

National Fire Protection Association

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WORKING DRAFT OF NEC CODE-MAKING PANEL 18 MEETING OUTPUT

CONTENT NOT FINAL – SUBJECT TO REVISION PRIOR TO LETTER BALLOT AND PUBLICATION OF SECOND DRAFT REPORT

Document: National Electrical Code®

Revision Cycle: A2025

Meeting Date: October 2024

Panel Activity: Comment Stage

This is a working draft, prepared by NFPA staff, to record the output generated at the Code-Making Panel 18 Second Draft Meeting. It includes draft copies of the Second Revisions and any Global Revisions.

It is being made available to Panel members for the purpose of facilitating early review, particularly for those Panel members who may be seeking input from their respective organizations in preparation for the Second Draft Ballot. Second Revision No. 8038-NFPA 70-2024 [Definition: Busbar (as applied to

low-voltage suspended cei...]

Busbar- (as applied to low-voltage suspended ceiling power distribution systems).

A noninsulated conductor electrically connected to the source of supply and physically supported on an insulator providing a power rail for connection to utilization equipment, such as sensors, actuators, A/V devices, low-voltage luminaire assemblies, and similar electrical equipment <u>for low-voltage suspended ceiling power distribution system</u>. (393) (CMP-18)

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Fri Oct 18 16:47:43 EDT 2024

Committee Statement

Committee Statement: The additional text "applies to low-voltage suspended ceiling power distribution systems" was removed from the title of the definition of Busbar and placed into the definition to comply the Section 2.1.2.6.2 of the NEC Style Manual.

Response SR-8038-NFPA 70-2024 Message:

Public Comment No. 480-NFPA 70-2024 [Definition: Busbar (as applied to low-voltage suspended cei...]



applied to low-voltage suspe...]

Busbar Support- (as applied to low-voltage suspended ceiling power distribution systems).

An insulator that runs the length of a section of suspended ceiling bus rail that serves to support and isolate the busbars from of the suspended grid rail low-voltage suspended ceiling power distribution system . (393) (CMP-18)

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Fri Oct 18 16:50:38 EDT 2024

Committee Statement

Committee Statement: The additional text "applies to low-voltage suspended ceiling power distribution systems" was removed from the title of the definition of Busbar Support and placed into the definition to comply the Section 2.1.2.6.2 of the NEC Style Manual.

Response SR-8040-NFPA 70-2024 Message:

Public Comment No. 481-NFPA 70-2024 [Definition: Busbar Support (as applied to low-voltage suspe...]



Luminaire.

Utilization equipment intended to illuminate a space or object(s), to facilitate visual tasks, activities, aesthetics, or security, or a similar purpose. Light-emitting devices such as lamps or LED modules could be removable or replaceable. The equipment can connect directly to the branch circuit (ac or dc) or be used with a separate power source that regulates the voltage, current, or both from the branch circuit. A lampholder itself is not a luminaire. (CMP-18)

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 18:37:00 EDT 2024

Committee Statement

Committee Statement: Removed last sentence to comply with the NEC Style Manual 2.1.2.5. **Response Message:** SR-7956-NFPA 70-2024

Public Comment No. 492-NFPA 70-2024 [Definition: Luminaire.]



Power Supply- (as applied to low-voltage suspended ceiling power distribution systems).

A Class 2 power supply connected between the branch-circuit power distribution system and the busbar <u>of the</u> low-voltage suspended ceiling power distribution system._ (393) (CMP-18)

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Fri Oct 18 16:54:22 EDT 2024

Committee Statement

Committee
Statement:The additional text "applies to low-voltage suspended ceiling power distribution
systems" was removed from the title of the definition of Power Supply and placed into
the definition to comply the Section 2.1.2.6.2 of the NEC Style Manual.

Response SR-8041-NFPA 70-2024 Message:

Public Comment No. 500-NFPA 70-2024 [Definition: Power Supply (as applied to low-voltage suspend...]

NFPA	Revision No. 7879-NFPA 70-2024 [Definition: Wiring Device.]
Wiring D	evice.
connectio	cal device <u>with a yoke or used with flexible cord or cable</u> , that serves as either a n point to facilitate the flow of current or as a control device in general distribution and cuits. (CMP-18)
gen	rmational Note: Examples of wiring devices include attachment plugs, receptacles, eral-use snap switches, pendant switches, surface switches, dimmers, and electronic trol switches and lighting control switches.
Submitter Info	NEC-P18
	ate: Thu Oct 17 11:38:24 EDT 2024
Submittal Da	ate. Thu Oct 17 11.38.24 EDT 2024
Committee St	atement
Committee Statement:	Wiring Device definition has been revised to include "with a yoke" for clarity and consistency with the definition of yoke(strap). A yoke (strap) is the structural frame of

Statement:consistency with the definition of yoke(strap). A yoke (strap) is the structural frame of a
wiring device. "Or used with flexible cord or cable" was added to address attachment
plugs, cord connectors and pendant switches, which do not have a yoke.Response
Message:SR-7879-NFPA 70-2024

Public Comment No. 549-NFPA 70-2024 [Definition: Wiring Device.]

Second Revision No. 7959-NFPA 70-2024 [New Definition after Definition: NFPA Labeled.]

Lampholder.

A contact device that makes an electrical connection to a lamp. (CMP-18)

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 18:41:46 EDT 2024

Committee Statement

Committee Statement:	A definition of lampholder has been added to differentiate those items from luminaires. See related resolution of PC 492
Response Message:	SR-7959-NFPA 70-2024



(A) General Requirements.

All components of low-voltage suspended ceiling power distribution systems shall be installed by qualified persons and in accordance with the manufacturer's installation instructions. Cables and conductors installed exposed on the surfaces of ceilings and sidewalls shall be supported by the building structure such that cables are not damaged by normal building use. Such cables shall be supported by straps, staples, hangers, cable ties listed and identified for securement and support, or similar fittings designed and installed to not damage the cable.

Informational Note: Suspended ceiling low-voltage power grid distribution systems should be installed by qualified persons in accordance with the manufacturer's installation instructions.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Fri Oct 18 16:44:47 EDT 2024

Committee Statement

CommitteeThe redundant text "to be installed" does not conform to sections 3.1.1, 3.1.2, and
3.5.1.1 of the NEC Style Manual and was removed .ResponseSR-8036-NFPA 70-2024Message:SR-8036-NFPA 70-2024

Public Comment No. 408-NFPA 70-2024 [Section No. 393.14(A)]

Second Re	vision No. 8043-NFPA 70-2024 [Section No. 393.45]		
393.45 Ove	rcurrent Protection and Reverse Polarity (Backfeed) Protection.		
(A) Overcur	rent Protection.		
The listed Cl amperes.	ass 2 power supply or transformer primary shall be protected at not greater than 20		
(B) Intercon	nection of Power Sources.		
	2 sources shall not have the output connections paralleled or otherwise ed unless listed for such interconnection.		
(C) Reverse	Polarity (Backfeed) Protection of Direct-Current Systems.		
	A suspended ceiling low-voltage power distribution system shall be permitted to have reverse polarity (backfeed) protection of dc circuits by one of the following means:		
	(1) If the power supply is provided as part of the system, the power supply is provided with reverse polarity (backfeed) protection; or		
protectio	(2) If the power supply is not provided as part of the system, reverse polarity or (backfeed) protection can be provided as part of the grid rail busbar or as a part of the power feed connector.		
Submitter Inform	nation Verification		
Committee:	NEC-P18		
Submittal Date:	Fri Oct 18 17:01:22 EDT 2024		
Committee State	ement		
Statement:	The title of 393.45 was revised to "Overcurrent Protection and Reverse Polarity (Backfeed) Protection as it applies to the application of an overcurrent protective device. The change in 393.45(C)(2) is to match the terminology to the rest of the section.		
Response Message:	SR-8043-NFPA 70-2024		

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(A) Damp Locations.(1) Receptacles.
(a) <i>General</i> .Installations suitable for wet locations shall also be considered suitable for damp locations. Receptacles shall be considered to be in locations protected from the weather where located under roofed open porches, canopies, marquees, and similar and other water shedding structures that will not be subjected to beating rain or water runoff.
(b) Weatherproof Enclosures. Receptacles- <u>The enclosure and cover for receptacles</u> installed outdoors in locations protected from the weather or in other damp locations shall have enclosures and covers for the receptacles that are <u>be</u> weatherproof when the receptacles are <u>covered (cover is closed and without an</u> attachment plug caps <u>cap</u> not inserted- and receptacle covers closed) .
(c) <i>Weather-Resistant Receptacle Type.</i> All 125- and 250-volt nonlocking receptacles shall be listed weather-resistant type.
(d) <i>Covers</i> . Hinged covers of outlet box hoods shall be able to open at least 90 degrees, or fully open if the covers are not designed to open 90 degrees from the closed to open position, after installation.
Informational Note: See ANSI/NEMA WD 6-2016, <i>Wiring Devices — Dimensional Specifications</i> , for the types of receptacles covered by this requirement.
<u>(2)</u> <u>Switches.</u>
Switches installed in damp locations shall comply with the following:
(1) <u>Surface-mounted switches shall be enclosed in weatherproof enclosures that comply with</u> <u>312.2</u> .
(2) Flush-mounted switches shall be equipped with weatherproof covers.
nitter Information Verification
ommittee: NEC-P18 Ibmittal Date: Thu Oct 17 14:49:49 EDT 2024

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Statement:	that" to comply with Section 3.5.4 of Style Manual.		
	The text of (b) Weatherproof Enclosures was revised to remove parenthetical phrase to comply with Section 3.5.1.1 of the Style Manual.		
	"b" and "cover is closed and without an attachment plug cap inserted" to clarify the position of the plug and the cover		
Response Message:	SR-7921-NFPA 70-2024		

\	Second Revision No. 7922-NFPA 70-2024 [Section No. 406.9(B)(1)(b)]
NFPA	

(b) Outlet Box Hood.

