuit breaker or switch and fuses, and their accessories, located near the point of entrance of supply conductors in a recreational vehicle and intended to constitute the means of cutoff for the supply to that recreational vehicle. (551) (CMP-7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 11:18:20 EDT 2021

Committee Statement

Committee Statement: The definition is deleted because the existing definition in Article 100 is sufficiently generic to cover all uses of the term throughout the Code, including within Article 551.

Response Message: SR-8513-NFPA 70-2021

[Public Comment No. 458-NFPA 70-2021 \[Definition: Disconnecting Means, Recreational Vehicle. \(Rec...\]](#)

[Public Comment No. 1263-NFPA 70-2021 \[Definition: Disconnecting Means, Recreational Vehicle. \(Rec...\]](#)



Second Revision No. 8568-NFPA 70-2021 [Definition: Distribution Point.]

Distribution Point (Center Yard Pole) (Meter Pole) .

An electrical supply point from which service drops, service conductors, feeders, or branch circuits to buildings or structures utilized under single management are supplied. (547) (CMP-7)

~~Informational Note No. 1: Distribution points are also known as the center yard pole, meter pole, or the common distribution point.~~

Informational Note: The service point as defined in Article 100 is typically located at the distribution point.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 15:29:17 EDT 2021

Committee Statement

Committee Statement: In accordance with the NEC Style Manual, similar terms are to be included in the definition title rather than an informational note. The reference to Article 100 has been deleted since this definition now also resides in Article 100.

Response Message: SR-8568-NFPA 70-2021

[Public Comment No. 820-NFPA 70-2021 \[Global Input\]](#)



Second Revision No. 8586-NFPA 70-2021 [Definition: Docking Facility.]

Docking Facility.

A covered or open, fixed or floating structure that provides access to the water and to which boats are secured. [~~303:3-3.6~~ 3.3.7] (555) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 16:13:42 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated.

Response Message: SR-8586-NFPA 70-2021



Second Revision No. 8514-NFPA 70-2021 [Definition: Electrical Datum Plane.

]

Electrical Datum Plane.

A specified vertical distance above the normal ~~highwater~~ high-water level at which electrical equipment can be installed and electrical connections can be made. (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 11:24:15 EDT 2021

Committee Statement

Committee Statement: The addition of “vertical” adds clarity to how measurements are to be taken when installing electrical equipment around bodies of water. The term “normal high-water level” has been editorially corrected to match the format used by the USGS and other agencies.

Response Message: SR-8514-NFPA 70-2021

[Public Comment No. 473-NFPA 70-2021 \[Definition: Electrical Datum Plane.\]](#)

[Public Comment No. 903-NFPA 70-2021 \[Global Input\]](#)



Second Revision No. 8516-NFPA 70-2021 [Definition: Electrical Datum Plane.

]

Electrical Datum Plane.

~~A specified distance above a water level above which electrical equipment can be installed and electrical connections can be made. (CMP-7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 11:28:43 EDT 2021

Committee Statement

Committee Statement: CMP-7 agrees that only one definition should exist. The second duplicate definition is not necessary. See PC 473 for revised definition.

Response Message: SR-8516-NFPA 70-2021

[Public Comment No. 1264-NFPA 70-2021 \[Definition: Electrical Datum Plane.\]](#)



Second Revision No. 8569-NFPA 70-2021 [Definition: Equipotential Plane (as applied to agricultural...]

Equipotential Plane (as applied to agricultural buildings) .

~~An area where wire mesh or other conductive elements are embedded in or placed under concrete, bonded to all metal structures and fixed nonelectrical equipment that could become energized, and connected to the electrical grounding system to minimize voltage differences within the plane and between the planes, the grounded equipment, and the earth.~~

~~(547) Conductive elements that are connected together to minimize voltage differences.~~
~~(CMP-7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 15:33:04 EDT 2021

Committee Statement

Committee Statement: In accordance with the recommended action from the NEC Correlating Committee, the definition was simplified to help make it usable in various applications throughout the NEC. Specific details can be included within the Articles that apply and each article can have different requirements depending on the application. The word "connected" was used instead of "bonded" to include typical connections of rebar and wire mesh in addition to specific bonding connections made by electrical workers.

Response Message: SR-8569-NFPA 70-2021

[Public Comment No. 1112-NFPA 70-2021 \[Definition: Equipotential Plane \(as applied to agricultural...\]](#)

[Public Comment No. 472-NFPA 70-2021 \[Definition: Equipotential Plane.\]](#)

[Public Comment No. 1959-NFPA 70-2021 \[Global Input\]](#)



Second Revision No. 8517-NFPA 70-2021 [Definition: Feeder Assembly.]

Feeder Assembly.

The overhead or under-chassis feeder conductors, including the equipment grounding conductor, together with the necessary fittings and equipment; or a the power-supply cord ~~listed assembly for a mobile home use , 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 . (550) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 11:41:09 EDT 2021

Committee Statement

Committee Statement: The definition of “Feeder Assembly” is a defined term used in Article 550, which is very similar to the term “Power-Supply Assembly” as used in Articles 551 and 552. The definition for “Feeder Assembly” is expanded to also include the intent of the term “Power-Supply Assembly”. See other comments which act to replace “Power-Supply Assembly” with “Feeder Assembly” where it is used in Articles 551 and 552. Having a single definition will increase clarity and reduce confusion.

Response Message: SR-8517-NFPA 70-2021

[Public Comment No. 1664-NFPA 70-2021 \[Definition: Feeder Assembly.\]](#)



Second Revision No. 8518-NFPA 70-2021 [Definition: Feeder, Recreational Vehicle Site. (Recreationa...]

~~Feeder, Recreational Vehicle Site. (Recreational Vehicle Site Feeder)~~

~~The conductors between the park service equipment and the recreational vehicle site supply equipment. (551) (CMP-7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 11:43:24 EDT 2021

Committee Statement

Committee Statement: In accordance with action recommended by the NEC Correlating Committee, the definition is deleted because the generic Article 100 definition of “Feeder” adequately covers the installations referred to in Article 551.

Response Message: SR-8518-NFPA 70-2021

[Public Comment No. 823-NFPA 70-2021 \[Definition: Feeder, Recreational Vehicle Site. \(Recreationa...\]](#)



Second Revision No. 8519-NFPA 70-2021 [Definition: Frame (as applies to recreational vehicles).]

Frame ~~(as applies to recreational vehicles)~~ .

Chassis rail and any welded addition thereto of metal thickness of 1.35 mm (0.053 in.) or greater. (551) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 11:46:19 EDT 2021

Committee Statement

Committee Statement: In accordance with action recommended by the NEC Correlating Committee, the phrase “(as applied to Recreational Vehicles)” was removed as the applicable article follows the definition, making the parenthetical statement redundant. The term frame that is used in Article 551 is specific to the materials used for the construction of recreational vehicle frames and their thickness. It would not constitute as a rule in a definition therefore is acceptable as per the NEC Style Manual.

Response Message: SR-8519-NFPA 70-2021

[Public Comment No. 1265-NFPA 70-2021 \[Definition: Frame \(as applies to recreational vehicles\).\]](#)



Second Revision No. 8577-NFPA 70-2021 [Definition: Low Voltage (as applied to recreational vehicle...]

Low Voltage ~~(as applied to recreational vehicles)~~ .

An electromotive force rated 24 volts, nominal, or less. (551) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 15:52:02 EDT 2021

Committee Statement

Committee Statement: In accordance with the action recommended by the NEC Correlating Committee, the phrase "(as applies to Recreational Vehicles)" was removed as the applicable article follows the definition, making the parenthetical statement redundant.

Response Message: SR-8577-NFPA 70-2021



Second Revision No. 8530-NFPA 70-2021 [Definition: Manufactured Home.]

Manufactured Home.

