

FBC ADVANCED COURSE # 1296.0

***TEMPORARY WIRING INSTALLATIONS
for Construction Type Activities (Advanced)
- simplified***

**National Code Seminars – Provider
Steven J. Owen - Instructor**

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**#1 – Related to Outline/Timeline
Question #1**

**TEMPORARY WIRING
INSTALLATIONS for Construction
Type Activities (Advanced) - simplified**

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Article 590 Temporary Installations

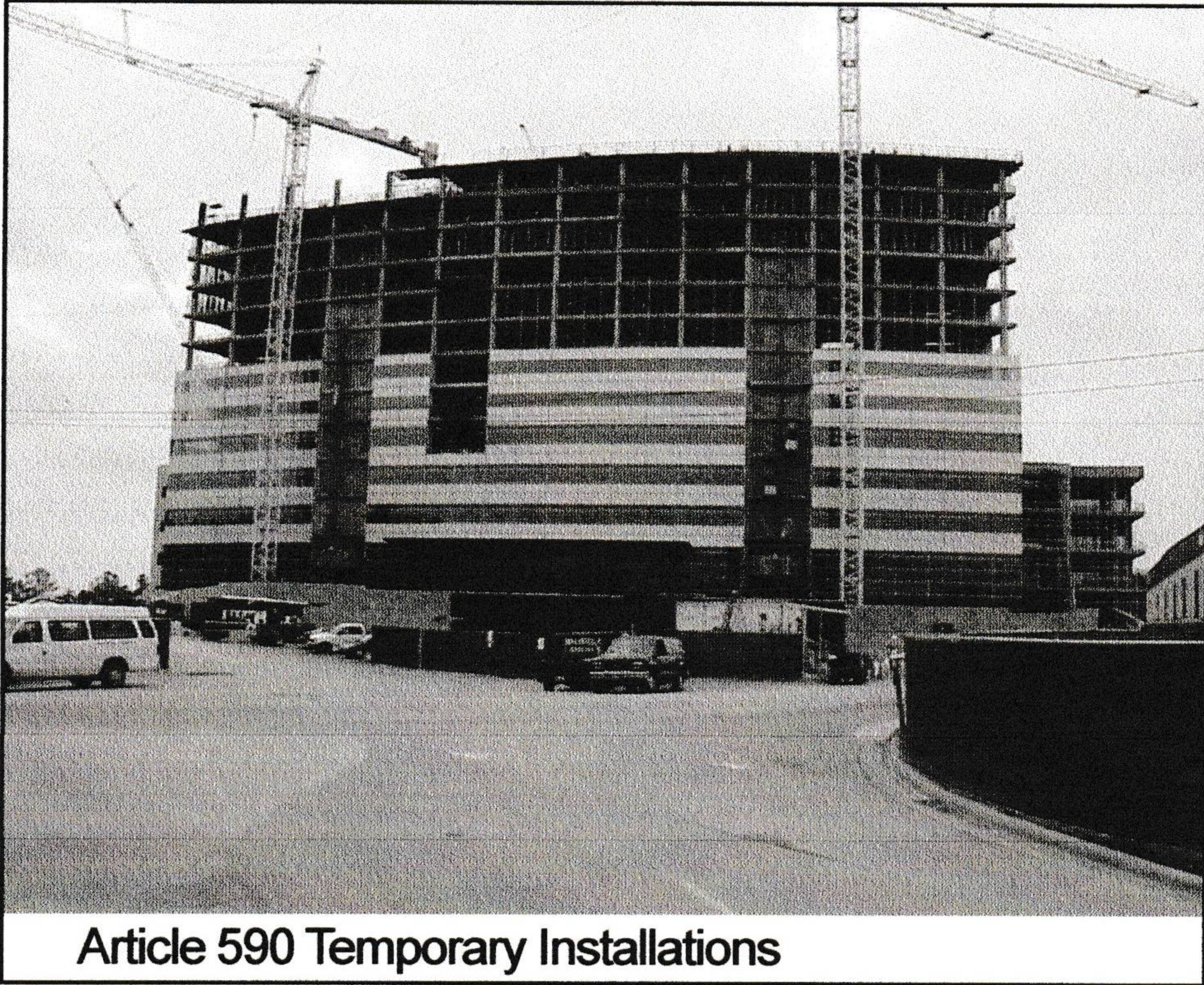
From 590.6 (and 590.3(A)) ... **these sections shall apply to temporary wiring installations used to supply temporary power to equipment used by personnel during remodeling, maintenance, repair, or demolition of buildings, structures, equipment or similar activities.** (The “when and where”).

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Article 590 Temporary Installations

FYI: trying to inform users that **temporary wiring methods used to supply temporary power to equipment used by personnel during remodeling, maintenance, repair, or demolition of buildings, structures, equipment or similar activities is not a place for taking “shortcuts”** . There is a misconception that for expediency, cost and time savings installers may use wiring methods of a class less than would normally be acceptable. This is **NOT** the case and is **NOT** acceptable in accordance with the *National Electrical Code*. Section 590.2(A) of the *National Electrical Code* makes the very clear.

