National Electrical Code: Grounding and Bonding

Live, Interactive Webinar - Wednesday, December 2, 2020

You’ll be able to:

Understand and use common terminology found in the National Electrical Code.
Review Ohms law, and discuss ground fault paths and electric shock hazards.
Review requirements for grounding electrode systems.
Identify AC systems to be grounded and circuits not to be grounded.
Differentiate grounding requirements for equipment fastened in place and equipment connected by cord and plug.
Comply with requirements for bonding of services, and for bonding conductors and jumpers.

Agenda

Presented by JD White

Introduction to Grounding and Bonding
- Ground/earth
- Ground fault paths/bonding
- Review of Ohmi’s law

Grounding Electrode System
- 250.52 - Grounding electrodes
- 250.54 - Auxiliary grounding electrodes

Grounding Electrode Conductors
- 250.62 - GEC materials
- 250.64 - GEC installation
- 250.66 - GEC sizing
- 250.70 - Methods of grounding and bonding

System Grounding Part 1
- 250.20 - AC systems to be grounded
- 250.22 - Circuits not to be grounded

System Grounding Part 2
- 250.24(A) - System grounding connections

Equipment Grounding and Conductors Part 1
- 250.110 - Equipment fastened in place
- 250.119 - ID of equipment grounding conductors
- 250.120 - EGC installation
- 250.126 - ID of wiring device terminals

Equipment Grounding and Conductors Part 2
- 250.110 - Equipment fastened in place
- 250.119 - ID of equipment grounding conductors
- 250.120 - EGC installation
- 250.126 - ID of wiring device terminals

Bonding Part 1
- 250.90 - General requirements
- 250.96 - Bonding other enclosures

Bonding Part 2
- 250.102 - Bonding conductors and jumpers
- 250.104 - Bonding pipe systems and structural metal
- 250.106 - Lightning protection systems

Methods of Equipment Grounding
- 250.130 - EGC connections
- 250.136 - Equipment considered grounded
- 250.142 - Grounded conductor and grounding equipment
- 250.148 - GEC continuity and attachment

Continuing Education Credits

Professional Engineers
- 7.0 PDHs

Architects
- 7.0 HSW CE Hours

AIA
- 7.0 LU|HSW

International Code Council
- 7.0 CEUs (Electrical)
**Faculty**

**JD White** Consultant at Freelance Electrical System Design and Drafting

Mr. White’s past ten years with Columbus State Community College in Columbus, Ohio, as its Skilled Trades Program coordinator, has provided him with insights beyond teaching, including migration to semesters, and providing oversight of 104 apprenticeship courses and 28 open enrollment courses covering construction, carpentry, electrical, plumbing, and welding. Mr. White helped craft 15 plans for study various, AAS majors, and ATS majors. He has been an active part of articulation agreements, with various vocational career programs and apprenticeship programs. He started a new open enrollment program in June of 2007, which had over 200 active students, and filled 28 course sections per term, prior to him handing it over to a new faculty member. Mr. White is presently working with 10 apprenticeship partnerships with annual enrollment of 1,500 students. He has oversight of five labs, equipment, materials, and lab personnel.

### Additional Learning

**How-To Webinar Series**
Live and interactive webinars that teach new skills

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- Fri., October 30, 2020 | 11:00 am - 12:00 pm CDT

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- Fri., Nov. 13, 2020 | 1:00 pm - 2:30 pm CST

**How to Design for Stormwater Management for Ground Mounted Solar Arrays**
- Mon., Nov. 16, 2020 | 10:00 am - 12:00 pm CST

**How To Apply the 2015/2018 IEBC to Historic and Relocated Buildings**
- Mon., Nov. 16, 2020 | 11:00 am - 12:00 pm CST

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- Mon., Nov. 16, 2020 | 1:00 pm - 3:00 pm CST

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- Thurs., Nov. 19, 2020 | 8:30 - 10:30 am CST

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- Fri., Nov. 20, 2020 | 12:00 - 2:00 pm CST

**Historic and Relocated Buildings**
- Mon., Nov. 16, 2020 | 11:00 am - 12:00 pm CST

**Management for Ground Mounted Solar Arrays**
- Mon., Nov. 16, 2020 | 10:00 am - 12:00 pm CST

**How To Apply the 2015/2018 IEBC**
- Mon., Nov. 16, 2020 | 11:00 am - 12:00 pm CST

**How To Maximize Your Road Network’s Life through Pavement Preservation**
- Fri., Nov. 13, 2020 | 1:00 pm - 2:30 pm CST

**How to Design Stormwater Management for Ground Mounted Solar Arrays**
- Mon., Nov. 16, 2020 | 10:00 am - 12:00 pm CST

**Break**
- 11:30 am - 12:30 pm CST

**Afternoon Session**
- 1:00 - 4:00 pm CST

**Tuition**
- $299 for individual registration
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Completion certificates will be awarded to participants who complete this event, respond to prompts and earn a passing score (80%) on the quiz that follows the presentation (multiple attempts allowed).

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- Morning Session: 7:30 - 11:30 am CST
- Tuition:
  - $299 for individual registration
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**FAQ**
- How to Register
- How to Design and Balance a Residential Ventilation System; Focusing on Balanced Ventilation
- How to Design Conservation Developments
- Solar Site Assessment
- Historic and Relocated Buildings
- Management for Ground Mounted Solar Arrays
- How To Apply the 2015/2018 IEBC
- How to Design Stormwater Management for Ground Mounted Solar Arrays
- Break
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