A structure, transportable in one or more sections, ~~which that~~ in the traveling mode is 2.4 m (8 ft) or more in width or 12.2 m (40 ft) or more in length, or ~~when erected~~ on site is 29.77 m² (320 ft²) or more is built on a permanent chassis and is designed to be used as a dwelling with or without a permanent foundation, whether or not connected to the utilities, and includes plumbing, heating, air conditioning, and electrical systems contained therein. ~~The This~~ term *manufactured home* includes any structure that meets all the requirements of this paragraph except the size requirements and with respect to which the manufacturer voluntarily files a certification required by the regulatory agency. Calculations used to determine the number of square meters (square feet) in a structure are based on the structure's exterior dimensions and include all expandable rooms, cabinets, and other projections containing interior space, but do not include bay windows. [501:1.2.13] ~~For the purpose of this Code and unless otherwise indicated, the term mobile home includes manufactured homes and excludes park trailers defined in 552.4 : (CMP-7)~~

Informational Note No. 1: Unless otherwise indicated, the term *mobile home* includes manufactured home and excludes park trailers defined in 552.4 .

Informational Note No. 2: See the applicable building code for definition of the term *permanent foundation*.

Informational Note No. 3: See 24 CFR Part 3280, *Manufactured Home Construction and Safety Standards, of the Federal Department of Housing and Urban Development*, for additional information on the definition.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 12:10:44 EDT 2021

Committee Statement

Committee Statement: In accordance with action recommended by the NEC Correlating Committee, this extracted definition is updated to reflect recent revisions in the source material. Essential information that was not present in the source material is moved to an informational note.

Response Message: SR-8530-NFPA 70-2021

Public Comment No. 25-NFPA 70-2021 [Definition: Manufactured Home.]

Public Comment No. 1984-NFPA 70-2021 [Definition: Manufactured Home.]



Second Revision No. 8587-NFPA 70-2021 [Definition: Marina.]

Marina.

A facility, generally on the waterfront, that stores and services boats in berths, on moorings, and in dry storage or dry stack storage. [303:3.3.12 3.3.13] (555) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 16:14:35 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated.

Response Message: SR-8587-NFPA 70-2021



Second Revision No. 8574-NFPA 70-2021 [Definition: Mobile Home Accessory Building or Structure.]

~~Mobile Home Accessory Building or Structure.~~

~~Any awning, cabana, ramada, storage cabinet, carport, fence, windbreak, or porch established for the use of the occupant of the mobile home on a mobile home lot. (550) (CMP-7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 15:46:45 EDT 2021

Committee Statement

Committee Statement: The definitions were revised, deleted, and/or moved to Article 100 for the 2023 NEC with FR 9274 and the Correlating Committee PC 820. CMP-7 has reviewed the definitions under their purview for compliance with the NEC Style Manual. Accessory structures at mobile homes are not unique therefore this definition did not add clarity or usability to the NEC.

Response Message: SR-8574-NFPA 70-2021



Second Revision No. 8532-NFPA 70-2021 [Definition: Mobile Home Park.]

Mobile Home Park.

A contiguous parcel of land that is used for the accommodation of ~~occupied~~ mobile homes that are intended to be occupied . (550) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 12:14:35 EDT 2021

Committee Statement

Committee Statement: Revised the text for clarity. The definition initially implied that homes needed to be occupied to be considered a “mobile home park”. The corrected text clarifies that a defined mobile home park doesn’t mandate that the homes be occupied.

Response Message: SR-8532-NFPA 70-2021

[Public Comment No. 26-NFPA 70-2021 \[Definition: Mobile Home Park.\]](#)



Second Revision No. 8573-NFPA 70-2021 [Definition: Mobile Home.]

Mobile Home.

A factory-assembled structure or structures transportable in one or more sections that are built on a permanent chassis and designed to be used as a dwelling without a permanent foundation where connected to the required utilities and that include the plumbing, heating, air-conditioning, and electrical systems contained therein. (CMP-7)

~~For the purpose of this Code and unless otherwise indicated, the term *mobile home* includes manufactured homes. (CMP-7)~~

Informational Note: Unless otherwise indicated, the term *mobile home* includes manufactured home and excludes park trailers defined in 552.4 .

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 15:44:38 EDT 2021

Committee Statement

Committee Statement: The language was revised to add an informational note to address the similar term for "Manufactured Home" that was located in the definition previously and adds an exclusion for "Park Trailers" consistent with revisions made to the definition for "Manufactured Home".

Response Message: SR-8573-NFPA 70-2021



Second Revision No. 8588-NFPA 70-2021 [Definition: Monorail.]

Monorail.

Overhead track and hoist system for moving material around the boatyard or moving and launching boats. [303:3.3.15 3.3.16] (555) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 16:15:21 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated.

Response Message: SR-8588-NFPA 70-2021



Second Revision No. 8589-NFPA 70-2021 [Definition: Mooring(s).]

Mooring(s).

Any place where a boat is wet stored or berthed. [~~303:3.3.16~~ 3.3.17] (555) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 16:15:59 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated.

Response Message: SR-8589-NFPA 70-2021



Second Revision No. 8578-NFPA 70-2021 [Definition: Motor Home.]

Motor Home.

~~A vehicular unit designed to provide temporary living quarters for recreational, camping, or travel use built on or permanently attached to a self-propelled motor vehicle chassis or on a chassis cab or van that is an integral part of the completed vehicle. (See *Recreational Vehicle*.) (551) (CMP-7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 15:53:01 EDT 2021

Committee Statement

Committee Statement: The definition for Motor Home is now encompassed by the expanded definition for Recreational Vehicle, and therefore this redundant definition can be deleted.

Response Message: SR-8578-NFPA 70-2021



Second Revision No. 8544-NFPA 70-2021 [Definition: Normal High Water

Level (as applies to electric...]

Normal High-Water Level (as applies to electrical datum plane distances).

Natural or Artificially Made Shorelines: An elevation delineating the highest water level that has been maintained for a sufficient period of time to leave evidence upon the landscape, commonly the point where the natural vegetation changes from predominantly aquatic to predominantly terrestrial. (CMP-7)

Rivers and Streams: The elevation of the top of the bank of the channel. Streams, rivers, and tributaries that are prone to flooding and effects of water runoff shall consider the “bankfull stage” where an established gauge height at a given location along a river or stream, above which a rise in water surface will cause the river or stream to overflow the lowest natural stream bank somewhere in the corresponding reach.

Flood Control Bodies of Water: The flood pool maximum water surface elevation of a reservoir, equal to the elevation of the spillway.

Nonflood Control Bodies of Water: The flowage easement boundary in which the highest water surface elevation defined by the area existing between governmental-owned property line(s) and a contour line with perpetual rights to flood the area in connection with the operation of the reservoir.

(CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submission Date: Thu Oct 28 12:29:52 EDT 2021

Committee Statement

Committee Statement: In accordance with action recommended by the NEC Correlating Committee, the definition is expanded to address both Article 555 and Article 682 installations and add clarity for enforcement and installer usability.

Response Message: SR-8544-NFPA 70-2021

[Public Comment No. 474-NFPA 70-2021 \[Definition: Normal High Water Level \(as applies to electric...\]](#)

[Public Comment No. 774-NFPA 70-2021 \[Definition: Normal High Water Level \(as applies to electric...\]](#)



Second Revision No. 8592-NFPA 70-2021 [Definition: Pier, Fixed.]

Pier, Fixed. (Fixed Pier)

Pier constructed on a permanent, fixed foundation, such as on piles, that permanently establishes the elevation of the structure deck with respect to land. [~~303:3-3.17.2~~ 3.3.18.2] (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 16:20:21 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated. Also, a similar term has been added to the title in accordance with the NEC Style Manual.

Response Message: SR-8592-NFPA 70-2021



Second Revision No. 8593-NFPA 70-2021 [Definition: Pier, Floating.]

Pier, Floating. (Floating Pier)

Pier designed with inherent flotation capability that allows the structure to float on the water surface and rise and fall with water level changes. [~~303:3.3.17.3~~ 3.3.18.3] (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 16:21:17 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated. Also, a similar term has been added to the title in accordance with the NEC Style Manual.