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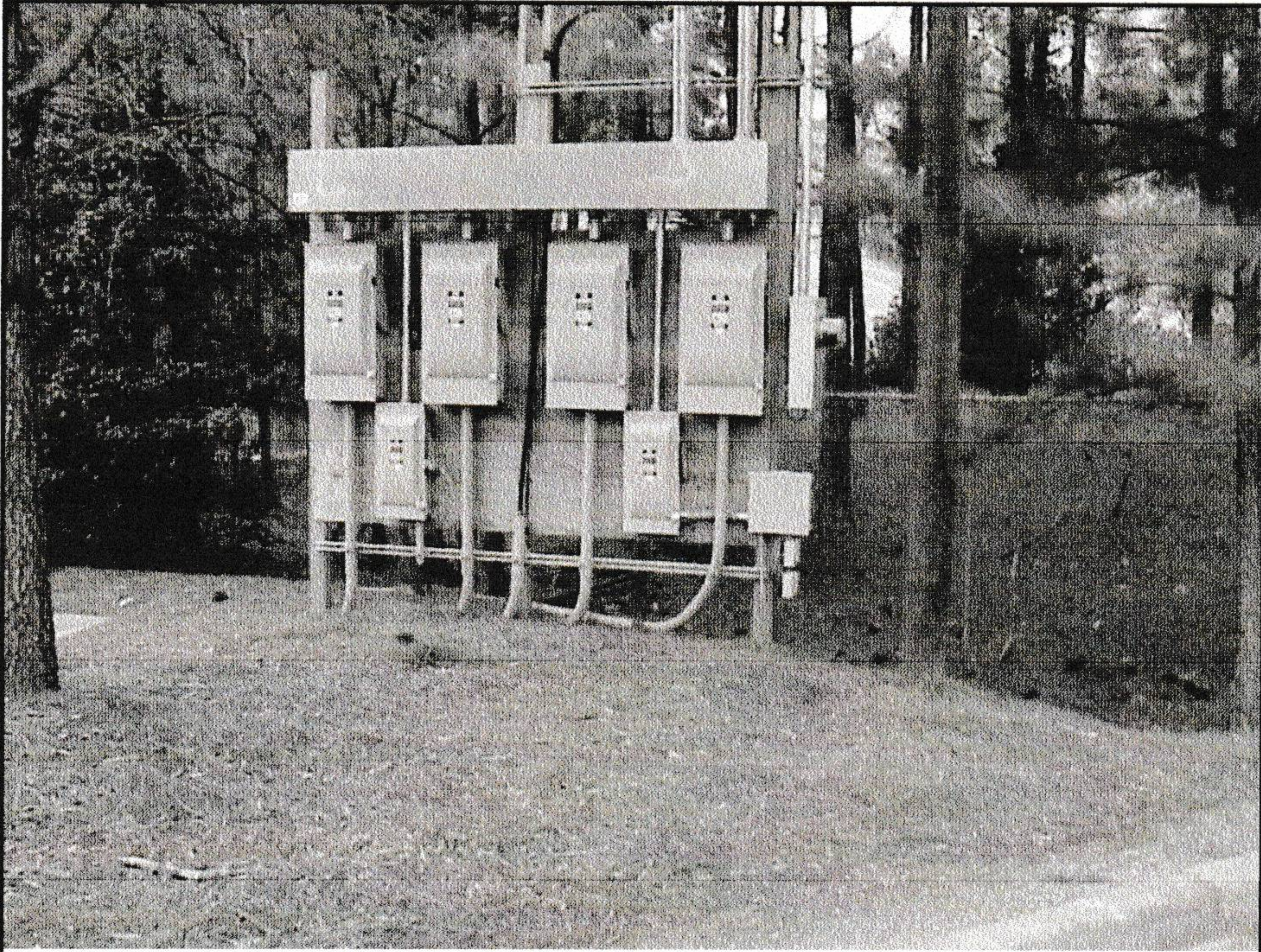
Article 590 Temporary Installations

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The preceding picture is the start of what is now Grandview Medical Center, Birmingham, AL . The following picture is the temporary power for the construction trailers for Grandview Medical Center.

Note that the temporary wiring for the construction trailers is done correctly.

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Article 590 Temporary Installations

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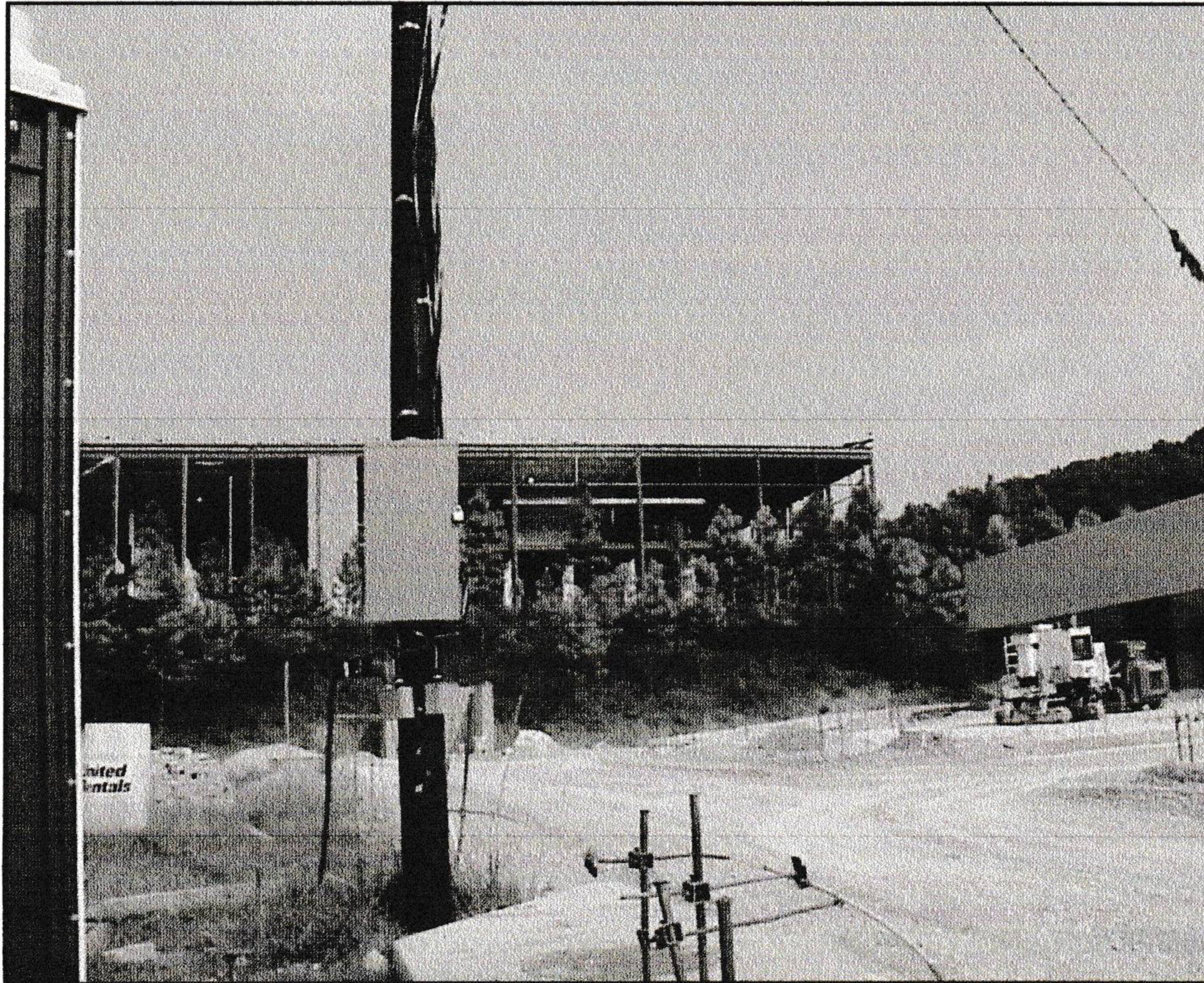