An outlet box hood <u>installed for this purpose</u> shall be <u>listed and</u> identified as extra-duty. Other listed products, enclosures, or assemblies providing weatherproof protection that do not utilize an outlet box hood need not be identified as extra duty.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 14:56:24 EDT 2024

Committee Statement

Committee Statement: There was no intention to remove listing requirement. The listing requirement needs to be maintained to coordinate with identified as extra-duty. Without "listed" and "identified" Outlet Box Hood could be self-declared as extra-duty.

Response SR-7922-NFPA 70-2024

Message:

Public Comment No. 415-NFPA 70-2024 [Section No. 406.9(B)(1)]

Public Comment No. 1212-NFPA 70-2024 [Section No. 406.9(B)(1)(b)]

	Second Revision No.	7923-NFPA 70-2024 [Section No. 406.9(B)(2)]
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(2) Other Receptacles.

All other receptacles installed in wet locations shall be listed weather-resistant type and be installed in accordance with 406.9(B)(2)(a) or 406.9(B)(2)(b).

(a) For supplying a product that is unattended while in use, the receptacle shall have an enclosure that is weatherproof with the attachment plug cap inserted or removed.

(b) For supplying a product that is attended while in use- (e.g., portable tools), the receptacle shall have an enclosure that is weatherproof when the attachment plug is removed.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 14:58:52 EDT 2024

Committee Statement

 Committee
 Parenthetical phrase (e.g., portable tools) to comply with Section 3.5.1.1 of the Style

 Statement:
 Manual.

For supplying a product that is attended while in use "portable tools" was removed to avoid confusion or misunderstanding and is already covered by the text "supplying a product".

Response SR-7923-NFPA 70-2024 Message:

Public Comment No. 416-NFPA 70-2024 [Section No. 406.9(B)(2)]

if P ⁄	Second Revision No	. 7924-NFPA	70-2024 [Section No.	406.9(C)(1)]
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(1) Receptacles.

Receptacles shall not be installed inside of tubs or showers or within the following zones:

- (1) Horizontal zone, measured 900 mm (3 ft) horizontally from any outside edge of the bathtub or shower stall, including the space outside the bathtub or shower stall space below the zone
- (2) Vertical zone, measured vertically from the floor to 2.5 m (8 ft) above the top of the bathtub rim or shower stall threshold

The identified zone shall be all-encompassing and include the space directly over the bathtub or shower stall and the space below this zone, but not the space separated by a floor, wall, ceiling, room door, window, or fixed barrier.

Exception No. 1: Receptacles installed in accordance with 680.73 shall be permitted.

Exception No. 2: In bathrooms with less than the required zone, the receptacle(s) required by 210.52(D) shall be permitted to be installed opposite the bathtub rim or shower stall threshold on the farthest wall within the room.

Exception No. 3: Weight supporting ceiling receptacles (WSCRs) shall be permitted to be installed for <u>permitted for</u> listed luminaires that employ weight supporting attachment fittings (WSAFs) in damp locations complying with 410.10(D).

Exception No. 4: In dwelling units, single receptacles shall be permitted for electronic toilets or personal hygiene devices such as electronic bidet seats. The receptacle shall be readily accessible and not located in the space between the toilet and the bathtub or shower.

Informational Note No. 1: See 210.8(A)(1) for GFCI requirements in a bathroom.

Informational Note No. 2: See 210.11(C) for bathroom branch circuits.

Informational Note No. 3: See 210.21(B)(1) for single receptacle on an individual branch.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 15:02:21 EDT 2024

Committee Statement

Committee
Statement:The redundant text "to be installed" does not conform to sections 3.1.1, 3.1.2, and
3.5.1.1 of the NEC Style Manual and was removed from Exceptions No. 2 and 3. This
also helps to create parallel structure in the exceptions.Response
Message:SR-7924-NFPA 70-2024

	6.10 Wiring Device Terminations.		
	Wiring device terminations shall comply with the following:		
(1)	Wiring devices marked CO/ALR shall be permitted to directly terminate aluminum, copper, or copper-clad aluminum conductors in accordance with the branch-circuit conductor size (AWG) identified by the manufacturer's instructions.		
(2)	For wiring devices not marked CO/ALR, the following shall apply:		
	(3) _ They shall not be permitted to directly terminate aluminum conductors.		
	(4) They shall be permitted to directly terminate		
	directly to conductors other than aluminum		
	a. <u>copper conductors, copper-clad aluminum conductors, or both</u> in accordance with the branch-circuit conductor size (AWG) and type of conductor(s) identified		
	in		
	a. <u>by the manufacturer's</u>		
	instruction		
	a. <u>instructions</u> .		
(5)	Wiring devices installed using screwless terminals of conductor push-in type construction (also known as <i>push-in-terminals</i>) shall be installed on not greater than 15-ampere branch circuits and be connected with 14 AWG solid copper wire <u>conductor</u> only.		
	Informational Note <u>No. 1</u> : See UL 498-2017, <i>Attachment Plugs and Receptacles</i> , for information regarding screwless terminals of various type constructions employed on receptacles. Screwless terminals of separable-terminal assembly, spring-action clamp, and insulation-displacement type constructions are not classified in UL 498 as screwless terminals of conductor push-in type construction (also known as push-in terminals).		
	Informational Note No. 2: See UL 20-2018, General-Use Snap Switches, for information regarding screwless terminals of various voltage type constructions employed on snap switches. Screwless terminals of separable-terminal assembly, spring-action clamp, and insulation- displacement type constructions are not classified in UL 20 as screwless terminals of conductor push-in type construction also known as conductor		

Submitter Information Verification

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Committee: NEC-P18 Submittal Date: Thu Oct 17 11:44:35 EDT 2024

Committee Statement

Committee
Statement:1214 & 263 These two comments add informational note No. 2 addressing UL 20 Snap
Switches.1389 - Text was modified to positive language to differentiate devices intended for
copper conductor only and those that are intended for both copper and copper-clad
aluminum conductors. It should be noted that copper conductors and copper-clad
aluminum conductors are not equivalent. Due to the different ampacity rating, see Table
310.16.718 - Informational note No. 2- i.e. UL 20 Snap Switches was added and provides
needed coordination. See committee action on PC 1213 & PC 304. Additionally,
parentheticals removed from (3) and informational note to comply with Style Manual
Section 3.5.1.1.

739 Text was modified by changing "wires" to "conductor" for clarity. The other changes do not improve the text and meaning of the requirements.

409 Parenthetical phrase was removed "(also known as push-in-terminals) in 406.10(3)" to comply with the Style Manual 3.5.1.1.

"Manufacturer's instructions" was retained to assure that

"Proper conductor size and type" are essential for safe use when terminated to a Wiring Device. Not providing clear and concise language to the reader can potentially create a hazardous condition simply due to not knowing the proper conductor size (AWG) and type (ex. Copper only and Copper Clad Aluminum and Aluminum).

Response SR-7881-NFPA 70-2024 Message:

Public Comment No. 263-NFPA 70-2024 [Section No. 406.10]

Public Comment No. 1389-NFPA 70-2024 [Section No. 406.10]

Public Comment No. 409-NFPA 70-2024 [Section No. 406.3]

Public Comment No. 739-NFPA 70-2024 [Section No. 406.10]

Public Comment No. 718-NFPA 70-2024 [Section No. 406.10]

Public Comment No. 1214-NFPA 70-2024 [Section No. 406.10]

406.10 Wiring Device Terminations.

Wiring device terminations shall comply with the following:

- (1) Wiring devices marked CO/ALR shall be permitted to directly terminate aluminum, copper, or copper-clad aluminum conductors in accordance with the branch-circuit conductor size (AWG) identified by the manufacturer's instructions.
- (2) For wiring devices not marked CO/ALR, the following shall apply:
 - a. They shall not be permitted to directly terminate aluminum conductors.
 - b. They shall be permitted to <u>directly</u> terminate <u>directly to_copper</u>, <u>conductors</u>, <u>or copper-clad</u> <u>aluminum</u>, conductors, <u>or both</u> other than aluminum in accordance with the branch-circuit conductor size (AWG) and type<u>of conductor(s)</u> identified <u>byin</u> the manufacturer's-instructions.
- (3) Wiring devices installed using screwless terminals of conductor push-in type construction (also known as push-in-terminals) shall be installed on not greater than 15-ampere branch circuits and be connected with 14 AWG solid copper <u>conductor-wire</u> only.

