

# Welcome Iowa Electricians!

## What Does Iowa Require?

### 18-Hours of Continuing Education Required

- The Iowa electrician must complete no less than 18 Continuing Education Units (CEUs) in each three-year license cycle.
- No less than 6 of those 18 CEUs must focus on the most recent Iowa electrical code.
- JADE Learning's two-hour VILT sessions satisfy ALL of Iowa's requirements for electrical continuing education.
- **9 VILT sessions provides you all 18 hours.**



1

## 2023 NEC Changes

Important Changes from the 2023 NEC

6:00 PM Eastern Time

← 5 PM in Iowa

5:45 PM – 6:00 PM Eastern	Registration / Check In
6:00 PM – 7:00 PM Eastern	NEC Chapter 3 <i>with poll questions</i>
7:00 PM – 7:10 PM Eastern	<b>Break</b>
7:10 PM – 8:00 PM Eastern	NEC Chapter 3 <i>continued with poll questions</i>
8:00 PM Eastern	Questions for the instructor?

2

# Article 300

## General Requirements for Wiring Methods and Materials

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3

### 300.4(E) Cables, Raceways, or Boxes Installed in or Under Metal-Corrugated Roof Decking

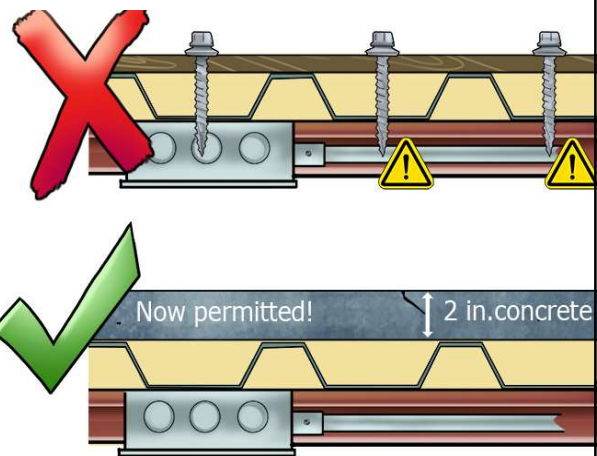
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**2023 NEC** adds *listed steel or malleable iron fittings and boxes* to Exception No. 1.

- It now reads: **Rigid metal conduit and intermediate metal conduit, with listed steel or malleable iron fittings, shall not be required to comply with 300.4(E)**

**2023 NEC** also adds Exception No. 2:

- It reads—**The 38mm (1½ in.) spacing is not required where metal-corrugated sheet roof decking is covered with a minimum thickness 50mm (2in) concrete slab, measured from the top of the corrugated roofing.**



2023 NEC Changes

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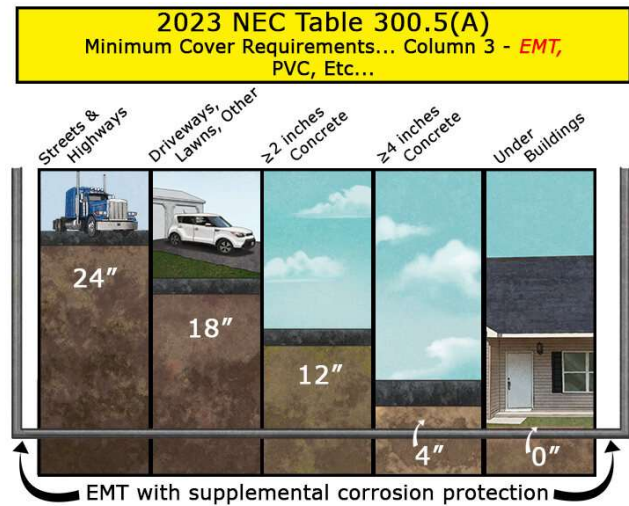
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## Table 300.5(A) Minimum Cover Requirements