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Article 590 Temporary Installations

- FYI: The following pictures are violations of Section 590.2(A).
- Section 590.2(A) Other Articles.
- **Except as specifically modified in this article, all other requirements of this Code for permanent wiring shall apply to temporary wiring installations.**
- These “shortcuts” are unsafe and unacceptable.

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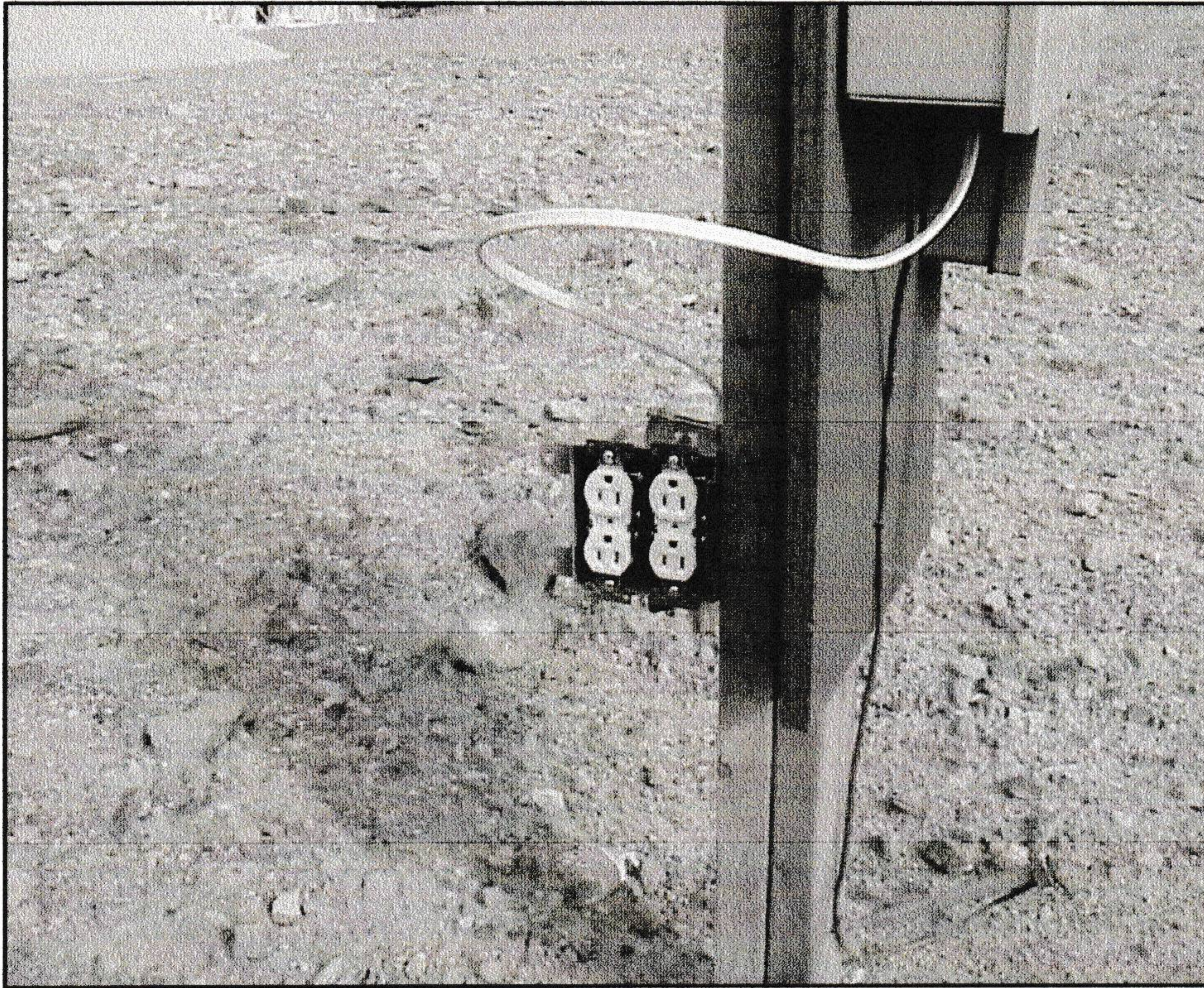
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2 – Related to Outline/Timeline Question #2

**TEMPORARY WIRING
INSTALLATIONS for Construction
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Article 590
Temporary Installations

***THE MOST BASIC RULE
OF TEMPORARY WIRING
INSTALLATIONS ...***

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Article 590
Temporary Installations

- Section 590.2(A) Other Articles.
- ***Except as specifically modified in this article, all other requirements of this Code for permanent wiring shall apply to temporary wiring installations.***

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Article 590 Temporary Installations

- Section 590.2(A) Other Articles.
- **FYI - NO SHORTCUTS !!!!!**
- **Do it correctly or RE-DO it.**

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Article 590 Temporary Installations

- **Section 590.3 Time Constraints .**
- **(A) During the Period of Construction.**
- **(B) 90 Days.**
- **(C) Emergencies and Tests – no time constraints.**
- **(D) Removal.**

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Article 590 Temporary Installations

- **Section 590.3 Time Constraints .**
- **(A) During the Period of Construction.**

- There is ***NO TIME LIMIT*** for temporary wiring Installations.