Informational Note <u>No. 1</u>: See UL 498-2017, *Attachment Plugs and Receptacles*, for information regarding screwless terminals of various type constructions employed on receptacles. Screwless terminals of separable-terminal assembly, spring-action clamp, and insulation-displacement type constructions are not classified in UL 498 as screwless terminals of conductor push-in type construction (also known as push-in terminals).

Informational Note No. 2: See UL 20-2018, General-Use Snap Switches, for information regarding screwless terminals of various voltage type constructions employed on snap switches. Screwless terminals of separable-terminal assembly, spring-action clamp, and insulation-displacement type constructions are not classified in UL 20 as screwless terminals of conductor push-in type construction also known as conductor push-in terminals. Second Revision No. 7892-NFPA 70-2024 [Sections 406.12(D)(2), 406.12(D)(3)

Sections 406.12(D)(2), 406.12(D)(3)

(2) Non-Grounding-Type Receptacles.

Where attachment to equipment grounding conductors does not exist in receptacle enclosures. the installation shall comply with 406.12(D)(2)(a), 406.12(D)(2)(b), or 406.12(D)(2)(c).

(a) Non-grounding-type receptacles shall be permitted to be replaced with other nongrounding-type receptacles.

(b) Non-grounding-type receptacles shall be permitted to be replaced with ground-fault circuit interrupter-type receptacles. These receptacles or their cover plates shall be marked "No Equipment Ground." Equipment <u>The equipment</u> grounding conductors <u>terminal</u> shall not be connected from the ground-fault circuit-interrupter-type receptacles to any outlets supplied from the ground-fault circuit-interrupter receptacles.

(c) Non-grounding-type receptacles shall be permitted to be replaced with grounding-type receptacles where supplied through ground-fault circuit interrupters. Where grounding-type receptacles are supplied through ground-fault circuit interrupters, grounding-type receptacles or their cover plates shall be marked "GFCI Protected" and "No Equipment Ground," visible after installation. Equipment The equipment grounding conductors- terminal shall not be connected between the grounding-type receptacles.

Informational Note No. 1: Some equipment or appliance manufacturers require that the branch circuit to the equipment or appliance includes an equipment grounding conductor.

Informational Note No. 2: See 250.114 for a list of cord- and plug-connected equipment or appliances that require equipment grounding conductors.

(3) Ground-Fault Circuit-Interrupter Protection.

Ground-fault circuit-interrupter protection for receptacles shall be provided where replacements are made at receptacle outlets that are required to be so protected elsewhere in this code.

Exception: The receptacle shall be permitted to be replaced with a new receptacle of the existing type, where GFCI protection is provided and the receptacle is marked "GFCI Protected" and "No Equipment Ground," in accordance with 406.12(D)(2)(a), 406.12(D)(2) (b), or 406.12(D)(2)(c), as applicable, if it is not possible to provide GFCI protection, where all of the following conditions exist:

- (1) The outlet box size will not permit the installation of the GFCI receptacle.
- (2) No electrically upstream outlet box will permit the installation of a GFCI receptacle.
- (3) A GFCI circuit breaker cannot provide the required GFCI protection.

Supplemental Information

File Name

Description

<u>Approv</u>ed

406.12 D 2 and D 3 on SR-7892.docx 406.12 D 2 and D 3 on SR-7892.docx

SR-7892 on 406.12(D)(2) and (D)(3) For prod use

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 12:26:20 EDT 2024

Committee Statement

The exception was modified by removing "where GFCI protection is provided, and the Committee receptacle is marked "GFCI Protected" and "No Equipment Statement: Ground," in accordance with 406.12(D)(2)(a), 406.12(D)(2)(b), or 406.12(D)(2)(c), as applicable," provides little clarity. The suggested change improves the intent of the requirement. The cross references are removed to state the requirements in positive language rather than sending the reader to other sections of the code it explains the conditions here. The text was modified to replace "conductors" with "terminal" to clarify that an equipment grounding conductor is not available and should not be extended as such. The intent is to exhaust all protection options prior to applying the exception. Response SR-7892-NFPA 70-2024 Message: Public Comment No. 1390-NFPA 70-2024 [Section No. 406.12(D)(3)] Public Comment No. 294-NFPA 70-2024 [Sections 406.12(D)(2), 406.12(D)(3)]

406.12(D)(2) and (D)(3) on SR-7892

(2) Non-Grounding-Type Receptacles.

Where attachment to equipment grounding conductors does not exist in receptacle enclosures, the installation shall comply with 406.12(D)(2)(a), 406.12(D)(2)(b), or 406.12(D)(2)(c).

- (a) Non-grounding-type receptacles shall be permitted to be replaced with other non-grounding-type receptacles.
- (b) Non-grounding-type receptacles shall be permitted to be replaced with ground-fault circuit interrupter-type receptacles. These receptacles or their cover plates shall be marked "No Equipment Ground." <u>The</u> <u>e</u>Equipment grounding <u>terminal conductors</u> shall not be connected from the ground-fault circuit-interrupter-type receptacles to any outlets supplied from the ground-fault circuit-interrupter receptacles.
- (c) Non-grounding-type receptacles shall be permitted to be replaced with grounding-type receptacles where supplied through ground-fault circuit interrupters. Where grounding-type receptacles are supplied through ground-fault circuit interrupters, grounding-type receptacles or their cover plates shall be marked "GFCI Protected" and "No Equipment Ground," visible after installation. <u>The eEquipment grounding terminal</u> conductors shall not be connected between the grounding-type receptacles.
- Informational Note No. 1: Some equipment or appliance manufacturers require that the branch circuit to the equipment or appliance includes an equipment grounding conductor.

Informational Note No. 2: See 250.114 for a list of cord- and plug-connected equipment or appliances that require equipment grounding conductors.

(3) Ground-Fault Circuit-Interrupter Protection.

Ground-fault circuit-interrupter protection for receptacles shall be provided where replacements are made at receptacle outlets that are required to be so protected elsewhere in this code.

Exception: The receptacle shall be permitted to be replaced with a new receptacle of the existing type, if when- it is not possible to provide where GFCI protection is provided and the receptacle is marked "GFCI Protected" and "No Equipment Ground," in accordance with 406.12(D)(2)(a), 406.12(D)(2)(b), or 406.12(D)(2)(c), as applicable, where all of the following conditions exist:

- (1) The outlet box size will not permit the installation of the GFCI receptacle.
- (2) No electrically upstream outlet box will permit the installation of a GFCI receptacle.
- (3) A GFCI circuit breaker cannot provide the required GFCI protection.

Commented [CK1]: 18 TG1 SR15: Statement: The text was modified to replace "conductors" with "terminal" to clarify that an equipment grounding conductor is not available and should not be extended as such.

Commented [CK2]: 18 TG1 SR4 Statement:

The exception was modified by removing "where GFCI protection is provided, and the receptacle is marked "GFCI Protected" and "No Equipment Ground," in accordance with 406.12(D)(2)(a), 406.12(D)(2)(b), or 406.12(D)(2)(c), as applicable," provides little clarity. The suggested change improves the intent of the requirement.

Add below to document:

Exception: The receptacle shall be permitted to be replaced with a new receptacle of the existing type , where when it is not possible to provide GFCI protection is provided and the receptacle is marked "GFCI Protected" and "No Equipment Ground," in accordance with 406.12(D)(2)(a) , 406.12(D)(2)(b) , or 406.12(D)(2)(e) , as applicable, where all of the following conditions exist:

due to the existance of all of the following conditions exist

Second Revision No. 8098-NFPA 70-2024 [Section No. 406.14(F)]				
(F) Recept	tacles in Work Surfaces.			
	assemblies and GFCI receptacle assemblies listed for work surface or countertop s shall be permitted to be installed in work surfaces.			
Submitter Information Verification				
Committee:	NEC-P18			
Submittal Date	e: Sat Oct 19 15:54:22 EDT 2024			
Committee Sta	tement			
Committee Statement:	The redundant text "to be installed" does not conform to sections 3.1.1, 3.1.2, and 3.5.1.1 of the NEC Style Manual and was removed.			
Response Message:	SR-8098-NFPA 70-2024			

Second Revision No.	7899-NFPA 70-2024	[Section No. 406.16]

406.16 Receptacle Faceplates (Cover Plates).

Receptacle faceplates shall be installed to completely cover openings and seat against mounting surfaces.

Receptacle faceplates mounted inside boxes having recess-mounted receptacles shall effectively close openings and seat against mounting surfaces.

(A) Thickness of Metal Faceplates.

Metal faceplates shall be of ferrous metal not less than 0.76 mm (0.030 in.) in thickness or of nonferrous metal not less than 1.02 mm (0.040 in.) in thickness.

(B) Grounding.

Metal faceplates shall be grounded.

(C) Faceplates of Insulating Material.

Faceplates of insulating material shall comply with the following:

- (1) They shall be noncombustible.
- (2) They shall not be less than 2.54 mm (0.10 in.) in thickness unless formed or reinforced to provide adequate mechanical strength.
- (D) Receptacle Faceplates (Cover Plates) with Integral Night Lights, USB Chargers, or Both.