Response Message: SR-8593-NFPA 70-2021



Second Revision No. 8590-NFPA 70-2021 [Definition: Pier.]

Pier.

A structure extending over the water and supported on a fixed foundation (fixed pier), or on flotation (floating pier), that provides access to the water. [~~303:3.3.17~~ 3.3.18] (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 16:16:48 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated.

Response Message: SR-8590-NFPA 70-2021



Second Revision No. 8617-NFPA 70-2021 [Definition: Power Outlet, Marina.]

Power Outlet, Marina. (Marina Power Outlet)

An enclosed assembly that can include equipment such as receptacles, circuit breakers, fused switches, fuses, a watt-hour meter(s) meters, panelboards, and monitoring means identified for marina use. [~~303: 3.3.13~~] (555) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 10:26:05 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been deleted since the definition was modified with the addition of panelboards. Also, a similar term has been added to the title in accordance with the NEC Style Manual. Additional edits were made as per the NEC Style Manual.

Response Message: SR-8617-NFPA 70-2021



Second Revision No. 8545-NFPA 70-2021 [Definition: Power-Supply Assembly.]

~~Power-Supply Assembly.~~

~~The conductors, including ungrounded, grounded, and equipment grounding conductors, the connectors, attachment plug caps, and all other fittings, grommets, or devices installed for the purpose of delivering energy from the source of electrical supply to the distribution panel within the recreational vehicle. (551) (CMP-7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 12:43:59 EDT 2021

Committee Statement

Committee Statement: The definition is deleted because the definition for “Feeder Assembly” has been expanded in another comment to also encompass the intent of the similar term “Power-Supply Assembly”, making this definition redundant. See other comments which act to replace “Power-Supply Assembly” with “Feeder Assembly” where it is used in Articles 551 and 552. Having a single definition will increase clarity and reduce confusion.

Response Message: SR-8545-NFPA 70-2021

[Public Comment No. 1660-NFPA 70-2021 \[Definition: Power-Supply Assembly.\]](#)



Second Revision No. 8550-NFPA 70-2021 [Definition: Recreational Vehicle Site Supply Equipment.]

Recreational Vehicle Site Supply Equipment.

~~The necessary equipment, usually a power outlet, consisting of a circuit breaker or switch and fuse and their accessories, A power outlet assembly~~ located near the point of entrance of supply conductors to a recreational vehicle site and intended to constitute the disconnecting means for the supply to that site connected recreational vehicles . (551) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 12:58:21 EDT 2021

Committee Statement

Committee Statement: The revised language clarifies that the site supply equipment does not disconnect power to the site, since that is done by overcurrent devices or disconnecting means at the origination of the feeder or branch circuit. The site disconnecting means acts only to disconnect supplied recreational vehicles. Editorial changes were made for clarity as "power outlet" is a defined term.

Response Message: SR-8550-NFPA 70-2021

Public Comment No. 73-NFPA 70-2021 [Definition: Recreational Vehicle Site Supply Equipment.]



Second Revision No. 8556-NFPA 70-2021 [Definition: Recreational Vehicle.]

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. [1192:3.3.53 3.3.52] (551) (CMP-7)

Informational Note: ~~The basic entities are travel trailer, camping trailer, truck camper, and motor home as referenced in See Annex A of NFPA 1192-2021 , Standard on Recreational Vehicles. See 3.3.52, Recreational Vehicle , and A.3.3.52 of NFPA 1192 , for product types and definitions for motor homes and towable recreational vehicles .~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 13:26:43 EDT 2021

Committee Statement

Committee Statement: The definition for “Recreational Vehicle” is an extracted term from NFPA 1192. The reference number was updated to reflect recent changes made in NFPA 1192. The informational note was added to address the different types of Recreational Vehicles that are referenced in the Annex and Annex Table in NFPA 1192 that defines the types of motor homes that are now covered by the similar terms added in parentheses to the title.

Response Message: SR-8556-NFPA 70-2021

Public Comment No. 72-NFPA 70-2021 [Definition: Recreational Vehicle.]



Second Revision No. 8572-NFPA 70-2021 [Definition: Site-Isolating Device.]

Site-Isolating Device.

A pole-mounted disconnecting means installed at the distribution point for the purposes of isolation, system maintenance, emergency disconnection, or connection of optional standby systems. (547) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 15:43:27 EDT 2021

Committee Statement

Committee Statement: The phrase “pole-mounted” is added to clarify that the site-isolating device definition only applies to pole-top disconnects.

Response Message: SR-8572-NFPA 70-2021



Second Revision No. 8599-NFPA 70-2021 [Definition: Slip.]

Slip.

A berthing space between or adjacent to piers, wharves, or docks; the water areas associated with boat occupation. ~~(See also Berth.)~~ [303:3.3.20 3.3.21] (555) (CMP-7)

Informational Note: See the definition of Berth for additional information.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 16:57:46 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated. A new informational note has been added pointing the users of the code to the definition of Berth and the term was removed from the definition as the industry uses “Berth” and “Slip” terms separately.

Response Message: SR-8599-NFPA 70-2021



Second Revision No. 8600-NFPA 70-2021 [Definition: Storage, Dry Stack.]

Storage, Dry Stack. (Dry Stack Storage)

A facility, either covered or uncovered, constructed of horizontal and vertical structural members designed to allow placement of small boats in defined slots arranged both horizontally and vertically. [~~303:3.3.23.2~~ 3.3.24.2] (555) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 17:16:33 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated. Also, a similar term has been added to the title in accordance with the NEC Style Manual.

Response Message: SR-8600-NFPA 70-2021



Second Revision No. 8575-NFPA 70-2021 [Definition: Trailer, Camping. (Camping Trailer)]

~~Trailer, Camping. (Camping Trailer)~~

~~A vehicular portable unit mounted on wheels and constructed with collapsible partial side walls that fold for towing by another vehicle and unfold at the campsite to provide temporary living quarters for recreational, camping, or travel use. (See *Recreational Vehicle*.) (551) (CMP-7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 15:48:07 EDT 2021

Committee Statement

Committee Statement: The definition for Camping Trailer is now encompassed by the expanded definition for Recreational Vehicle, and therefore this redundant definition can be deleted.

Response Message: SR-8575-NFPA 70-2021



Second Revision No. 8579-NFPA 70-2021 [Definition: Travel Trailer.]

Travel Trailer.

~~A vehicular unit, mounted on wheels, designed to provide temporary living quarters for recreational, camping, or travel use, of such size or weight as not to require special highway movement permits when towed by a motorized vehicle, and of gross trailer area less than 30 m² (320 ft²). (See *Recreational Vehicle*.) (551) (CMP 7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 15:54:13 EDT 2021

Committee Statement

Committee Statement: The definition for Travel Trailer is now encompassed by the expanded definition for Recreational Vehicle, and therefore this redundant definition can be deleted.

Response Message: SR-8579-NFPA 70-2021



Second Revision No. 8580-NFPA 70-2021 [Definition: Truck Camper.]

Truck Camper.

~~A portable unit constructed to provide temporary living quarters for recreational, travel, or camping use, consisting of a roof, floor, and sides, designed to be loaded onto and unloaded from the bed of a pickup truck. (See *Recreational Vehicle*.) (551) (CMP-7)~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 15:55:06 EDT 2021

Committee Statement

Committee Statement: The definition for Truck Camper is now encompassed by the expanded definition for Recreational Vehicle, and therefore this redundant definition can be deleted.

Response Message: SR-8580-NFPA 70-2021



Second Revision No. 8591-NFPA 70-2021 [Definition: Wharf.]

Wharf.

A structure at the shoreline that has a platform built along and parallel to a body of water with either an open deck or a superstructure. [307:3.3.24 3.3.28] (555) (CMP-7)

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 16:17:38 EDT 2021

Committee Statement

Committee Statement: The reference to the source for this extracted definition has been updated.