- FYI: However ... on any given day or any given time the temporary wiring installation needs to be in a safe *Code-compliant* electrical condition.

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Article 590 Temporary Installations

- **Section 590.3(B) 90 Days**
-
- FYI – The 90 day rule applies **ONLY** to temporary wiring Installations for holiday decorative lighting and similar purposes.

- This is a very common misconception. Many people think this rule is for all temporary wiring installations.
- As you can see it is not.

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Article 590 Temporary Installations

- **Section 590.3 Time Constraints.**
- **(D) Removal**

Temporary wiring shall be removed *immediately* upon completion of construction or purpose for which the wiring was installed.

Don't wait. Reduce your liability. Remove it! Leave it and let someone be injured by it and you may be answering questions as to why you left that "attractive nuisance" unremoved, unattended and not left in a safe condition.

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Article 590 Temporary Installations

- **Section 590.4 General.**
- **(A) Services** must be installed like any other permanently installed service. No shortcuts, no flexible wiring methods (such as (B) and (C) below).
- **(B) Feeders** may use type SE, NMC, NM or other cables per Article 400, ONLY per their listing instructions. These are all non-metallic wiring methods.
- **(C) Branch Circuits** may use SE, NMC, NM or other cables per Article 400, ONLY per their listing instructions. These are all non-metallic wiring methods.

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Article 590 Temporary Installations

- **Section 590.4 General.**
- **(D) Receptacles.** Shall be of the grounding type and properly grounded. If the receptacles are 15-, 20-, or 30-ampere receptacle outlets they must be GFCI protected.
- **(E) Disconnecting Means.** Shall be suitable for the application.
- **(F) Lamp Protection.** All lamps for general illumination shall be protected from accidental damage or breakage.

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Article 590 Temporary Installations

- Section 590.6
- Ground-Fault Protection for Personnel
(A) Receptacle Outlets
- All 125-volt, single-phase, 15-, 20-, and 30-ampere receptacle outlets ... **require GFCI protection for personnel.**
- Only one exception.
- FYI – PLAN ON GFCI PROTECTION. Circuit breakers or GFCI receptacle outlets.

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3 – Related to Outline/Timeline Question #3

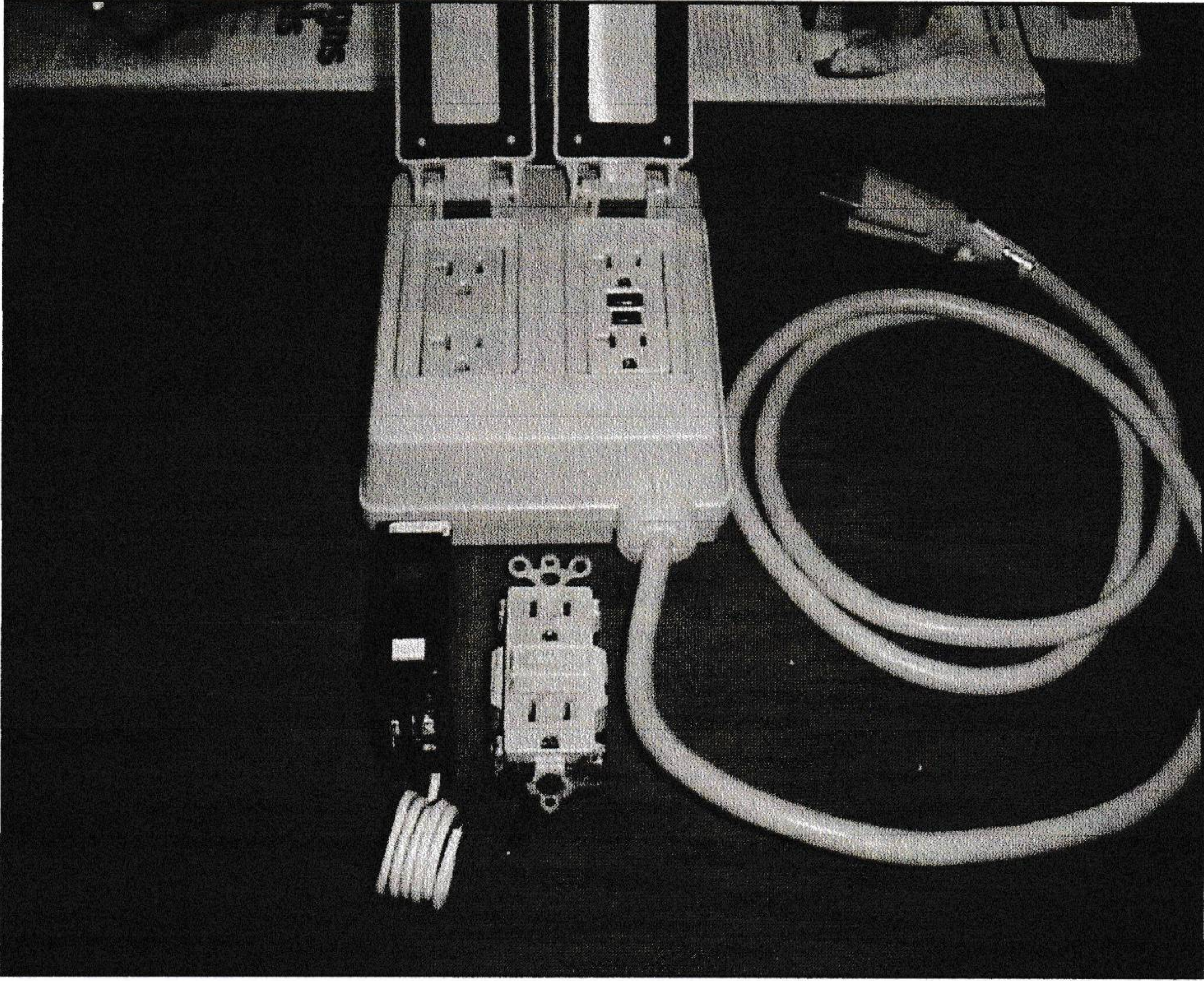
TEMPORARY WIRING INSTALLATIONS for Construction Type Activities (Advanced) - simplified