Flush device faceplates (cover plates) that integrally incorporate night lights, Class 2 output connectors (USB chargers), or both shall comply with all of the following:

- (1) Faceplate (cover plate) assemblies shall be listed.
- (2) <u>During normal operation, night light and Class 2 supply connections shall not introduce</u> <u>current to the grounding means or to the equipment grounding conductor.</u>
- (3) <u>Night lights and Class 2 connections (USB chargers), if relying on spring-tensioned</u> <u>contacts for electrical power, shall comply with the following:</u>
 - a. They shall not be rated more than 1 watt.
 - b. <u>They shall be connected to only unpainted or unenameled heads of receptacle</u> <u>terminal screws made only of copper alloy unless the faceplate (cover plate) is</u> <u>additionally listed and identified that the spring-tensioned contacts are suitable for</u> <u>connection to unpainted or unenameled heads of terminal screws made of plated</u> <u>steel.</u>

Exception: Effective January 1, 2026, spring-tensioned contact connections to steel receptacle terminal screws shall be permitted if the receptacle faceplate is specifically listed and identified for connection to steel receptacle terminal screws.

Supplemental Information

<u>File Name</u> SR-7899_on_406.16.docx SR-7899_on_406.16.docx Description SR-7899 on 406.16 For prod use

Approved

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 12:55:09 EDT 2024

Committee Statement

Committee
Statement:The title and text were revised by removing parenthetical phrase to comply with
Section 3.5.1.1 of the Style Manual.Response
Message:SR-7899-NFPA 70-2024

Public Comment No. 411-NFPA 70-2024 [Section No. 406.16]

406.16 Receptacle Faceplates or (Cover Plates).

Receptacle faceplates <u>or cover plates</u> shall be installed to completely cover openings and seat against mounting surfaces.

Receptacle faceplates <u>or cover plates</u> mounted inside boxes having recess-mounted receptacles shall effectively close openings and seat against mounting surfaces.

(A) Thickness of Metal Faceplates.

Metal faceplates <u>or metal cover plates</u> shall be of ferrous metal not less than 0.76 mm (0.030 in.) in thickness or of nonferrous metal not less than 1.02 mm (0.040 in.) in thickness.

(B) Grounding.

Metal faceplates or metal cover plates shall be grounded.

(C) Faceplates of Insulating Material.

Faceplates of insulating material shall comply with the following:

- (1) They shall be noncombustible.
- (2) They shall not be less than 2.54 mm (0.10 in.) in thickness unless formed or reinforced to provide adequate mechanical strength.

(D) Receptacle Faceplates <u>or</u> Cover Plates with Integral Night Lights, USB Chargers, or Both.

Flush device faceplates<u>or</u>-(cover plates) that integrally incorporate night lights, Class 2 output connectors₂ (USB chargers) connectors, or both shall comply with all of the following:

- (1) Faceplate or (cover plate) assemblies shall be listed.
- (2) During normal operation, night light and Class 2 supply, or USB charger connections shall not introduce current to the grounding means or to the equipment grounding conductor.
- (3) Night lights₂-and Class 2 connections<u>, or-(</u>_USB chargers), if relying on spring-tensioned contacts for electrical power, shall comply with the following:
 - a. They shall not be rated more than 1 watt.
 - b. They shall be connected to only unpainted or unenameled heads of receptacle terminal screws made only of copper alloy unless the faceplate <u>or (cover plate)</u> is additionally listed and identified that the spring-tensioned contacts are suitable for connection to unpainted or unenameled heads of terminal screws made of plated steel.



406.18 Attachment Plugs, Cord Connectors, and Flanged Surface Devices.

All attachment plugs, cord connectors, and flanged surface devices- (<u>, including</u> inlets and outlets)-, shall be marked with the manufacturer's name or identification and voltage and ampere ratings.

(A) Construction of Attachment Plugs and Cord Connectors.

Attachment plugs and cord connectors shall be constructed so that there are no exposed current-carrying parts except the prongs, blades, or pins. The cover for wire terminations shall be a part that is essential for the operation of attachment plugs or connectors- (dead-front construction).

(B) Connection of Attachment Plugs.

Attachment plugs shall be installed so that their prongs, blades, or pins are not energized unless inserted into energized receptacles or cord connectors. No receptacle shall be installed so as to require the insertion of an energized attachment plug as its source of supply.

(C) Attachment Plug Ejector Mechanisms.

Attachment plug ejector mechanisms shall not adversely affect engagement of the blades of attachment plugs with the contacts of receptacles.

(D) Flanged Surface Inlet.

Flanged surface inlets shall be installed such that the prongs, blades, or pins are not energized unless energized cord connectorsare <u>connectors are</u> inserted into them.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 13:09:42 EDT 2024

Committee Statement

CommitteeParenthetical removed parenthetical phrase to comply with Section 3.5.1.1 of theStatement:Style Manual. Dead front construction is a form of a plug construction and it is not
necessary to call it out separately.

Response SR-7900-NFPA 70-2024

Message:

Public Comment No. 412-NFPA 70-2024 [Section No. 406.18]



(B) Grounded Conductors.

Switches or circuit breakers shall Switches shall not disconnect the grounded conductors of circuits.

Exception: A switch or circuit breaker shall switch shall be permitted to disconnect a grounded circuit conductor where all circuit conductors are disconnected simultaneously, or where the device is arranged so that the grounded conductor cannot be disconnected until all the ungrounded conductors of the circuit have been disconnected.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 13:24:03 EDT 2024

Committee Statement

Committee Statement:	"Circuit breakers" appearing in Article 406.30 (B) and in the Exception, was removed. Circuit breakers are covered by Article 404.
Response Message:	SR-7903-NFPA 70-2024

Public Comment No. 1122-NFPA 70-2024 [Section No. 406.30(B)]



(C) Switches Controlling Lighting Loads.

The grounded circuit conductor for the controlled lighting circuit shall be installed at the location where switches control lighting loads that are supplied by a grounded general-purpose branch circuit serving bathrooms, hallways, stairways, and habitable rooms or occupiable spaces as defined in the applicable building code. Where multiple switch locations control the same lighting load such that the entire floor area of the room or space is visible from the single or combined switch locations, the grounded circuit conductor shall only be required at one location. A grounded conductor shall not be required to be installed at lighting switch locations under any of the following conditions:

- (1) Where conductors enter the box enclosing the switch through a racewayif raceway if the raceway is large enough for all contained conductors, including a grounded conductor
- (2) Where snap switches with integral enclosures comply with 300.17(E)
- (3) Where lighting in the area is controlled by automatic means from a remote location.
- (4) Where a switch controls a receptacle load

The grounded conductor shall be extended to any switch location as necessary, be connected to switching devices that require line-to-neutral voltage to operate the electronics of the switch in the standby mode, and meet the requirements of 406.50.

Exception: The connection requirement shall not apply to replacement or retrofit switches installed in locations prior to local adoption of 406.30(C) and where the grounded conductor cannot be extended without removing finish materials. The number of electronic control switches on a branch circuit shall not exceed five, and the number connected to any feeder on the load side of a system or main bonding jumper shall not exceed 25. For the purpose of this exception, a neutral busbar, in compliance with 200.4(B) and to which a main or system bonding jumper is connected, shall not be limited as to the number of electronic lighting control switches connected.

Informational Note: The provision for a grounded conductor is to complete a circuit path for electronic lighting control devices.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 13:31:03 EDT 2024

Committee Statement

CommitteeThe lighting area was changed for clarity as to what is meant by automatic means.Statement:The redundant text "to be installed" does not conform to sections 3.1.1, 3.1.2, and
3.5.1.1 of the NEC Style Manual and was removed

Response SR-7904-NFPA 70-2024 Message:

Public Comment No. 828-NFPA 70-2024 [Section No. 406.30(C)]



406.36 Indicating.

General-use and motor circuit use snap switches where mounted in enclosures as described in 406.32 shall indicate, in locations that are visible when accessing the external operation means, whether they are in the open (off) or closed (on) position.

<u>Exception:</u> Vertically operated double-throw switches shall be permitted to be in the closed (on) position with the handle in either the up or down position.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 13:34:22 EDT 2024

Committee Statement

Committee Article 406.36 was revised by removing "and motor circuit". Motor circuit switches are covered by Article 404. Additionally, "snap" was added to general use snap switch for clarity.
 Response SR-7905-NFPA 70-2024

Response SR-7905-NFPA 70-2024 Message:

Public Comment No. 1123-NFPA 70-2024 [Section No. 406.36]

Second Revision No. 7906-NFPA 70-2024 [Section No. 406.38(A)]

(A) Location. [SEE ATTACHED]

All switches and circuit breakers used as switches shall comply with the following:

- (1) They shall be located so that they can be operated from readily accessible places.
- (2) They shall be installed such that the center of the grip of the operating handle of the switch or circuit breaker, when in its highest position, is not more than 2.0 m (6 ft 7 in.) above the floor or working platform, except as follows:
 - (3) <u>On busway installations, fused switches and circuit breakers shall be permitted to be</u> located at the same level as the busway if suitable means is provided to operate the handle of the device from the floor.
 - (4) <u>Switches and circuit breakers installed adjacent to motors, appliances, or other equipment that they supply shall be permitted to be located higher than 2.0 m (6 ft 7 in.) and to be accessible by portable means.</u>
 - (5) <u>Hookstick operable isolating switches shall be permitted at greater heights.</u>

Supplemental Information

<u>File Name</u> SR-7906_on_Section_406.38_A_.docx NEC_CMP-18_SR-7906_406.38_A_.docx Description SR-7906 on 406.38(A) For prod use

<u>Approved</u>

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 13:37:29 EDT 2024

Committee Statement

CommitteeArticle 406.38 including 406.38(A) was revised by removing "and circuit breakers usedStatement:as switches" since circuit breakers are covered by Article 404.