Response Message: SR-8591-NFPA 70-2021



Second Revision No. 8603-NFPA 70-2021 [Section No. 545.22]

545.22 Power Supply.

(A) Feeder.

A relocatable structure shall be supplied by a feeder. The feeder shall include ~~four~~ insulated color-coded conductors, one of which shall be an equipment grounding conductor. The equipment grounding conductor shall be permitted to be uninsulated if part of a listed cable assembly.

Informational Note: See ~~Article~~ 590.4(B) for temporary installation of feeder conductors.

(B) Number of Supplies.

Where two or more relocatable structures are structurally connected to form a single unit and there is a factory-installed panelboard in each relocatable structure, each panelboard shall be permitted to be supplied by a separate feeder.

(C) Identification.

The identification requirements in 225.37 shall not apply to relocatable structures structurally connected provided the following conditions are met:

- (1) The relocatable structures are located on an industrial or commercial establishment where the conditions of maintenance and supervision ensure qualified individuals will service the installation.
- (2) The individual panelboard enclosures or covers have been marked to indicate to location of their supply disconnecting means. The marking shall be visible without removing the cover and shall be of sufficient durability to withstand the environment involved.

(D) Grounding.

(1) Feeders.

The feeder(s) shall be grounded in accordance with Parts I, II, and III of Article 250.

(2) Two or More Relocatable Structures.

Where two or more relocatable structures are structurally connected to form a single unit, and a common grounding electrode conductor and tap arrangement as specified in 250.64(D)(1) is utilized, it shall be permitted to use the chassis bonding conductor specified in 545.26 as the tap conductor.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 17:37:25 EDT 2021

Committee Statement

Committee Statement: The number "four" when referencing the quantity of color-coded conductors is deleted to not limit the feeder to single phase and a specific reference to 590.4(B) is added for temporary feeders in the Informational Note to comply with NEC Style Manual section 4.1.4.

Response Message: SR-8603-NFPA 70-2021

[Public Comment No. 776-NFPA 70-2021 \[Section No. 545.22\]](#)



Second Revision No. 8605-NFPA 70-2021 [Section No. 547.20(A)]

547.20 Wiring Methods.

Conductor types shall be installed in accordance with the applicable requirements of this Code covering the type of wiring Wiring methods used and shall be limited to the following methods :

- (1) Type UF
- (2) Type NMC
- (3) Type SE cable-copper
- (4) Jacketed Type MC cable
- (5) Rigid polyvinyl chloride conduit Raceways identified for the locations specified in 547.1(A) and (B)
- (5) Liquidtight flexible nonmetallic conduit (Type LFNC) with listed fittings
- (5) Other cables or raceways suitable for the location

The wiring methods of Article 502, Part II, shall be permitted for areas described in 547.1 .

Informational Note: See 300.7, 352.44, and 355.44 for installation of raceway systems exposed to widely different temperatures.

~~(A) Wiring Systems.~~

~~Conductor types shall be installed in accordance with the applicable requirements of this Code covering the type of wiring method used and shall be limited to the following methods:~~

- ~~(0) Type UF~~
- ~~(0) Type NMC~~
- ~~(0) Type SE cable-copper~~
- ~~(0) Jacketed Type MC cable~~
- ~~(0) Rigid polyvinyl chloride conduit~~
- ~~(0) Liquidtight flexible nonmetallic conduit (Type LFNC) with listed fittings~~
- ~~(0) Other cables or raceways suitable for the location~~

~~The wiring methods of Article 502 , Part II, shall be permitted for areas described in 547.1.~~

~~Informational Note: See 300.7 , 352.44 , and 355.44 for installation of raceway systems exposed to widely different temperatures.~~

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NEC_SR-8605_547.20_A_CMP7.docx	NEC_SR-8605_547.20(A)_CMP7 For Staff Use	

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 17:51:36 EDT 2021

Committee Statement

Committee Statement: The sentence for 547.20(A) is modified to remove redundant text as NEC 90.3 already addresses applicability. The section is revised for clarity while maintaining the detailed list of cable wiring methods while replacing the list of conduits with raceways identified for the location as specified in the scope of Article 547. Subsection (A) is deleted as it is not needed, as there is no other subsection after it. The term "suitable" is replaced with the defined term "identified" as "suitable" is a vague term.

Response Message: SR-8605-NFPA 70-2021

[Public Comment No. 779-NFPA 70-2021 \[Section No. 547.20\]](#)

[Public Comment No. 141-NFPA 70-2021 \[Section No. 547.20\(A\)\]](#)

[Public Comment No. 1719-NFPA 70-2021 \[Section No. 547.20\(A\)\]](#)



Second Revision No. 8619-NFPA 70-2021 [Section No. 547.28]

547.28 Ground-Fault Circuit-Interrupter Protection.

Ground-fault circuit-interrupter (GFCI) protection shall be provided as required in 210.8(B) for areas of agricultural buildings not included in the scope of this article. GFCI protection shall not be required for other than 125-volt, 15- and 20-ampere receptacles installed within the following areas:

- (1) Areas having requiring an equipotential plane
- (2) Outdoors
- (3) Damp or wet locations
- (4) Dirt confinement areas for livestock

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 10:39:38 EDT 2021

Committee Statement

Committee Statement: Regardless of whether an equipotential plane is installed, if an equipotential plane is required then only the 125V, 15 and 20A receptacles will require GFCI protection.

Response Message: SR-8619-NFPA 70-2021

[Public Comment No. 1267-NFPA 70-2021 \[Section No. 547.28\]](#)



Second Revision No. 8630-NFPA 70-2021 [Section No. 550.10(I)]

(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 ~~Parts I, II, III, IV, V, VI, VII, and VIII~~ 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 ~~suitable~~ identified for the location, 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)]. 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.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 11:57:27 EDT 2021

Committee Statement

Committee Statement: The term "suitable" is replaced with the defined term "Identified" and references to all parts of Article 230 was replaced with only Part II per Correlating Committee recommendation. RTRC was not added to this section since other raceways identified for the location already permits this wiring method.

Response Message: SR-8630-NFPA 70-2021

[Public Comment No. 1721-NFPA 70-2021 \[Section No. 550.10\(I\)\]](#)

[Public Comment No. 142-NFPA 70-2021 \[Section No. 550.10\(I\)\]](#)

[Public Comment No. 782-NFPA 70-2021 \[Section No. 550.10\(I\)\]](#)



Second Revision No. 8633-NFPA 70-2021 [Section No. 550.13(B)]

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

Ground-fault circuit-interrupter protection shall be provided as required in 210.8(A). ~~GFCI protection shall not be required for other than~~ 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 installed within a mobile or manufactured home in the following areas :

- (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.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 12:11:08 EDT 2021

Committee Statement

Committee Statement: CMP-7 disagrees with submitter's substantiation that this section modifies 422.5. The language was clarified related to locations and outlets that are required to be GFCI protected. CMP-7 added specific reference to 422.5(A) for clarity.

Response Message: SR-8633-NFPA 70-2021

Public Comment No. 1421-NFPA 70-2021 [Section No. 550.13(B)]



Second Revision No. 8640-NFPA 70-2021 [Section No. 550.15 [Excluding any Sub-Sections]]

Except as specifically limited in this section, the wiring methods and materials included in this *Code* shall be used in mobile homes. Where ~~either aluminum conductors or copper-clad aluminum conductors are installed, the conductors are terminated, they~~ shall be used with equipment listed and identified for the conductor materials in accordance with 110.14 .

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 12:36:25 EDT 2021

Committee Statement

Committee 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. The inclusion of 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. CMP-7 disagrees with the submitter of PC 1637 as the terminations on the device shall be listed and identified for the conductor materials being terminated.