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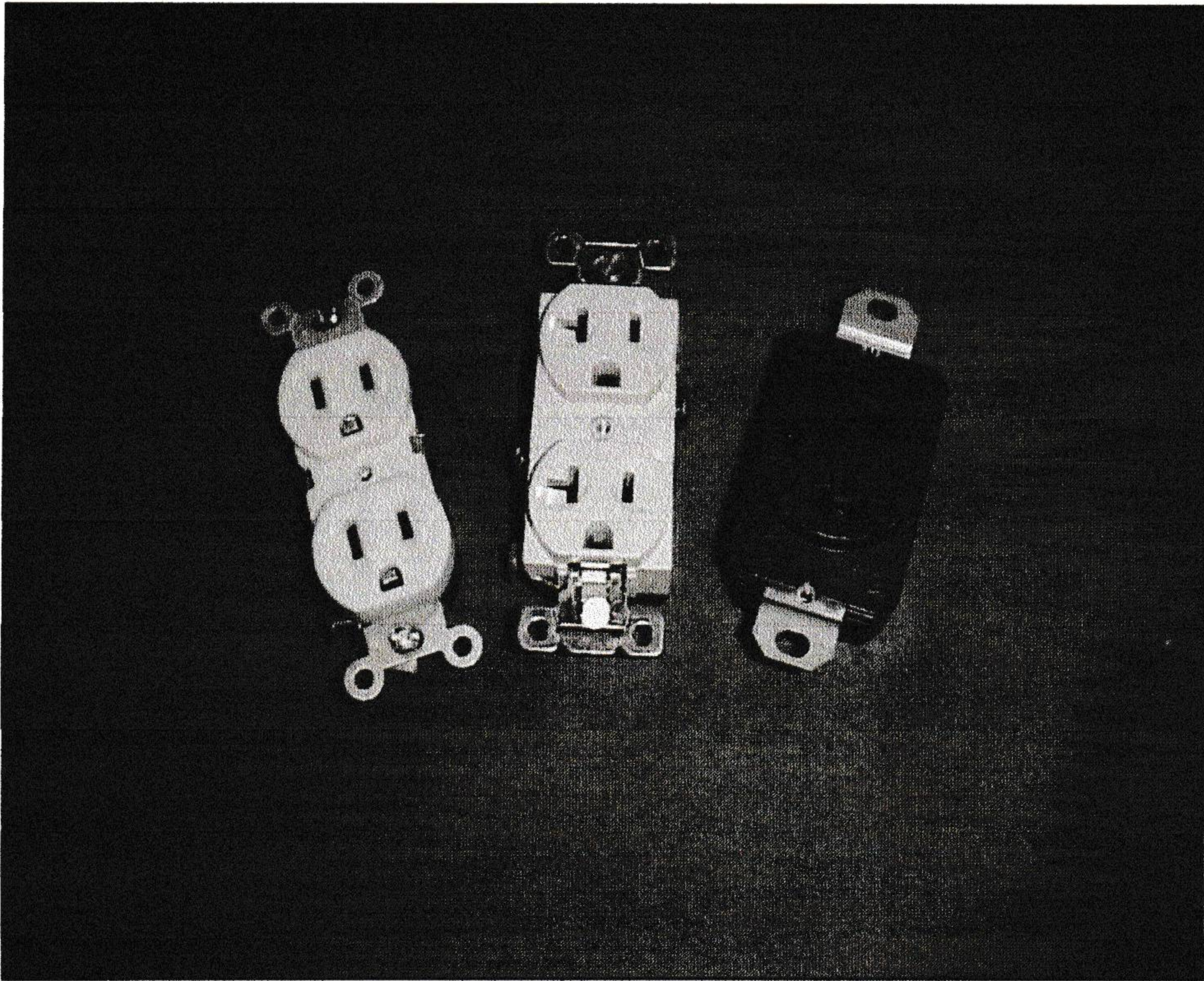
Article 590 Temporary Installations

- Section 590.6(A) GFCI for Personnel.
-
- IT IS YOUR CHOICE.
- (1) GFCI Circuit Breaker(s) or
- (2) GFCI Receptacle(s) or
- (3) Cords or cord sets incorporating listed GFCI protection for personnel, identified for portable use.
- See the following examples.

