

***National Electrical Code***  
**Requirements**  
**For**  
**Grounding PV Systems**  
A SOLARABCS White Paper

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# To Ground or Not to Ground

## That was the Question

The NEC was first published in 1897

Thomas Edison was generating Direct Current electricity at that time

Grounding was debated from 1892 to 1913                      And still is

The 1913 NEC had several grounding requirements—mostly AC

The 2011 NEC has 31 pages on grounding plus Art 690 requirements

Much of the Rest of the World (ROW) elected to not ground electrical systems



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# Grounding?

## Definitions Lead to Understanding

Circuit grounding >> The **grounded** conductor

Equipment grounding >> Equipment-**grounding** conductors (EGC)

ROW>> Protective Earth (PE)

**Grounding** electrode >> Connection to Earth

**Grounding**-electrode conductors (GEC) >> Grounding system to Electrode



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# Do We Have Problems?

Complex and in some cases unclear Code requirements

Unclear standards requirements

Inconsistent application of standards >> Differing hardware

Insufficient training of Installers

Insufficient experience/training of Inspectors

Murphy



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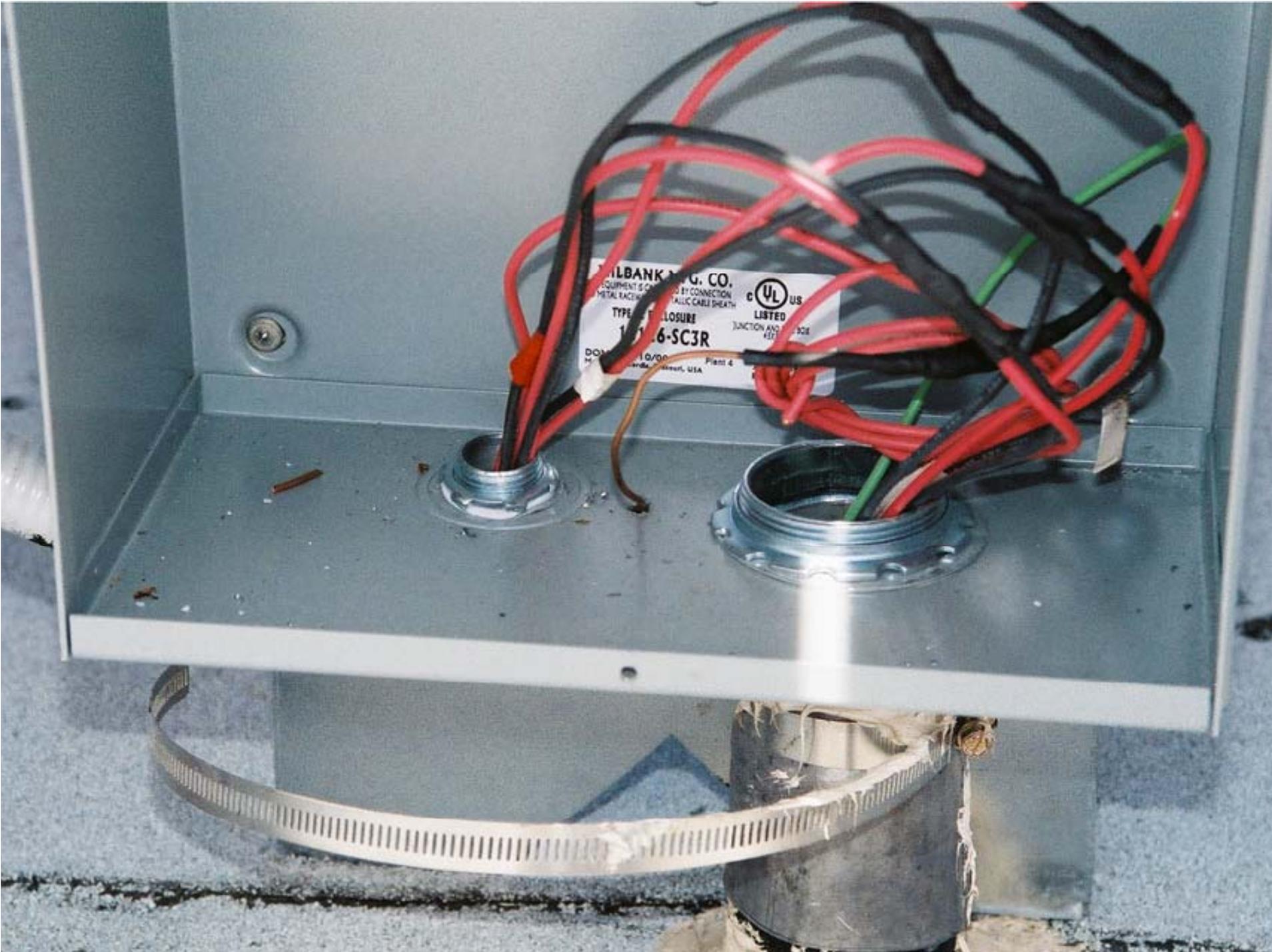


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# The White Paper

Definitions

Equipment-grounding requirements

System grounding requirements

Grounding Issues

Suggestions for improved grounding longevity

**GROUNDING, GROUNDING, GROUNDING**

An important key to Public Safety for the next 50+ years



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