Response Message: SR-8640-NFPA 70-2021

[Public Comment No. 1637-NFPA 70-2021 \[Section No. 550.15 \[Excluding any Sub-Sections\]\]](#)

[Public Comment No. 783-NFPA 70-2021 \[Section No. 550.15\]](#)



Second Revision No. 8683-NFPA 70-2021 [Section No. 550.18(A)(2)]

(2) Small-Appliance Volt-Amperes.

Number of circuits times 1500 volt-amperes for each 20-ampere appliance receptacle circuit (~~see definition of *Appliance, Portable*~~, with an informational note in 550.2), for example, number of circuits × 1500 = small-appliance volt-amperes.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 13:15:01 EDT 2021

Committee Statement

Committee Statement: Due to the action taken on PC438 and PC821 the definition was deleted as the generic definition for “Appliance” found in Article 100 and is sufficient to cover all uses of the term throughout the code, including within Article 550.

Response Message: SR-8683-NFPA 70-2021



Second Revision No. 8649-NFPA 70-2021 [Section No. 550.32(A)]

(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 ~~visible from within sight from~~ the mobile home it serves. The mobile home service disconnect shall be permitted to be used as the emergency disconnect in accordance with 230.85. Grounding at the disconnecting means shall be in accordance with 250.32.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 13:05:18 EDT 2021

Committee Statement

Committee 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. The inclusion of 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.

The NEC is often used by manufacturers in the creation of their manufacturer's specifications. Specific references should remain for clarity and usability.

The term "visible" was replaced with "within Sight from." "Within sight from" is a defined term and provides clarity.

Response Message: SR-8649-NFPA 70-2021

[Public Comment No. 1535-NFPA 70-2021 \[Section No. 550.32\(A\)\]](#)

[Public Comment No. 792-NFPA 70-2021 \[Section No. 550.32\(A\)\]](#)



Second Revision No. 8651-NFPA 70-2021 [Section No. 550.33(A)]

(A) Feeder Equipment.

The feeder equipment 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 visible within sight from the mobile home or manufactured home it serves. Grounding of the disconnecting means shall be in accordance with 250.32.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 13:09:52 EDT 2021

Committee Statement

Committee Statement: “Feeder equipment” is replaced with “feeder assembly” as “feeder equipment” is not a defined term. PC 1664 defined the term “feeder assembly” which would be applicable in this instance. Undefined term “visible’ is replaced with “within sight from” to be consistent with previous actions.

Response Message: SR-8651-NFPA 70-2021

Public Comment No. 772-NFPA 70-2021 [Section No. 550.33(A)]



Second Revision No. 8656-NFPA 70-2021 [Section No. 551.31(D)]

(D) ~~Power-Supply~~ Feeder Assembly Not Less Than 30 Amperes.

The external ~~power-supply~~ feeder assembly shall be permitted to be less than the calculated load but not less than 30 amperes and shall have overcurrent protection not greater than the capacity of the external ~~power-supply~~ feeder assembly.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 14:45:21 EDT 2021

Committee Statement

Committee Statement: The definition for Feeder Assembly was revised and moved to Article 100, this SR changes the term “power supply” to “feeder” to correlate to this global change.

Response Message: SR-8656-NFPA 70-2021

[Public Comment No. 1869-NFPA 70-2021 \[Article 551\]](#)



Second Revision No. 8658-NFPA 70-2021 [Section No. 551.40(C)]

(C) Ground-Fault Circuit-Interrupter Protection.

The internal wiring of a recreational vehicle having only one 15- or 20-ampere branch circuit as permitted in 551.42(A) and (B) shall have ground-fault circuit-interrupter protection for personnel. The ground-fault circuit interrupter shall be installed at the point where the power supply assembly terminates within the recreational vehicle. Where a separable cord set is not employed, the ground-fault circuit interrupter shall be permitted to be an integral part of the attachment plug of the ~~power supply feeder~~ assembly. The ground-fault circuit interrupter shall provide protection also under the conditions of an open grounded circuit conductor, interchanged circuit conductors, or both.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 14:48:56 EDT 2021

Committee Statement

Committee Statement: The definition for Feeder Assembly was revised and moved to Article 100, this SR changes the term "power supply" to "feeder" to correlate to this global change.

Response Message: SR-8658-NFPA 70-2021



Second Revision No. 8708-NFPA 70-2021 [Section No. 551.40(D)]

(D) Loss of Ground Device.

~~A device listed to indicate loss of ground shall be installed directly adjacent to the recreational vehicle entrance so that the external indicator display is visible prior to entry into the recreational vehicle. Each recreational vehicle 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. The device shall provide a continuous visible or audible signal response to the loss of ground. This requirement shall become effective January 1, 2026.~~

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Tue Nov 02 13:11:16 EDT 2021

Committee Statement

Committee Statement: Current language in 551.40(D) pertaining to “Loss of Ground Device” is removed and replaced with “Grounding Monitor Interrupter” as the previous text did not provide the intended requirement that is to disconnect any circuits when a loss of equipment grounding is detected. This is intended to address the issue of “hot-skin” condition that can result from the loss of an equipment ground connection. A future effective date of January 1, 2026, was added to allow for the standard development, product design, certification, and implementation.

Response Message: SR-8708-NFPA 70-2021

[Public Comment No. 701-NFPA 70-2021 \[Section No. 551.40\(D\)\]](#)

[Public Comment No. 65-NFPA 70-2021 \[Section No. 551.40\(D\)\]](#)

[Public Comment No. 161-NFPA 70-2021 \[Section No. 551.40\(D\)\]](#)



Second Revision No. 8659-NFPA 70-2021 [Section No. 551.42(C)]

(C) Two to Five 15- or 20-Ampere Circuits.

Two to five 15- or 20-ampere circuits to supply lights, receptacle outlets, and fixed appliances shall be permitted. Such recreational vehicles shall be permitted to be equipped with panelboards rated 120 volts_ maximum or 120/240 volts_ maximum and listed for 30-ampere application supplied by the appropriate ~~power-supply feeder~~ assemblies. 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 551.45(C) for main disconnect and overcurrent protection requirements.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 14:51:29 EDT 2021

Committee Statement

Committee Statement: The definition for Feeder Assembly was revised and moved to Article 100, this SR changes the term "power supply" to "feeder" to correlate to this global change.

Response Message: SR-8659-NFPA 70-2021



Second Revision No. 8661-NFPA 70-2021 [Section No. 551.42(D)]

(D) More Than Five Circuits Without a Listed Energy Management System.

A 50-ampere, 120/208-240-volt ~~power-supply~~ feeder assembly and a minimum 50-ampere-rated panelboard shall be used where six or more circuits are employed. The load distribution shall ensure a reasonable current balance between phases.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 14:52:54 EDT 2021

Committee Statement

Committee Statement: The definition for Feeder Assembly was revised and moved to Article 100, this SR changes the term “power supply” to “feeder” to correlate to this global change.

Response Message: SR-8661-NFPA 70-2021



Second Revision No. 8662-NFPA 70-2021 [Section No. 551.44]

551.44 Power-Supply Feeder Assembly.

Each recreational vehicle shall have only one of the main ~~power-supply~~ feeder assemblies covered in 551.44(A) through (D).

(A) Fifteen-Ampere Main ~~Power-Supply~~ Feeder Assembly.

Recreational vehicles wired in accordance with 551.42(A) shall use a listed 15-ampere or larger main ~~power-supply~~ feeder assembly.

(B) Twenty-Ampere Main ~~Power-Supply~~ Feeder Assembly.

Recreational vehicles wired in accordance with 551.42(B) shall use a listed 20-ampere or larger main ~~power-supply~~ feeder assembly.

(C) Thirty-Ampere Main ~~Power-Supply~~ Feeder Assembly.

Recreational vehicles wired in accordance with 551.42(C) shall use a listed 30-ampere or larger main ~~power-supply~~ feeder assembly.

(D) Fifty-Ampere ~~Power-Supply~~ Feeder Assembly.