No. (2) was modified by removal of "center of grip of the"; and replaced with "actuating means" for clarity of a snap switch actuator; "or circuit breaker" was removed, since circuit breakers are covered by Article 404."Finished grade" was also added from existing Article 404 text.

a) and c) were removed since these are not relevant to a snap switch use;

and

b) was modified to remove "and circuit breakers" and relocated to an exception to (2) as it is the only remaining exception from the previous list of text.

Response SR-7906-NFPA 70-2024

Message:

406.38 Accessibility and Grouping.

(A) Location.

All switches and circuit breakers used as switches shall comply with the following:

- (1) They shall be located so that they can be operated from readily accessible places.
- (2) They shall be installed such that the <u>center of the grip_actuating means</u> of the<u>switch's</u> operating handle<u>of</u> the <u>switch or circuit breaker</u>, when in its highest position, is not more than 2.0 m (6 ft 7 in.) above the floor<u>, or</u> working platform<u>, or finished grade</u>, except <u>that as follows</u>:
 - a. On busway installations, fused switches and circuit breakers shall be permitted to be located at the same level as the busway if suitable means is provided to operate the handle of the device from the floor.
 - b. Exception to (2): Switches and circuit breakers installed adjacent to motors, appliances, or other equipment that they supply shall be permitted to be located higher than 2.0 m (6 ft 7 in.). and to be accessible by portable means.
 - c. Hookstick operable isolating switches shall be permitted at greater heights.



Sections 406.40, 406.40(D)

406.40 General-Use Snap Switches, Dimmers, and Control Switches.

(A) Faceplate (or Cover Plate) Mounting Plate Mounting.

Faceplates provided for snap switches, dimmers, and control switches mounted in boxes and other enclosures shall be installed to completely cover the opening and, where the switch is flush mounted, seat against the finished surface.

Faceplates that are installed on receptacles mounted on the same box as snap switches, dimmers, and control switches shall comply with 406.14(C), 406.14(D), 406.16, and, as applicable, 406.9.

(B) Grounding.

Snap switches, dimmers, and control switches shall be connected to an equipment grounding conductor and provide a means to connect metal faceplates to the equipment grounding conductor, whether or not metal faceplates are installed. Metal faceplates shall be bonded to the equipment grounding conductor. Snap switches, dimmers, control switches, and metal faceplates shall be connected to equipment grounding conductors using either of the following methods:

- (1) The switch is mounted with metal screws to a metal box or metal cover that is connected to an equipment grounding conductor or to a nonmetallic box with integral means for connecting to an equipment grounding conductor.
- (2) An equipment grounding conductor or equipment bonding jumper is connected to an equipment grounding termination of the snap switch.

Exception No. 1: Where no means exists within the enclosure for bonding to the equipment grounding conductor, or where the wiring method does not include or provide an equipment grounding conductor, a snap switch without a connection to an equipment grounding conductor shall be permitted for replacement purposes only. A snap switch wired under the provisions of this exception and located within 2.5 m (8 ft) vertically, or 1.5 m (5 ft) horizontally, of ground or exposed grounded metal objects shall be provided with a faceplate of nonconducting noncombustible material with nonmetallic attachment screws, unless the switch mounting strap or yoke is nonmetallic or the circuit is protected by a ground-fault circuit interrupter.

Exception No. 2: Listed kits or listed assemblies shall not be required to be bonded to an equipment grounding conductor if all of the following conditions are met:

- (1) The device is provided with a nonmetallic faceplate, and the device is designed such that no metallic faceplate replaces the one provided.
- (2) The device does not have mounting means to accept other configurations of faceplates.
- (3) The device is equipped with a nonmetallic yoke.
- (4) All parts of the device that are accessible after installation of the faceplate are manufactured of nonmetallic materials.

Exception No. 3: A snap switch with an integral nonmetallic enclosure complying with 300.17(E) shall be permitted without a bonding connection to an equipment grounding conductor.

(C) Faceplate (<u>or</u> Cover Plate) Construction <u>Plate Construction</u> .	
Metal faceplates shall be constructed of ferrous metal not less than 0.76 mm (0.030 in.) in thickness or of nonferrous metal not less than 1.02 mm (0.040 in.) in thickness. Faceplates of insulating material shall be noncombustible and be not less than 2.54 mm (0.100 in.) in thickness unless formed or reinforced to provide adequate mechanical strength.	
(D) Faceplates (<u>or</u> Cover Plates) Incorporating <u>Plates Incorporating</u> Night Lights, USB Chargers, or Both.	
For snap switches, dimmers, and control switches, faceplates- (<u>, or</u> cover plates) that integrally incorporate night lights Class 2 connections- (<u>,</u> USB chargers) <u>charger connections</u> , or both shall comply with all the following:	
(1) Faceplate (<u>or</u> cover plate) assemblies <u>plate assemblies</u> shall be listed.	
(2) During normal operation, night lights and Class 2 connections- (USB chargers) shall, or <u>USB chargers shall</u> not introduce current to the bonding means or the equipment grounding conductors.	
(3) Electrical power supply connections to night lights and Class 2 connections- (USB chargers) shall, or USB chargers shall not be connected across the line and load terminals of snap switches, dimmers, and control switches having a marked OFF position.	
(4) Night lights and Class 2 connections (<u>or</u> USB chargers), if relying on spring-tensioned contacts for electrical power, shall comply with the following:	
(5) <u>They shall not be rated more than 1 watt.</u>	
(6) <u>They shall be connected to only unpainted or unenameled heads of switch terminal</u> screws made of only copper alloy unless the faceplate	
(
a. <u>or cover plate</u>	
)	
a. <u>is additionally listed and identified that the spring-tensioned contacts are suitable for</u> connection to unpainted or unenameled heads of terminal screws made of steel.	
Supplemental Information	
File NameDescriptionApprovedNEC_CMP-18_SR-7943_406.40.docx	
Submitter Information Verification	
Committee: NEC-P18	
Submittal Date: Thu Oct 17 17:18:40 EDT 2024	
Committee Statement	
CommitteeParenthetical expressions have been removed and replaced in multiple clauses,Statement:for consistency with Style Manual Section 3.5.1.1.	
ResponseSR-7943-NFPA 70-2024Message:	
Public Comment No. 407-NFPA 70-2024 [Article 406]	

406.40 General-Use Snap Switches, Dimmers, and Control Switches.

(A)–Faceplate <u>(or</u> Cover Plate) Mounting.

Faceplates provided for snap switches, dimmers, and control switches mounted in boxes and other enclosures shall be installed to completely cover the opening and, where the switch is flush mounted, seat against the finished surface.

Faceplates that are installed on receptacles mounted on the same box as snap switches, dimmers, and control switches shall comply with 406.14(C), 406.14(D), 406.16, and, as applicable, 406.9.

(B)–_Grounding.

Snap switches, dimmers, and control switches shall be connected to an equipment grounding conductor and provide a means to connect metal faceplates to the equipment grounding conductor, whether or not metal faceplates are installed. Metal faceplates shall be bonded to the equipment grounding conductor. Snap switches, dimmers, control switches, and metal faceplates shall be connected to equipment grounding conductors using either of the following methods:

- 1. The switch is mounted with metal screws to a metal box or metal cover that is connected to an equipment grounding conductor or to a nonmetallic box with integral means for connecting to an equipment grounding conductor.
- 2. An equipment grounding conductor or equipment bonding jumper is connected to an equipment grounding termination of the snap switch.

Exception No. 1: Where no means exists within the enclosure for bonding to the equipment grounding conductor, or where the wiring method does not include or provide an equipment grounding conductor, a snap switch without a connection to an equipment grounding conductor shall be permitted for replacement purposes only. A snap switch wired under the provisions of this exception and located within 2.5 m (8 ft) vertically, or 1.5 m (5 ft) horizontally, of ground or exposed grounded metal objects shall be provided with a faceplate of nonconducting noncombustible material with nonmetallic attachment screws, unless the switch mounting strap or yoke is nonmetallic or the circuit is protected by a ground-fault circuit interrupter.

Exception No. 2: Listed kits or listed assemblies shall not be required to be bonded to an equipment grounding conductor if all of the following conditions are met:

- 1. The device is provided with a nonmetallic faceplate, and the device is designed such that no metallic faceplate replaces the one provided.
- 2. The device does not have mounting means to accept other configurations of faceplates.
- 3. The device is equipped with a nonmetallic yoke.
- 4. All parts of the device that are accessible after installation of the faceplate are manufactured of nonmetallic materials.

Exception No. 3: A snap switch with an integral nonmetallic enclosure complying with 300.17(E) shall be permitted without a bonding connection to an equipment grounding conductor.

(C)-_Faceplate (or_Cover Plate) Construction.

Metal faceplates shall be constructed of ferrous metal not less than 0.76 mm (0.030 in.) in thickness or of nonferrous metal not less than 1.02 mm (0.040 in.) in thickness. Faceplates of insulating material shall be noncombustible and be not less than 2.54 mm (0.100 in.) in thickness unless formed or reinforced to provide adequate mechanical strength.