**2023 NEC** includes a few changes for Table 300.5 (The burial depth Table)

- The title changed from 0 to 1000 volts to **0 to 1000 volts ac, 1500 volts dc**
- Column 3 now applies to **Electrical Metallic tubing (EMT)**, which was not included in the 2020 NEC
- Note No. 6 is new, which states: **Directly buried electric metallic tubing (EMT) shall comply with 358.10**

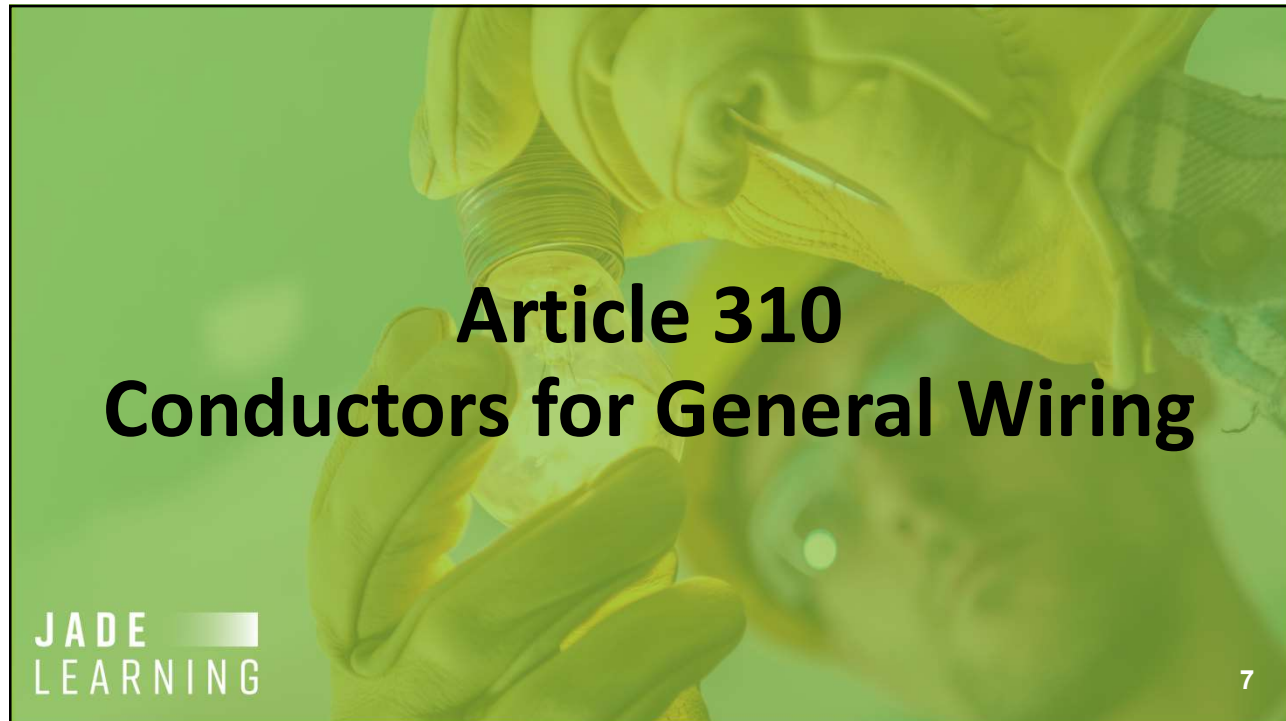
2023 NEC Changes



5

**BE AWARE**  
**In 2023 NEC, there is a new Article**  
**Article 305**  
**General Requirements for Wiring Methods and**  
**Materials for Systems Rated OVER 1000 Volts AC,**  
**1500 Volts DC, Nominal**

6



7

## 310.15(B)(2) Rooftop

- Section 310.15(B)(2) is included in **Part III, Installation**, of Article 310.
- Ambient Temperature Correction Factors for Rooftops have CHANGED in 2023 NEC.
- **In 2020 NEC**, for raceways or cables exposed to direct sunlight, the required distance from the roof surface to the bottom of the raceway or cable was 7/8 in.
- **In 2023 NEC**, the required distance from the surface of the roof to the bottom of the raceway has changed to 3/4 in!