Recreational vehicles wired in accordance with 551.42(D) shall use a listed 50-ampere, 120/208-240-volt main ~~power-supply~~ feeder assembly.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 14:54:39 EDT 2021

Committee Statement

Committee Statement: The definition for Feeder Assembly was revised and moved to Article 100, this SR changes the term "power supply" to "feeder" to correlate to this global change.

Response Message: SR-8662-NFPA 70-2021



Second Revision No. 8663-NFPA 70-2021 [Section No. 551.45(C)]

(C) Dead-Front Type.

The panelboard shall be of the dead-front type and shall consist of one or more circuit breakers or Type S fuseholders. 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 ~~power-supply~~ feeder assembly rating shall be provided where more than two branch circuits are employed.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 14:58:52 EDT 2021

Committee Statement

Committee Statement: The definition for Feeder Assembly was revised and moved to Article 100, this SR changes the term "power supply" to "feeder" to correlate to this global change.

Response Message: SR-8663-NFPA 70-2021



Second Revision No. 8664-NFPA 70-2021 [Section No. 551.46(A)]

(A) Assembly.

The ~~power-supply feeder~~ assembly or assemblies shall be factory supplied or factory installed and be of one of the types specified herein.

(1) Separable.

Where a separable ~~power-supply feeder~~ assembly consisting of a cord with a female connector and molded attachment plug cap is provided, the vehicle shall be equipped with a permanently mounted, flanged surface inlet (male, recessed-type motor-base attachment plug) wired directly to the panelboard by an approved wiring method. The attachment plug cap shall be of a listed type.

(2) Permanently Connected.

Each ~~power-supply feeder~~ assembly shall be 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 power-supply cord. The supply end of the assembly shall be equipped with an attachment plug of the type described in 551.46(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 vehicle is in transit and while the cord assembly is being stored or removed for use.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 14:59:53 EDT 2021

Committee Statement

Committee Statement: The definition for Feeder Assembly was revised and moved to Article 100, this SR changes the term “power supply” to “feeder” to correlate to this global change.

Response Message: SR-8664-NFPA 70-2021



Second Revision No. 8669-NFPA 70-2021 [Section No. 551.47(N)]

(N) Moisture or Physical Damage.

~~Where outdoor or under-chassis line-voltage (120 volts, nominal, or higher) wiring is exposed to moisture or physical damage, it shall be protected by a conduit or raceway identified for use in wet locations and be closely routed against frames and equipment enclosures or other raceway or cable identified for the application. The conductors shall be listed for use in wet locations. 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, to moisture or physical damage, it shall be protected by a conduit or raceway identified for use in wet locations and be closely routed against frames and equipment enclosures or other raceway or cable identified for the application . 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.

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NEC_SR-8669_551.47_N_CMP7.docx	NEC_SR-8669_551.47(N)_CMP7 For Staff Use	

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 10:13:25 EDT 2021

Committee Statement

Committee Statement: Submitter's substantiation to remove the last sentence is rejected since it provides clarity to installers. An example, NM cable cannot be used in wet locations or within conduit in wet locations. Section 300.9 indicates that the interior of the raceway installed in a wet location is a wet location as well.

Requirements for the section are separated and placed in a list format, in accordance with the NEC Style Manual.

Response Message: SR-8669-NFPA 70-2021

Public Comment No. 75-NFPA 70-2021 [Section No. 551.47(N)]



Second Revision No. 8670-NFPA 70-2021 [Section No. 551.71(C)]

(C) 50-Ampere.

A minimum of 20 percent of existing and 40 percent of all new recreational vehicle sites, with electrical supply, shall 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 be equipped with a 30-ampere, 125-volt receptacle conforming to Figure 551.46(C)(1). These electrical supplies shall 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.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 10:35:13 EDT 2021

Committee Statement

Committee Statement: The weather-resistant receptacle requirement has been added with an effective date of January 1, 2026 as the addition of this requirement now could create a burden on installers from AHJs who would require a weather-resistant receptacle that may not meet the actual intent.

Response Message: SR-8670-NFPA 70-2021

Public Comment No. 1131-NFPA 70-2021 [Section No. 551.71(C)]



Second Revision No. 8671-NFPA 70-2021 [Section No. 551.71(F)]

(F) GFCI Protection.

~~Ground-fault circuit-interrupter protection shall be provided as required in 210.8(B). GFCI protection shall not be required for other than 125-volt, 15- and 20-ampere receptacles used in the recreational vehicle site equipment.~~

(1) Receptacles Installed in Other Than Recreational Vehicle Site Equipment.

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

(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 *Power Supply Feeder Assembly* in 551.2 and the definition of *Feeder* in Article 100 clarifies that the power supply cord to a recreational vehicle is considered a feeder.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 11:45:16 EDT 2021

Committee Statement

Committee Statement: An editorial change was made to create list items in 551.71(F) to clarify when GFCI protection is required in recreational vehicle parks. Informational Note No. 2 was revised to be consistent with the new definition of Feeder Assembly.

Response Message: SR-8671-NFPA 70-2021

Public Comment No. 1915-NFPA 70-2021 [Section No. 551.71(F)]



Second Revision No. 8672-NFPA 70-2021 [Section No. 551.72(C)]

(C) Receptacles.

Receptacles rated at 50 amperes shall be supplied from a ~~branch~~ circuit of the voltage class and rating of the receptacle. Other recreational vehicle sites with 125-volt, 20- and 30-ampere receptacles shall be permitted to be derived from any grounded distribution system that supplies 120-volt, single-phase power.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 11:52:57 EDT 2021

Committee Statement

Committee Statement: The term "branch" is removed to provide clarity and the intent of CMP-7 first revision (FR-8168).

Response Message: SR-8672-NFPA 70-2021

[Public Comment No. 1921-NFPA 70-2021 \[Section No. 551.72\(C\)\]](#)



Second Revision No. 8673-NFPA 70-2021 [Section No. 551.72(D)]

(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 No. 1: All loads in a recreational vehicle are 120-volt, line-to-neutral and are nonpermanently connected loads.~~

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 ~~may 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).

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 12:10:49 EDT 2021

Committee Statement

Committee Statement: Informational Note No. 1 is removed as it was unnecessary.

Response Message: SR-8673-NFPA 70-2021

Public Comment No. 796-NFPA 70-2021 [Sections 551.72(C), 551.72(D)]



Second Revision No. 8667-NFPA 70-2021 [Section No. 551.72(E)]

(E) Connected Devices.

The use of ~~autotransformers shall not be permitted. 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.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 16:07:15 EDT 2021

Committee Statement

Committee Statement: The use of cord and plug connected autotransformers in a RV park or a campground distribution system should not be prohibited however an informational note was added to address concerns related to the usage of multiple autotransformers on a single feeder. The permissive language of using listed surge protection devices is continued in 551.72(E)

Response Message: SR-8667-NFPA 70-2021

Public Comment No. 645-NFPA 70-2021 [Section No. 551.72(E)]



Second Revision No. 8565-NFPA 70-2021 [Section No. 551.77(A)]

(A) Location.

Where provided on back-in sites, the recreational vehicle site electrical supply equipment shall be located on the left (road) side of the parked vehicle, on a line that is 1.5 m to 2.1 m (5 ft to 7 ft) from the left edge (driver's side of the parked RV) of the recreational vehicle stand and shall be located at any point on this line from the rear of the recreational vehicle stand to 4.5 m (15 ft) forward of the rear of the recreational vehicle stand.

For pull-through sites, the electrical supply equipment shall be permitted to be located at any point along the line that is 1.5 m to 2.1 m (5 ft to 7 ft) from the left edge (driver's side of the parked RV) from 4.9 m (16 ft) forward of the rear of the recreational vehicle stand to the center point between the two roads that gives access to and egress from the pull-through sites.

The left edge (driver's side of the parked RV) of the recreational vehicle stand shall be marked.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Thu Oct 28 15:00:55 EDT 2021

Committee Statement

Committee Statement: Contrary to the comment, the term "stand" is used in this context in Article 551; see 551.77(A). CMP added the term "recreational vehicle" in front of "stand" to further clarify the intent.