(D)–_Faceplates (<u>or</u> Cover Plates)-Incorporating Night Lights, USB Chargers, or Both.

For snap switches, dimmers, and control switches, faceplates (, or cover plates) that integrally incorporate night lights Class 2 connections (, USB chargers), charger connections, or both shall comply with all the following:

- 1. Faceplate <u>(or</u> cover plate) assemblies shall be listed.
- 2. During normal operation, night lights and Class 2 connections <u>(, or USB chargers)</u> shall not introduce current to the bonding means or the equipment grounding conductors.
- 3. Electrical power supply connections to night lights and Class 2 connections (, or USB chargers) shall not be connected across the line and load terminals of snap switches, dimmers, and control switches having a marked OFF position.
- 4. Night lights and Class 2 connections (or USB chargers), if relying on spring-tensioned contacts for electrical power, shall comply with the following:
 - 1. They shall not be rated more than 1 watt.
 - They shall be connected to only unpainted or unenameled heads of switch terminal screws made of only copper alloy unless the faceplate <u>(or</u> cover plate) is additionally listed and identified that the spring-tensioned contacts are suitable for connection to unpainted or unenameled heads of terminal screws made of steel.

Second Revision No. 7920-NFPA 70-2024 [Section No. 406.46(C)]

(C) Snap Switch Terminations.

Snap switch terminations shall comply with the following:

- (1) Copper, aluminum, and copper-clad aluminum conductors shall be permitted to terminate at the terminals of snap switches marked CO/ALR.
- (2) Only copper and copper-clad aluminum conductors shall be permitted to be terminated at the terminals of 15-ampere and 20-ampere snap switches not marked CO/ALR.
- (3) Snap switches connected using screwless terminals of conductor push-in type construction (also known as conductor push-in terminals) shall be installed on not greater than 15ampere branch circuits and be connected with 14 AWG solid copper wire only unless listed and marked for other types of conductors.

Informational Note: See UL 20-2018, General-Use Snap Switches, for information regarding screwless terminals of various voltage type constructions employed on snap switches. Screwless terminals of separable-terminal assembly, spring-action clamp, and insulation-displacement type constructions are not classified in UL 20 as screwless terminals of conductor push-in type construction (also known as conductor push-in terminals).

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 14:44:30 EDT 2024

Committee Statement

Committee Statement: This subsection is no longer necessary as result of relocating general use snap switches into section 406 under the new title of "Wiring Devices". Subsection 406.10, in Part 1. General, applies generally to all wiring devices which renders 406.46(C) unnecessary. The current requirements in 406.10 is aligned with the UL 20 standards updates currently in process, which is identical to UL498 requirements.

There is a companion public comment to add Informational Note regarding UL 20 to subsection 406.10.

The two proposals will resolve the correlation concern expressed by the Correlating Committee.

Response SR-7920-NFPA 70-2024

Message:

Public Comment No. 304-NFPA 70-2024 [Section No. 406.46(C)]

Public Comment No. 1213-NFPA 70-2024 [Section No. 406.46(C)]

Second Revision No. 7936-NFPA 70-2024 [Section No. 406.46(F)]

(F) Cord- and-Plug-Connected Loads.

Where snap switches or control devices are used to control cord-and-plug-connected equipment on general-purpose branch circuits, each snap switch or control device controlling receptacle outlets or cord connectors that are supplied by permanently connected cord pendants shall be rated at not less than the rating of the maximum permitted ampere rating or setting of the overcurrent device <u>OCPD</u> protecting the receptacles or cord connectors, as provided in 210.21(B).

Informational Note: See 210.50(A) and 400.10(A)(1) for equivalency to a receptacle outlet of a cord connector that is supplied by a permanently connected cord pendant.

Exception: Where a snap switch or control device is used to control not more than one receptacle on a branch circuit, the switch or control device shall be permitted to be rated at not less than the rating of the receptacle.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 17:06:00 EDT 2024

Committee Statement

CommitteeThe term "overcurrent device" was removed and replaced with the acronymStatement:"OCPD" for consistency.ResponseSR-7936-NFPA 70-2024Message:SR-7936-NFPA 70-2024

Public Comment No. 1658-NFPA 70-2024 [Global Input]



Second Revision No. 7981-NFPA 70-2024 [Section No. 410.3]		
410.3 Reconditioned Equipment.		
Reconditioned luminaires, lampholders, ballasts, LED drivers, lamps, and retrofit kits be installed. If a retrofit kit is installed in a luminaire in accordance with the installatior instructions, the retrofitted luminaire		
(A) Permitted to be Installed. (Reserved)		
(B) Not Permitted to be Installed.		
The following reconditioned equipment shall not be installed:		
(1) <u>Luminaries</u>		
(2) <u>Lampholders</u>		
(3) <u>Ballasts</u>		
(4) <u>LED drivers</u>		
(5) <u>Lamps</u>		
(6) <u>Retrofit kits</u>		
Luminaries equipped with retrofit kits shall not be considered reconditioned luminaries	<u>es .</u>	
Submitter Information Verification		
Committee: NEC-P18		
Submittal Date: Thu Oct 17 19:36:51 EDT 2024		
Committee Statement		
Committee Statement: The NEC does not cover the ability to prohibit "reconditioned" equipment what the NEC can address is the ability to install a reconditioned equipment to a list format to comply with the NEC Style Manual.		
Response SR-7981-NFPA 70-2024 Message:		

Public Comment No. 1450-NFPA 70-2024 [Section No. 410.3]

Public Comment No. 417-NFPA 70-2024 [Section No. 410.3]

Second F	Revision No. 7989-NFPA 70-2024 [Section No. 410.56(C)]
(C) Splice	s and Taps.
No unnecessary splices or taps shall be made within or on a luminaire. Splices <u>Splices</u> and taps shall not be located within luminaire arms or stems.	
ubmitter Info	rmation Verification
Committee:	NEC-P18
Submittal Dat	e: Fri Oct 18 11:09:58 EDT 2024
ommittee Sta	tement
Committee Statement:	Removed "No unnecessary splices or taps shall be made within or on a luminaire" because it is unenforceable and already addressed by product safety standards required for listing.
Response Message:	SR-7989-NFPA 70-2024
Public Comme	ent No. 418-NFPA 70-2024 [Section No. 410.56]



(A) Cord Requirements.

Flexible cord shall be of the hard-service type, having conductors not smaller than the branchcircuit conductors, having ampacity at least equal to the branch-circuit overcurrent device <u>OCPD</u>, and having an equipment grounding conductor.

Informational Note: See Table 250.122(A) for size of equipment grounding conductor.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Thu Oct 17 18:15:13 EDT 2024

Committee Statement

Committee
Statement:The term "overcurrent device" was removed and replaced with the acronym
"OCPD" for consistency.Response
Message:SR-7953-NFPA 70-2024

Second Revision No. 7990-NFPA 70-2024 [Section No. 410.136(B)]

(B) Combustible Low-Density Cellulose Fiberboard.

Where a surface-mounted luminaire containing a ballast, transformer, LED driver, or power supply is to be installed on combustible low-density cellulose fiberboard, it shall be marked for this condition or be spaced not less than 38 mm ($1\frac{1}{2}$ in.) from the surface of the fiberboard. Where such luminaires are partially or wholly recessed, 410.110 through 410.118 shall apply.

Informational Note: See ASTM E84-2023c 2023d, Standard Test Method for Surface Burning Characteristics of Building Materials, or ANSI/UL 723-2018, Standard for Test for Surface Burning Characteristics of Building Materials. Combustible low-density cellulose

fiberboard includes sheets, panels, and tiles that have a density of 320 kg/m³ (20 lb/ft³) or less and are formed of bonded plant fiber material but does not include solid or

laminated wood or fiberboard that has a density in excess of 320 kg/m³ (20 lb/ft³) or is a material that has been integrally treated with fire-retarding chemicals to the degree that the flame spread index in any plane of the material will not exceed 25, determined in accordance with tests for surface burning characteristics of building materials.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Fri Oct 18 11:14:20 EDT 2024

Committee Statement

Committee Statement: Reference standard years are being updated to the latest edition **Response Message:** SR-7990-NFPA 70-2024

Public Comment No. 419-NFPA 70-2024 [Section No. 410.136(B)]



(C) Wired Luminaire Sections.

Wired luminaire sections are paired, with a shall comply with all of the following:

(1) Wired luminaire sections that contain ballast(s) - or , LED driver drivers (s) to supply a light source- or light sources in both. For interconnection between paired units, it shall be permissible to use permitted to be connected together by metric designator

<u>12 (3/8 in trade size</u> $-\frac{3}{8}$) flexible metal conduit $-\frac{1}{10}$ in lengths not exceeding , maximum 7.5 m 5m (25 ft), installed in accordance with Article 348, Part II. Luminaire wire operating at line voltage, supplying only the ballast(s) or LED driver(s) of one of the paired luminaires, shall be permitted in the same raceway as the light source supply wires of the paired luminaires where the voltage rating of the light source supply wires is greater than the line voltage 25 ft) total length.