**3/4 in.**

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# Article 312

## Cabinets, Cutout Boxes, and Meter Socket Enclosures

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9

### 312.10 Screws or Other Fasteners

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The **2023 NEC** now gives the following three new requirements for screws or fasteners installed in the field (through boxes and enclosures and such) where they enter the wiring space.

1. Screws shall be machine type with blunt ends.
2. Other fasteners shall have blunt ends.
3. Screws or other fasteners shall extend into the enclosure no more than 6mm (1/4 in) unless the end is protected with an approved means. [or not more than 7/16 in if located within 3/8 in. of another enclosure wall (in the corner of a box).



**1/4" maximum length.**  
Exception: Not more than 7/16" if located within 3/8" of the enclosure wall.

2023 NEC Changes

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10

# Article 314

## Outlet, Device, Pull, and Junction Boxes; Conduit Bodies; Fittings; and Handhold Enclosures

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11

11

### 314.27(E) Weight-Supporting Ceiling Receptacle and Weight-Supporting Attachment Fitting

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In 2023 NEC, Section 314.27(E) was retitled due to the added terms: **Weight-Supported Ceiling Receptacle (WSCR)** and **Weight-Supporting Attachment Fitting (WSAF)**.

In 2023 NEC, Section 314.27(E) added this new rule:

**Listed WSCR used in combination with compatible WSAF shall be permitted to be installed in outlet boxes for the sole support of ceiling-suspended (paddle) fans, in accordance with 314.27(C)**

Outlet Boxes comply with 314.27

Ceiling Fan installations comply with 314.27(C)

2023 NEC Changes

12

## 314.29(B) Underground

Regarding identifying buried electrical boxes, the *Exception* to Section 314.29(B) has changed!

In **2020 NEC**, the *Exception* allowed for boxes in the ground to be covered over if their location was effectively **identified** and accessible.

In **2023 NEC** the *Exception* allows boxes in the ground to be covered over if their location is effectively **described** and accessible. That location description must be available to those authorized to access, maintain, or inspect the wiring.

- The description can be in the form of a map and/or written description.
- This does not mean the method for covering the box has changed, it still allows for only gravel, light aggregate, or noncohesive granulated soil.



**2023 NEC Changes**

13

# Article 334

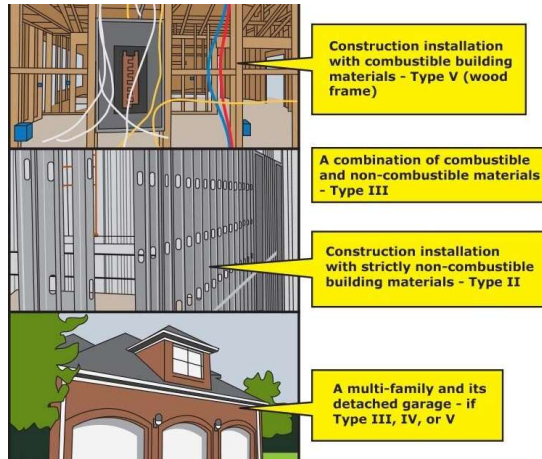
## Nonmetallic-Sheathed Cable: Types NM and NMC

14

## 334.10 Uses Permitted

NEC 334.10 covers uses permitted for nonmetallic-sheathed cable (aka Romex).

In **2023 NEC**, Section 334.10(2) adds **multi-family dwelling-unit detached garages** as a structure allowed to use Types III, IV, and V Construction.



2023 NEC Changes

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15

## 334.12 Uses Not Permitted

In the 2023 NEC, the only change to section 334.12 is for item (A)(5), the referenced section changes from 518.4(B) to (C), to remain consistent with other changes.



2023 NEC Changes

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16



## 334.40(B) Boxes and Fittings

NEC 334 addresses nonmetallic-sheathed cable (aka Romex).

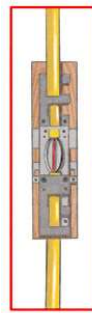
The **2023 NEC** revises requirements for where Romex interconnectors can be used.