Response Message: SR-8565-NFPA 70-2021

[Public Comment No. 1276-NFPA 70-2021 \[Definition: Recreational Vehicle Stand.\]](#)



Second Revision No. 8674-NFPA 70-2021 [Section No. 551.77(D)]

(D) Mounting Height.

Site supply equipment shall be located not less than 600 mm (2 ft) above the electrical datum plane for that RV site and no more than 2.0 m ($6\frac{1}{2}$ ft) (6 ft 6 in.) above the ground electrical datum plane unless platform provisions are made to reach the circuit protection devices that are no more than 2.0 m ($6\frac{1}{2}$ ft) (6 ft 6 in.) above that platform.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 12:25:35 EDT 2021

Committee Statement

Committee Statement: Term "Ground" is replaced with the defined term "Electrical Datum Plane" to provide consistency with the definition update in Article 100.

Response Message: SR-8674-NFPA 70-2021



Second Revision No. 8680-NFPA 70-2021 [Section No. 552.4]

552.4 General Requirements.

A park trailer ~~as specified in 552.2~~ 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.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 12:56:58 EDT 2021

Committee Statement

Committee Statement: The reference to 552.2 is removed as definitions are no longer located in this section.

Response Message: SR-8680-NFPA 70-2021

[Public Comment No. 797-NFPA 70-2021 \[Section No. 552.4\]](#)



Second Revision No. 8681-NFPA 70-2021 [Section No. 552.41(A)]

(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 ~~be exempt from outlet spacing requirements~~ 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 ~~may could~~ open fully against a wall surface; or similar facilities.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 12:58:34 EDT 2021

Committee Statement

Committee Statement: CMP-7 replaces the phrase shall be exempt with shall not be required.

The term “shall be exempt” was replaced with the “shall not be required” for clarity in Exception No 1 to indicate that spacing requirements are not mandatory.

Response Message: SR-8681-NFPA 70-2021

Public Comment No. 799-NFPA 70-2021 [Section No. 552.41(A)]



Second Revision No. 8682-NFPA 70-2021 [Section No. 552.43(C)]

(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, 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 ~~suitable~~ identified for the location from the disconnecting means in the park trailer to the underside of the park trailer

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 13:03:30 EDT 2021

Committee Statement

Committee Statement: The term "suitable" was replaced with the defined term "identified" to provide clarity. RTRC was not added into the list of items since other raceways identified for the location would permit its use.

Response Message: SR-8682-NFPA 70-2021

[Public Comment No. 1718-NFPA 70-2021 \[Section No. 552.43\(C\)\]](#)

[Public Comment No. 140-NFPA 70-2021 \[Section No. 552.43\(C\)\]](#)



Second Revision No. 8675-NFPA 70-2021 [Section No. 552.44(A)]

(A) Permanently Connected.

Each ~~power-supply 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 ~~power-supply 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.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 12:49:42 EDT 2021

Committee Statement

Committee Statement: The definition for Feeder Assembly was revised and moved to Article 100, this SR changes the term “power supply assembly” to the defined term “feeder assembly” to correlate with this global change.

Response Message: SR-8675-NFPA 70-2021

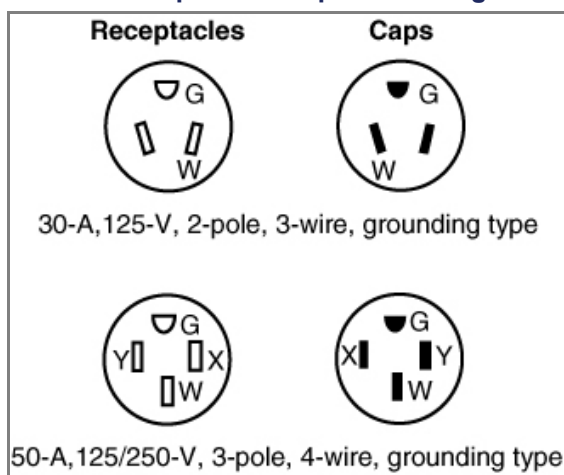
[Public Comment No. 1874-NFPA 70-2021 \[Article 552\]](#)

**Second Revision No. 8676-NFPA 70-2021 [Section No. 552.44(C)(2)]****(2) Units with 50-Ampere Power-Supply Feeder Assembly.**

Park trailers having a power-supply 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: Complete details of this configuration can be found in ANSI/NEMA WD 6-2016, *Wiring Devices — Dimensional Specifications*, Figure 14-50.

Figure 552.44(C)(1) Attachment Cap and Receptacle Configurations.

**Submitter Information Verification**

Committee: NEC-P07

Submittal Date: Sat Oct 30 12:52:23 EDT 2021

Committee Statement

Committee Statement: The definition for Feeder Assembly was revised and moved to Article 100, this SR changes the term “power supply assembly” to the defined term “feeder assembly” to correlate with this global change.

Response Message: SR-8676-NFPA 70-2021



Second Revision No. 8677-NFPA 70-2021 [Section No. 552.44(D)]

(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 ~~power-supply~~ 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).

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 12:53:05 EDT 2021

Committee Statement

Committee Statement: The definition for Feeder Assembly was revised and moved to Article 100, this SR changes the term “power supply assembly” to the defined term “feeder assembly” to correlate with this global change.

Response Message: SR-8677-NFPA 70-2021



Second Revision No. 8684-NFPA 70-2021 [Section No. 552.44(E)]

(E) Location.

The point of entrance of a ~~power-supply~~ feeder assembly shall be located on either side or the rear, within 450 mm (18 in.), of an outside wall.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 13:19:37 EDT 2021

Committee Statement

Committee Statement: The definition for Feeder Assembly was revised and moved to Article 100, this SR changes the term “power supply assembly” to the defined term “feeder assembly” to correlate with this global change.

Response Message: SR-8684-NFPA 70-2021



Second Revision No. 8678-NFPA 70-2021 [Section No. 552.45(C)]

(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 ~~power-supply~~ feeder assembly rating shall be provided where more than two branch circuits are employed.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 12:53:53 EDT 2021

Committee Statement

Committee Statement: The definition for Feeder Assembly was revised and moved to Article 100, this SR changes the term "power supply assembly" to the defined term "feeder assembly" to correlate with this global change.

Response Message: SR-8678-NFPA 70-2021



Second Revision No. 8679-NFPA 70-2021 [Section No. 552.46(A)]

(A) Two to Five 15- or 20-Ampere Circuits.

get that

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 ~~main power supply 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.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 12:54:38 EDT 2021

Committee Statement

Committee Statement: The definition for Feeder Assembly was revised and moved to Article 100, this SR changes the term "power supply assembly" to the defined term "feeder assembly" to correlate with this global change.

Response Message: SR-8679-NFPA 70-2021

**Second Revision No. 8685-NFPA 70-2021 [Section No. 555.6]****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, and, in addition, the demand factors set forth in Table 555.6 shall be permitted for each service and/or feeder circuit supplying receptacles that provide shore power for boats. These calculations shall be permitted to be modified as indicated in notes (1) and (2) to Table 555.6. Where demand factors of Table 555.6 are applied, the demand factor specified in 220.61(B) shall not be permitted.

Informational Note: These demand factors ~~may~~ could be inadequate in areas of extreme hot or cold temperatures with loaded circuits for heating, air-conditioning, or refrigerating equipment.

Table 555.6 Demand Factors

<u>Number of Shore Power Receptacles</u>	<u>Sum of the Rating of the Receptacles</u> (%)
1–4	100
5–8	90
9–14	80
15–30	70
31–40	60
41–50	50
51–70	40
≥71	30

Notes:

1. Where shore power accommodations provide two receptacles specifically for an individual boat slip and these receptacles have different voltages (~~for example, e.g.,~~ one 30-ampere, 125-volt and one 50-ampere, 125/250-volt), only the receptacle with the larger kilowatt demand shall be required to be calculated.
2. ~~If the facility being installed includes individual~~ For each shore power pedestal being installed that includes an individual kilowatt-hour submeters for each slip and is being calculated using the criteria listed in Table 555.6, the total demand amperes shall be permitted to be multiplied by 0.9 to achieve the final demand amperes of the facility .
3. When a circuit feeding a boat hoist and shore power for the same boat slip is shared, only the load with the larger kilowatt demand shall be required to be counted in the load calculation.