(2) All conductors shall have an insulation rating equal to at least the maximum circuit voltage applied to any conductor within the enclosure, cable, or raceway.

Supplemental Information

File Name SR-7992 on 410.137 C .docx NEC CMP-18 SR-7992 410.137 C .docx For prod use

Description SR-7992 on 410.137(C) **Approved**

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Fri Oct 18 11:17:01 EDT 2024

Committee Statement

Committee Changed into a list format wording to comply with Section 3.5.1.1 of the NEC Statement: Style Manual.

The language was revised in list item 2 to reflect similar language in 300.5. Response Message: SR-7992-NFPA 70-2024

Public Comment No. 420-NFPA 70-2024 [Section No. 410.137(C)]

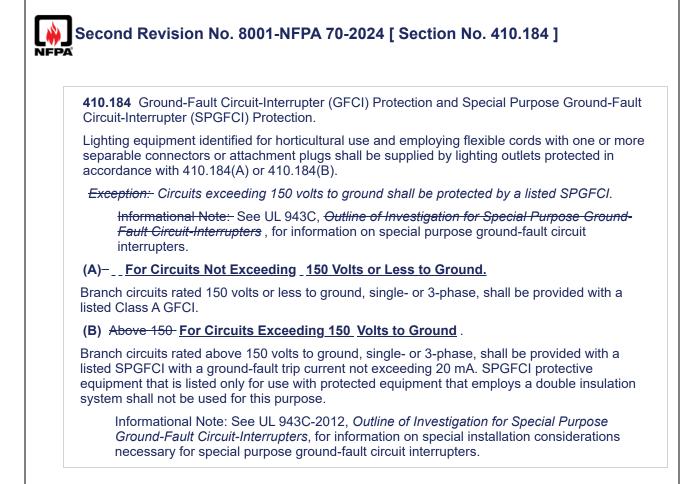
(C) Wired Luminaire Sections.

Wired luminaire sections shall comply with all of the following:

- 1. Wired luminaire sections that contain ballast(s), LED drivers(s) or light sources shall be permitted to be connected together by metric designator 12 (3/8 in trade size) flexible metal conduit, maximum 7.5m (25 ft) total length.
- 2. All conductors shall have an insulation rating equal to at least the maximum circuit voltage applied to any conductor within the enclosure, cable, or raceway.

Second Revision No. 7970-NFPA 70-2024 [Section No. 410.140(A)]		
NFPA		
(A) Listing.		
	narge lighting systems with an open-circuit voltage exceeding 1000 volts shall be talled in conformance with that listing.	
Submitter Inform	nation Verification	
Committee:	NEC-P18	
Submittal Date:	Thu Oct 17 19:08:55 EDT 2024	
Committee State	ement	
Committee Statement:	List item A is being deleted as it has been added to the listing requirements in 410.2. See related resolution to PC 698 (SR 7968)	
Response Message:	SR-7970-NFPA 70-2024	
Public Comment	t No. 421-NFPA 70-2024 [Section No. 410.140(A)]	

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Supplemental Information

File Name NEC_CMP-18_SR-8001_410.184.docx <u>Approved</u>

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Fri Oct 18 11:57:56 EDT 2024

Committee Statement

CommitteeTo comply with Section 3.2.2 of the NEC Style Manual, the headings wereStatement:changed.

Description

Response Message: SR-8001-NFPA 70-2024

Public Comment No. 422-NFPA 70-2024 [Section No. 410.184]

410.184 Ground-Fault Circuit-Interrupter (GFCI) Protection and Special Purpose Ground-Fault Circuit-Interrupter (SPGFCI) Protection.

Lighting equipment identified for horticultural use and employing flexible cords with one or more separable connectors or attachment plugs shall be supplied by lighting outlets protected in accordance with 410.184(A) or 410.184(B).

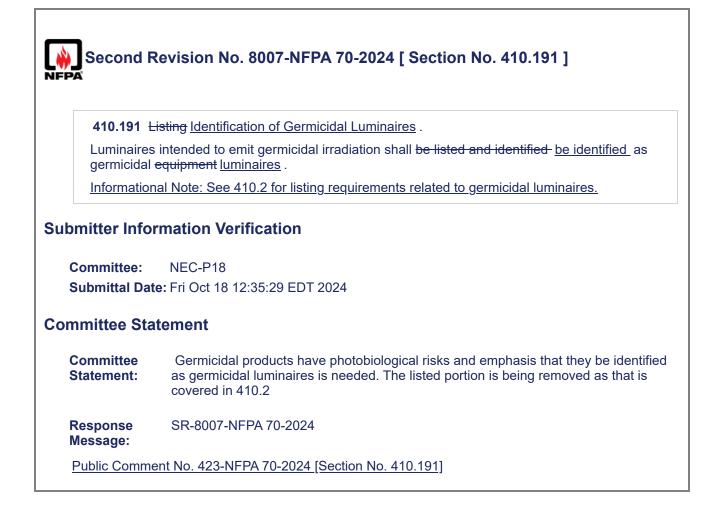
(A) For Circuits Not Exceeding 150 Volts or Less to Ground.

Branch circuits rated 150 volts or less to ground, single- or 3-phase, shall be provided with a listed Class A GFCI.

(B) Above For Circuits Exceeding 150 Volts to Ground.

Branch circuits rated above 150 volts to ground, single- or 3-phase, shall be provided with a listed SPGFCI with a ground-fault trip current not exceeding 20 mA. SPGFCI protective equipment that is listed only for use with protected equipment that employs a double insulation system shall not be used for this purpose.

Informational Note: See UL 943C-2012, *Outline of Investigation for Special Purpose Ground-Fault Circuit-Interrupters*, for information on special installation considerations necessary for special purpose ground-fault circuit interrupters.



	Second Revision N	o. 8048-NFPA	70-2024 [Section No.	411.2]
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411.2 Listing Requirements.

(A) Listed Systems.

The luminaires, power supply, and luminaire fittings- (,_including the exposed bare conductors) of , of a low-voltage lighting system shall be listed for use as part of the same identified lighting system.

(B) Assembly of Listed Parts.

A lighting system assembled from the following listed parts shall be permitted:

- (1) Low-voltage luminaires identified for the use
- (2) Power supply identified for the use
- (3) Low-voltage luminaire fittings identified for the use
- (4) Suitably rated cord or cable <u>Approved flexible cords or cables</u>, or any Chapter 3 wiring method for the secondary circuit

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Fri Oct 18 17:27:32 EDT 2024

Committee Statement

Committee Statement:	Parenthetical expressions have been removed from 411.2 for consistency with the NEC Style Manual Section 3.5.1.1.	
	The vague and unenforceable term "Suitablye" was removed in 411.2(B)(4) and replaced to comply to the NEC Style Manual Section 3.2.1.	
Response Message:	SR-8048-NFPA 70-2024	
Public Comment No. 424-NFPA 70-2024 [Sections 411.2, 411.3]		

Second I	Revision No. 8050-NFPA 70-2024 [Section No. 411.3]
411.3 Re	conditioned Equipment.
<u>(A) Permi</u>	itted to be Installed. (Reserved)
<u>(B) Not P</u>	ermitted to be Installed.
	oned low-voltage lighting systems or a lighting system assembled from reconditioned not be installed <u>permitted</u> .
Supplemental	Information
	File NameDescriptionApproved8_SR-8050_411.3.docx
Submitter Info	ermation Verification
Committee:	NEC-P18
Submittal Da	te: Fri Oct 18 17:37:42 EDT 2024
Committee Sta	atement
Committee Statement:	The text of article 411.3 was modified to "The installation of reconditioned low-voltage lighting systems or a lighting system assembled from reconditioned parts shall not be permitted" to align with recommended wording and list structure regarding reconditioning.
Response Message:	SR-8050-NFPA 70-2024
Public Comm	ent No. 1452-NFPA 70-2024 [Section No. 411.3]

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411.4 Low-Voltage Lighting Systems.

Low-voltage lighting systems shall consist of an isolating power supply, low-voltage luminaires, and associated equipment that are all identified for the use.- The output circuits of the power supply shall be rated for 25 amperes maximum under all load conditions.

(A) Power Supply Limitation.

The output circuits of the power supply shall be rated for 25 amperes maximum under all load conditions.

(B) Voltage Limitations.

The operating voltage of low-voltage lighting systems and their associated components shall not exceed 30 volts ac or 60 volts dc. If wet contact is likely to occur, the operating voltage of low-voltage lighting systems and their associated components shall not exceed 15 volts ac or 30 volts dc.

Informational Note: See 680.1 for swimming pools, fountains, and similar installations.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Fri Oct 18 17:41:53 EDT 2024

Committee Statement

Committee
Statement:The duplicate wording "The output circuits of the power supply shall be rated for 25
amperes maximum under all load conditions." in section 411.4 was removed because
it is stated in the 411.4(A).

Response SR-8052-NFPA 70-2024

Message:

Public Comment No. 425-NFPA 70-2024 [Section No. 411.4]

Second Revision No. 8054-NFPA 70-2024 [Section No. 411.8]

411.8 Branch Circuit.

Lighting systems covered by this article shall

(A) Lighting Systems Supplied by Class 2 Power Sources.

Conductors and equipment supplying Class 2 power source shall comply with 725.127.

(B) Lighting Systems Supplied by Other than Class 2 Power Sources.