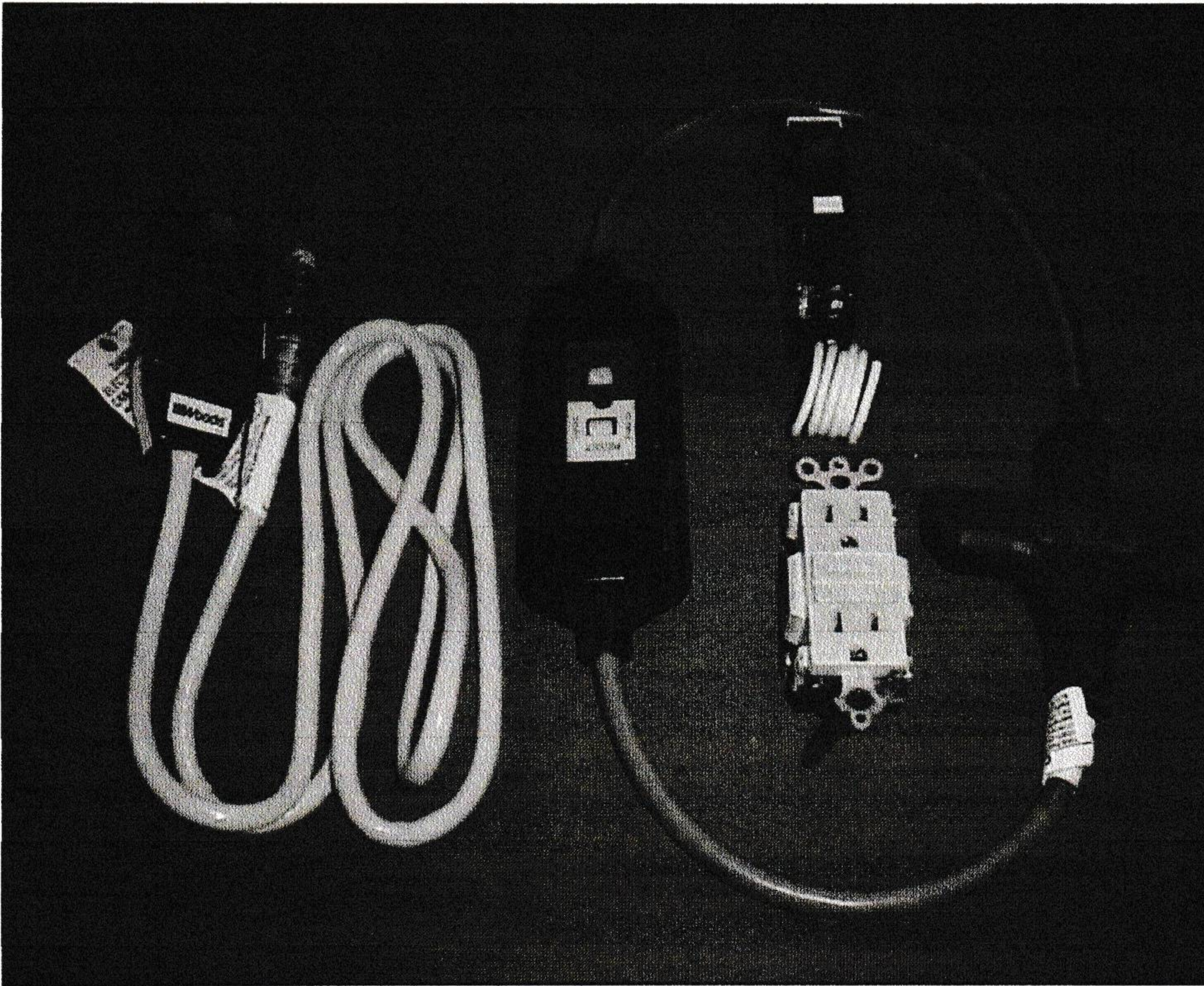
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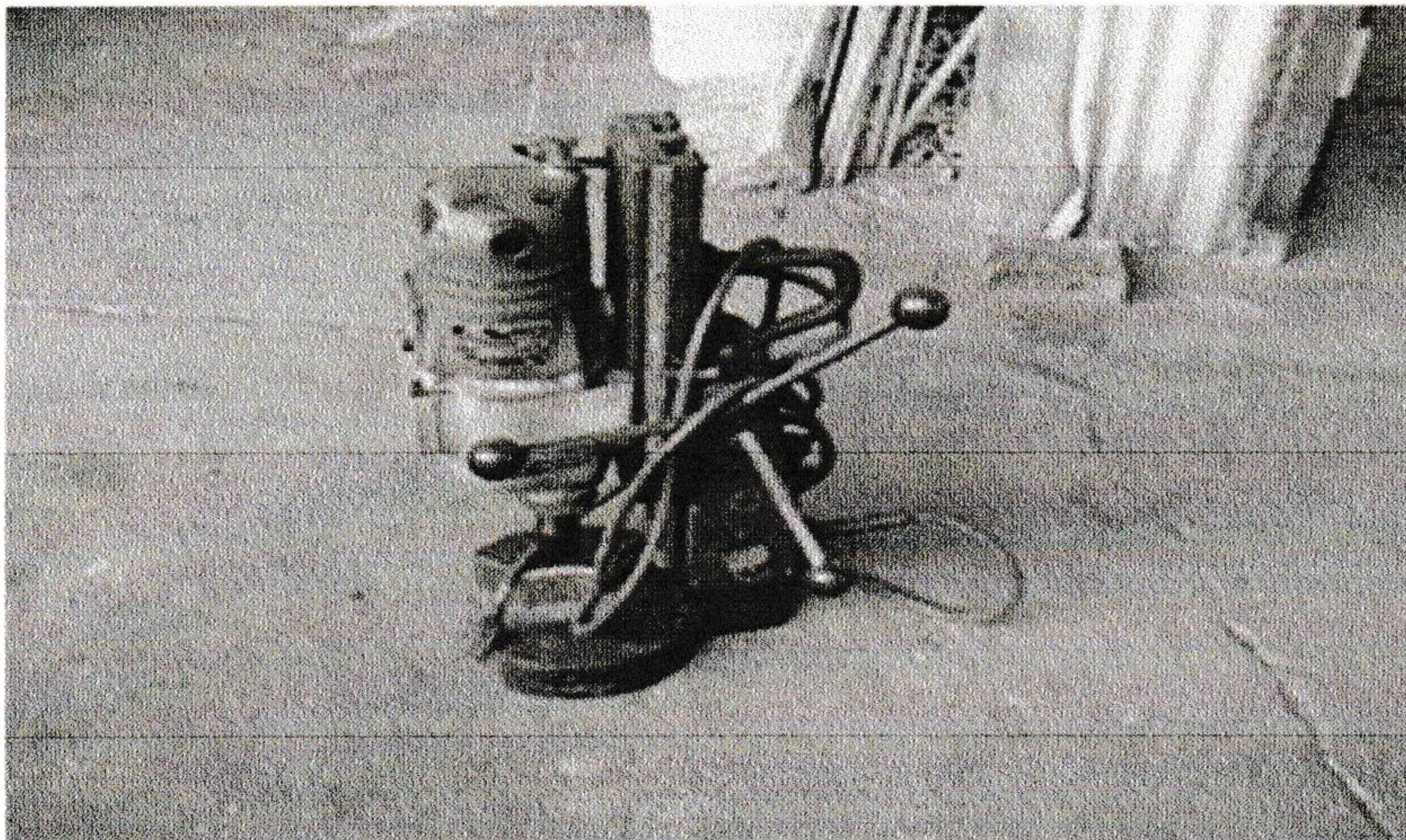