Submitter Information Verification**Committee:** NEC-P07**Submittal Date:** Sat Oct 30 14:03:39 EDT 2021**Committee Statement**

Committee Statement: The language clarifies that each shore power pedestal kilowatt-hour submeter for each slip can be used for the calculation. The editorial changes address the initial intent of the text.

Response SR-8685-NFPA 70-2021
Message:

[Public Comment No. 1232-NFPA 70-2021 \[Section No. 555.6\]](#)



Second Revision No. 8686-NFPA 70-2021 [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 and that are not connected to a branch circuit or feeder equipment grounding conductor, shall be connected to 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.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 14:29:07 EDT 2021

Committee Statement

Committee Statement: The public comment clarified an issue that needed to be considered and was addressed by the committee.

The language clarifies that an equipment grounding conductor in a branch circuit or feeder, when extended to electrical equipment or circuits on the dock, would not require an additional 8 AWG for bonding.

Response Message: SR-8686-NFPA 70-2021

[Public Comment No. 1132-NFPA 70-2021 \[Section No. 555.13\]](#)



Second Revision No. 8687-NFPA 70-2021 [Section No. 555.14]

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

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 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.

(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.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 14:40:13 EDT 2021

Committee Statement

Committee Statement: The panel disagrees with the submitter's request to remove this section. The need to provide an equipotential plane in and around water is significant in reducing electrical shock drowning events.

Additional language was added to specify the minimum size and types of conductors to be used for the equipotential plane. During the first revision, the language was inadvertently left out. The minimum size and type of conductor used for the equipotential plane is consistent with other similar requirements in and around water to help mitigate touch and step potentials.

Response Message: SR-8687-NFPA 70-2021

[Public Comment No. 1701-NFPA 70-2021 \[Section No. 555.14\]](#)



Second Revision No. 8688-NFPA 70-2021 [Section No. 555.15]

555.15 Replacement of Equipment.

~~Any modification, replacement, or repair~~ 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 provisions requirements of this Code. ~~When modification(s), replacement(s), or repair(s) of electrical enclosures, devices, or wiring methods are necessary on a docking facility, and the installation shall require an inspection of the entire circuit.~~ All Existing equipment that has been ~~recognized as being damaged or compromised during the inspection~~ 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.

Informational Note: NFPA 303-2021, *Fire Protection Standard for Marinas and Boatyards*, is a resource for guiding the electrical inspection of a marina.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 15:16:40 EDT 2021

Committee Statement

Committee Statement: The language addresses electrical equipment that is being modified or replaced. The modified or replaced equipment needs to be brought up to the current provisions of the code. The requirement for the remainder of the branch circuit or feeder to be inspected for damage and repaired if necessary, is to help eliminate other parts of the circuit that could contribute to electric shock drowning events. This language does not require the entire circuit to be brought into compliance with the current code, only the replaced electrical equipment that was originally modified or changed. Editorial correction to remove parenthesis for plural as per NEC Style Manual.

Response Message: SR-8688-NFPA 70-2021

Public Comment No. 1644-NFPA 70-2021 [Section No. 555.15]



Second Revision No. 8689-NFPA 70-2021 [Section No. 555.35(C)]

(C) 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 ~~Class A~~ GFCI protection for personnel.

Exception to (C): Low-voltage circuits not requiring grounding, not exceeding the low-voltage contact limit as defined in 680.2, 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.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 15:33:56 EDT 2021

Committee Statement

Committee Statement: The term "Class A" when referencing GFCI protection for personnel has been removed since "Class A" is explicitly included in the Article 100 definition of GFCI. The reference to 680.2 regarding the low-voltage contact limit definition is removed because that definition is now located in Article 100 and thus needs no reference.

Response Message: SR-8689-NFPA 70-2021

[Public Comment No. 768-NFPA 70-2021 \[Global Input\]](#)



Second Revision No. 8690-NFPA 70-2021 [Section No. 555.35(E)]

(E) 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 may 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 may 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.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 16:30:00 EDT 2021

Committee Statement

Committee Statement: The future effective date is anticipated to provide sufficient time for standard development, design, certification, and implementation of these devices.

Response Message: SR-8690-NFPA 70-2021



Second Revision No. 8691-NFPA 70-2021 [Section No. 555.38]

555.38 Luminaires.

(A) General.

All luminaires and retrofit kits shall be listed and identified for use in their intended environment. 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.

(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 that operate below the low-voltage contact limit defined in Article 100 and be supplied by an isolating transformer or power supply in accordance with 680.23(A)(2) - 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)

Supplemental Information

<u>File Name</u>	<u>Description</u>	<u>Approved</u>
NEC_SR-8691_555.38_CMP7.docx	NEC_SR-8691_555.38_CMP7 For Staff Use	

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Sat Oct 30 16:40:04 EDT 2021

Committee Statement

Committee Statement: Low voltage luminaires that are identified as submersible would adequately meet the safety concerns addressed by this section, and therefore should be permitted. The section was modified to a list format to address CMP-7's intent to not allow line voltage underwater luminaires regardless if they are marked submersible. UL Listed Submersible Luminaires (IFEV) guide information states these luminaires "are intended for installation in accordance with Article 680 of ANSI/NFPA 70, "National Electrical Code," in fountains and similar water-containing vessels not intended to accommodate the complete or partial immersion of persons." While Listed submersible luminaires are designed and investigated to be submersed in fountains, they are not investigated for the harsh conditions in a marina (e.g. subject to waves, storm surges, impact from boats, predatory fish, the ambient temperature fluctuations for luminaires installed between tide levels, sea water salt concentrations, daily UV exposure, etc.); therefore it is necessary that luminaires operate below the low-voltage contact limit defined in Article 100 and supplied by an isolating transformer or power supply in accordance with 680.23(A)(2). The electrical safety of immersed persons in the vicinity of an immersed marina luminaire is best assured by not relying on the luminaire mechanical design to fully contain the dangerous line voltage electrical supply but instead precluding this dangerous energy from approaching the water at all. If the harsh environmental conditions damage or

destroy an isolated low voltage luminaire, there will only be a loss of underwater lighting and not an increased risk of electric shock drowning (ESD).

Response SR-8691-NFPA 70-2021

Message:

[Public Comment No. 1549-NFPA 70-2021 \[Section No. 555.38\]](#)



Second Revision No. 8620-NFPA 70-2021 [Section No. 604.100(A)(2)]

(2) Conduits and Tubing .

Conduit shall be listed flexible metal conduit (FMC) , listed liquidtight flexible metal conduit (LFMC) , liquidtight flexible nonmetallic conduit (LFNC), or electrical metallic tubing (EMT) containing nominal 600-volt, 8 AWG to 12 AWG insulated copper-clad aluminum or copper 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): A luminaire tap, 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.

Submitter Information Verification

Committee: NEC-P07

Submittal Date: Fri Oct 29 11:10:54 EDT 2021

Committee Statement

Committee Statement: “Tubing” is added to the title of (A)(2) and wiring method acronyms are added for clarity and usability. Metallic and nonmetallic liquidtight conduits were specifically detailed instead of generically “flexible liquidtight conduit” as these are permitted wiring methods in UL 183, the Standard for Manufactured Wiring Systems.

Response Message: SR-8620-NFPA 70-2021

[Public Comment No. 56-NFPA 70-2021 \[Section No. 604.100\(A\)\(2\)\]](#)

[Public Comment No. 819-NFPA 70-2021 \[Section No. 604.100\(A\)\(2\)\]](#)