**No longer does the installation need to be a part of repair wiring for the installer to use an interconnector to join two NM cables in a concealed space**

- **They are now approved for use within a wall, floor, or ceiling**

In **2023 NEC**, the only requirement for the use of an interconnector is that the interconnector is **listed for use without a box**.

Interconnector  
Concealed



OK!



2023 NEC Changes

17

## Article 337 Type P Cable

18

# Article 352

## Rigid Polyvinyl Chloride Conduit

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19

19

### 352.10 Uses Permitted

NEC 352 addresses Polyvinyl Chloride Conduit (PVC).

Section 352.10 **in the 2023 NEC** adds two new sections:

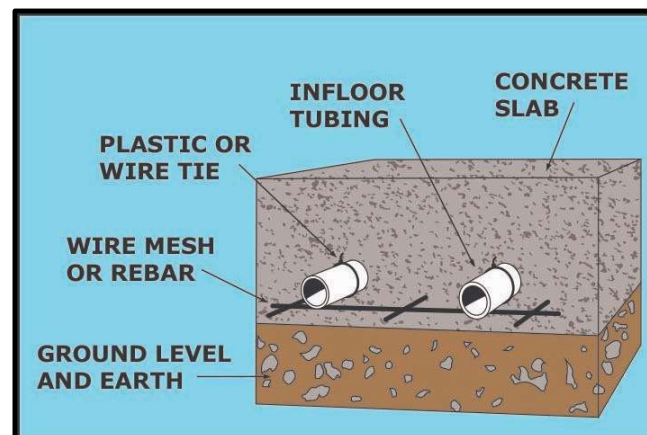
#### 352.10(B) Encased in Concrete:

- **PVC Conduit shall be permitted to be encased in concrete.**

#### 352.10(K) Physical Damage

- **Where subject to physical damage, Schedule 80 PVC Conduit, Schedule 80 PVC elbows, and listed fittings for PVC conduit shall be used.**

An included informational note says that all listed PVC fittings are suited for both Schedule 40 and Schedule 80 PVC uses.



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2023 NEC Changes

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## 352.44 Expansion Fittings

NEC 352 addresses Polyvinyl Chloride Conduit (PVC).

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In **2020 NEC**, Section 352.44 contained no subsections.

In **2023 NEC**, 352.44 has expanded to include:

- **352.44(1) Thermal Expansion and Contraction**, which includes the original text from 2020 NEC.
- **352.44(2) Earth Movement**, which is all NEW and requires the following:

*Expansion fittings for underground runs of direct buried PVC conduit emerging from the ground shall be provided above grade when required to compensate for earth settling or movement, including frost heave.*

Also includes an *Informational Note* to see 300.5(J)

2023 NEC Changes

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21

# Article 369

## Insulated Bus Pipe (IBP)/ Tubular Covered Conductors (TCC) Systems

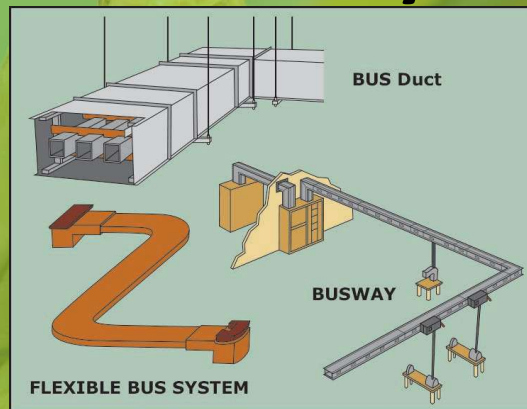


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22

# Article 371 Flexible Bus Systems



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23

23

## THANK YOU FOR ATTENDING!

Questions?

For additional instructor support, please contact  
[instructor@jadelearning.com](mailto:instructor@jadelearning.com)

For questions about your continuing education, please  
contact [registrar@jadelearning.com](mailto:registrar@jadelearning.com)

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24

24