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**590.6(A) Exception; Magnetic Drill Power Interruption
Creating a Greater Hazard – does NOT require GFCI
protection.**



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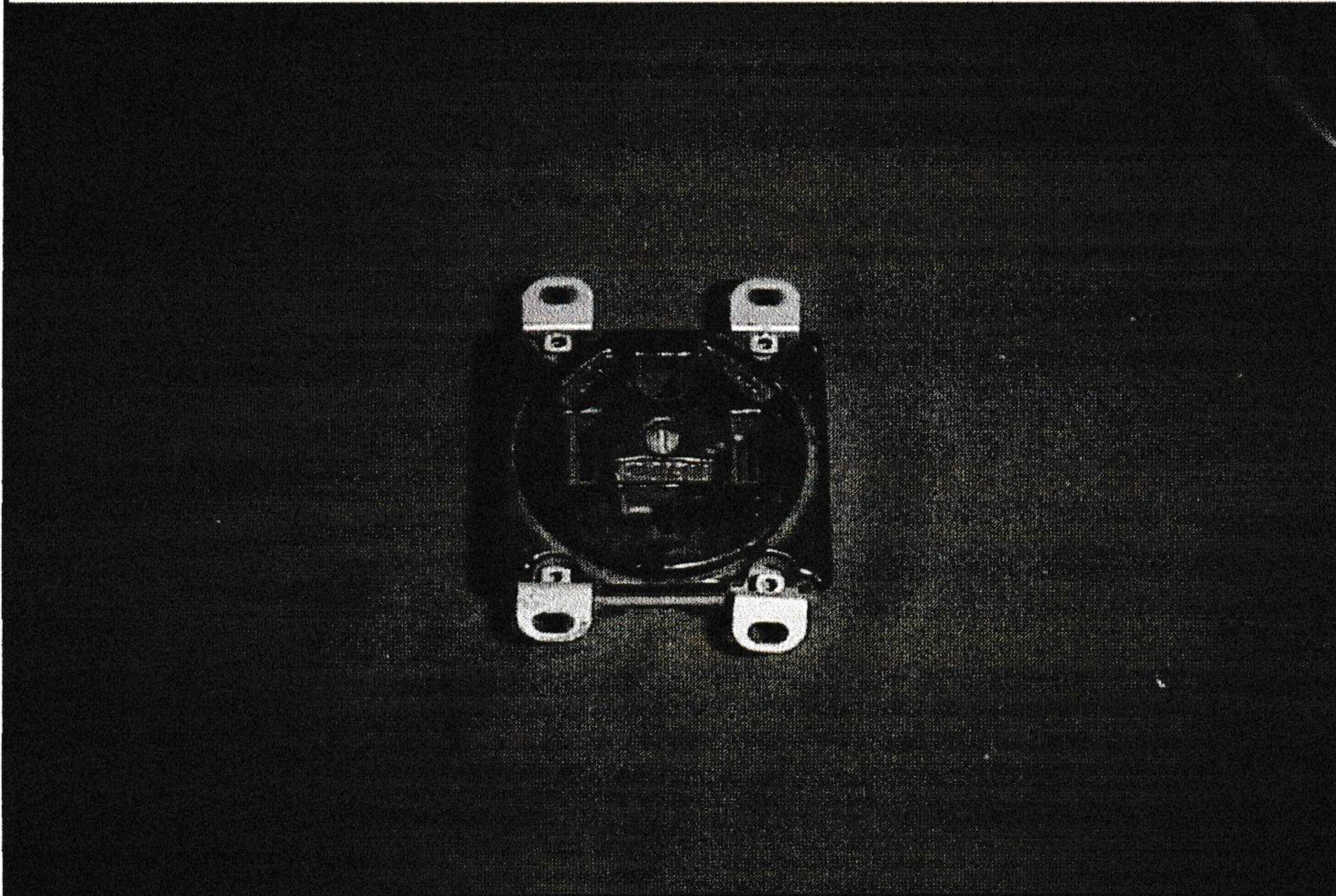
Article 590

Temporary Installations

- Ground-Fault Protection for Personnel
(B) Use of Other Outlets
- Receptacles other than the 125-volt, single-phase, 15-, 20-, and 30-ampere receptacle outlets ... shall have ***GFCI protection for personnel, or use a written assured equipment grounding conductor program.***

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590.6(B) Use of Other Outlets



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**#4 – Related to Outline/Timeline
Question #4**

**TEMPORARY WIRING
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**Article 590
Temporary Installations**

Maintenance requirements within...

590.8(A) Where Reused

Where overcurrent devices, i.e., circuit breakers, have been previously used are installed in a temporary installation, these overcurrent devices shall be **examined** to ensure these devices have been properly installed, properly maintained, and there is no evidence of impending failure.