Other than Class 2 power sources shall be supplied from a maximum 20-ampere branch circuit.

Supplemental Information

File Name SR-8054 on 411.8.docx NEC CMP-18 SR-8054 411.8.docx

Description SR-8054 on 411.8 For prod use

Approved

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Fri Oct 18 17:45:35 EDT 2024

Committee Statement

Committee Section 411.8 was revised to address the option of a low-voltage lighting systems to Statement: be supplied by a Class 2 power source installed in accordance with 725.127. SR-8054-NFPA 70-2024 Response Message:

Public Comment No. 1800-NFPA 70-2024 [Section No. 411.8]



(B) Visibility.

Listing labels and markings that identify the input voltage and current rating shall be visible after installation and be permanently applied in a location visible prior to servicing. The marking shall be permitted to be installed in permitted in a location not viewed by the public.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Fri Oct 18 16:11:05 EDT 2024

Committee Statement

Committee Statement:	The redundant text "to be installed" does not conform to sections 3.1.1, 3.1.2, and 3.5.1.1 of the NEC Style Manual.
Response Message:	SR-8027-NFPA 70-2024

Second Revision No. 8032-NFPA 70-2024 [Section No. 600.5(D)(1)]

(1) Supply.

The wiring method used to supply signs and outline lighting systems shall terminate within a sign, an outline lighting system enclosure, a suitable box, a conduit body, or an enclosed \underline{a} panelboard.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Fri Oct 18 16:28:17 EDT 2024

Committee Statement

Committee
Statement:The term enclosed panelboard has been removed from Article 100. Additionally the
term panelboard is more accurate to the rest of the requirement.Response
Message:SR-8032-NFPA 70-2024

Public Comment No. 1637-NFPA 70-2024 [Section No. 600.5(D)(1)]

(A) Location. [SEE ATTACHED]

The disconnecting means shall be accessible and located in accordance with 600.6(A)(1), 600.6(A)(2), or 600.6(A)(3). If the disconnecting means is remote from the sign it controls, it shall comply with 600.6(A)(4).

(1) At Point of Entry to a Sign.

The disconnect shall be located at the point the feeder circuit or branch circuits supplying a sign or outline lighting system enters a sign enclosure, a sign body, or a pole in accordance with 600.5(D)(3). The disconnect shall open all ungrounded conductors where it enters the enclosure of the sign or pole.

Exception No. 1: A disconnect shall not be required for branch circuits or feeder conductors passing through the sign where not accessible and enclosed in a Chapter 3 listed raceway or metal-jacketed cable identified for the location.

Exception No. 2: A disconnect shall not be required at the point of entry to a sign enclosure or sign body for branch circuits or feeder conductors that supply an internal panelboard in a sign enclosure or sign body. The conductors shall be enclosed where not accessible in a Chapter 3 listed raceway or metal-jacketed cable identified for the location. A field-applied permanent hazard label that is visible during servicing shall be applied to the raceway at or near the point of entry into the sign enclosure or sign body. The danger label shall state the following: "Danger. This raceway contains energized conductors." The marking shall include the location of the disconnecting means for the energized conductors. The disconnecting means shall be capable of being locked in the open position.

(2) Within Sight of the Sign.

The disconnecting means shall be within sight of the sign or outline lighting system that it controls. Where the disconnecting means is out of the line of sight from any section that is able to be energized, the disconnecting means shall be lockable open in accordance with 110.25. A permanent field-applied marking identifying the location of the disconnecting means shall be applied to the sign in a location visible during servicing.

(3) Within Sight of the Controller.

The following shall apply for signs or outline lighting systems operated by electronic or electromechanical controllers located external to the sign or outline lighting system:

- (1) The disconnecting means shall be located within sight of the controller or in the same enclosure with the controller.
- (2) The disconnecting means shall disconnect the sign or outline lighting system and the controller from all ungrounded supply conductors.
- (3) The disconnecting means shall be designed such that no pole can be operated independently and shall be lockable open in accordance with 110.25.

Exception: Where the disconnecting means is not located within sight of the controller, a permanent field-applied marking identifying the location of the disconnecting means shall be applied to the controller in a location visible during servicing.

(4) Remote Location.

The disconnecting means, if located remote from the sign, sign body, or pole, shall be mounted at an accessible location available to first responders and service personnel. The location of the disconnect shall be marked with a label at the sign location and marked as the disconnect for the sign or outline lighting system.

Supplemental Information

SR-8033_on_6	<u>File Name</u> 00.6_A_1docx _SR-8033_600.6_Adocx	Description SR-8033 on 600.6(A)(1) For prod use	<u>Approved</u>
Submitter Inforr	nation Verification		
Committee: Submittal Date Committee State	NEC-P18 : Fri Oct 18 16:35:00 EDT 202 ement	24	
Committee Statement:	The language is revised consistent with other parts	to comply with the NEC Style I s of this Code.	Manual (3.5.1.1) and to be
Response Message:	SR-8033-NFPA 70-2024		
Public Comment No. 427-NFPA 70-2024 [Section No. 600.6(A)]			

(1) At Point of Entry to a Sign.

The disconnect shall be located at the point the feeder circuit or branch circuits supplying a sign or outline lighting system enters a sign enclosure, a sign body, or a pole in accordance with 600.5(D)(3). The disconnect shall open all ungrounded conductors where it enters the enclosure of the sign or pole.

Exception No. 1: A disconnect shall not be required for branch circuits or feeder conductors passing through the sign where not accessible and enclosed in a Chapter 3 listed raceway or metal-jacketed cable identified for the location.

Exception No. 2: A disconnect shall not be required at the point of entry to a sign enclosure or sign body for branch circuits or feeder conductors that supply an internal panelboard in a sign enclosure or sign body <u>if the installation</u> <u>meets all the following:</u>-

- 1. <u>TIf accessible, the conductors shall be protected from physical damage by being enclosed where not accessible in an approvedChapter 3 listed_raceway or_other approved meansmetal-jacketed cable identified for the location.</u>
- 2. A field-applied permanent hazard label, meeting the requirements of 110.21(B)-that is and visible during servicing shall be applied to the raceway at or near <u>from</u> the point of entry into the sign enclosure or sign body <u>during servicing</u>, shall be applied to the raceway or cable. The danger label shall state the following: "Danger. This raceway contains energized conductors,", <u>and</u> <u>The marking</u> shall include the location of the disconnecting means <u>required by 600.6</u>. for the energized conductors.
 - 3. The disconnecting means <u>required by 600.6</u> shall-<u>meet the requirements of 110.25</u>be capable of being locked in the open position.

	evision No. 8026-NFPA 70-2024 [Section No. 600.41(A)]
(A) Design.	
	nd design of the tubing shall not cause a continuous overcurrent <u>overload</u> beyond ading of the transformer or electronic power supply.
Submitter Inforn Committee:	NEC-P18
Submittal Date:	: Fri Oct 18 16:05:57 EDT 2024
Committee State	ent
Committee Statement:	The term overload has been used as that is consistent with the defined term based on the way it is used here.
	SR-8026-NFPA 70-2024

Second Re	evision No. 8028-NFPA 70-2024 [Section No. 600.42(H)(1)]		
(1) Dry Loc	ations.		
	Electrode enclosures that are listed, labeled, and identified for use in dry, damp, or wet locations shall be permitted to be installed and used in permitted in such locations.		
Submitter Inform	nation Verification		
Committee:	NEC-P18		
Submittal Date	: Fri Oct 18 16:13:25 EDT 2024		
Committee State	ement		
Committee Statement:	The redundant text "to be installed" does not conform to sections 3.1.1, 3.1.2, and 3.5.1.1 of the NEC Style Manual.		
Response Message:	SR-8028-NFPA 70-2024		



(2) Damp and or Wet Locations.

Electrode enclosures installed in damp and <u>or</u> wet locations shall be specifically listed, labeled, and identified for use in such locations.

Informational Note: See 110.3(B) covering installation and use of electrical equipment.

Submitter Information Verification

Committee: NEC-P18 Submittal Date: Fri Oct 18 16:14:42 EDT 2024

Committee Statement

Committee Statement:	The correct terminology is "or" not "and" as it can be either condition and its not required to be both.
Response Message:	SR-8029-NFPA 70-2024

Second Revision No. 8077-NFPA 70-2024 [Section No. 605.5]	
605.5 Offic	e Furnishing Interconnections.
use with off	al connection between office furnishings shall be a flexible assembly identified for ice furnishings or shall be permitted to be installed using flexible cord, provided that ving conditions are met:
	rd is extra-hard usage type with 12 AWG or larger conductors, with an insulated nent grounding conductor.
(2) The off	ice furnishings are mechanically contiguous.
	rd is not longer than necessary for maximum positioning of the office furnishing but case to exceed 600 mm (2 ft).
(4) The co	rd is terminated at an attachment plug-and-cord connector with strain relief.
Submitter Information Verification Committee: NEC-P18 Submittal Date: Fri Oct 18 19:50:49 EDT 2024	
Committee Statement	
Committee Statement:	he redundant text "to be installed" does not conform to sections 3.1.1, 3.1.2, and 3.5.1.1 of the NEC Style Manual and was removed.
Response Message:	SR-8077-NFPA 70-2024