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Article 590 Temporary Installations

Maintenance requirements within... **590.8(A) Where Reused**

FYI – How can a 15-, 20-, or 30-ampere circuit breaker be **examined** other than visually? (They have a molded case that cannot be opened). It may be cost more to electrically test these circuit breakers than to discard them and replace them with new circuit breakers. For much larger circuit breakers it may be a visual inspection followed by testing by a qualified testing agency or group.

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Article 590 Temporary Installations

Maintenance requirements within... **590.8(A) Where Reused**

FYI – cont'd. It is important to check the manufacturer's instructions for use of and maintenance of their circuit breakers and equipment. Be cautious of the portable, handheld GFCI testers. The manufacturers of circuit breakers may NOT accept these portable GFCI test devices as acceptable for testing their small 15-, 20- and 30- ampere circuit breakers.

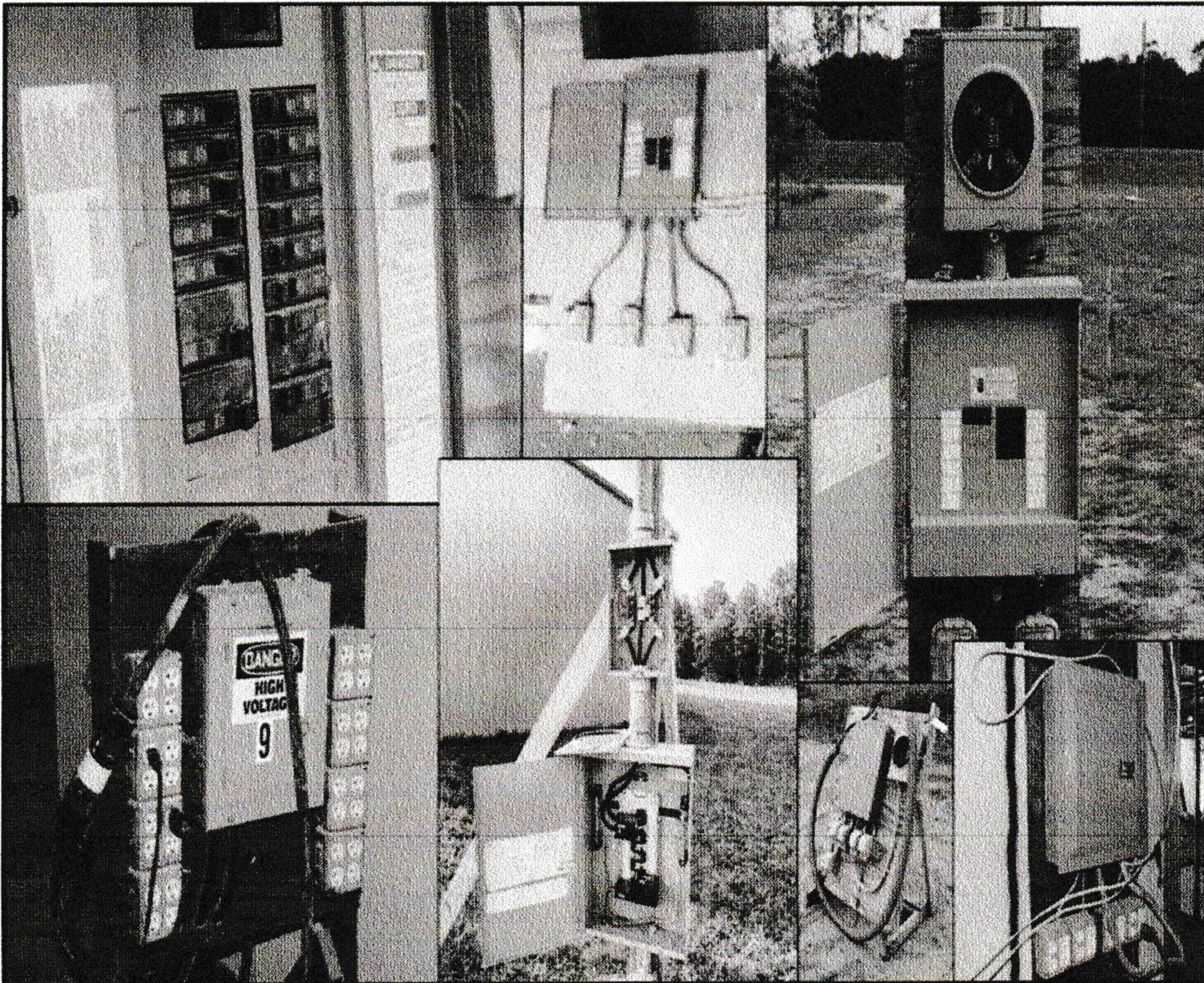
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Article 590 Temporary Installations

Maintenance requirements within... 590.8(A) Where Reused

FYI – cont'd. Last item. The term **“examined”**. This term is not defined in Article 100 of the **National Electrical Code - 2020**. It may be a good idea to check **NFPA 70B – Standard for Electrical Equipment Maintenance – 2023 or earlier**. Also check **NFPA70E- Standard for Electrical Safety in the Workplace - 2021 - Articles 205 and 225**.

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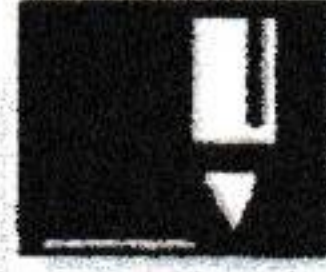


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COURSE

MATERIALS

Referenced and/or used in class

2020 NATIONAL ELECTRICAL CODE

NFPA 70B

NFPA 70E

Students shall bring their own copy or other means of access to the 2020 NEC. Students shall provide a form of identification. Students shall attend entire class and will not receive certificate of completion until the end of the class. Students shall behave in a responsible manner during class.
