SDEC 2025 Q&A Watertown, SD

- **1.** Can a three-phase GFCI device be used to provide GFCI protection for a single-phase circuit?
- 2. I have just installed a new branch circuit and ran the conductors through the cabinet of a different panel board from where the branch circuits originated. My inspector insists I need to provide a warning label that identifies the closest disconnecting means for the feed through type branch conductors. Is this correct?
- **3.** I have installed a Surge Protective Device (SPD) in the meter main on the outside of the house. The inspector told me I also am required to have one in the panel inside. Is this correct?
- **4.** I was recently asked if the NEC covers the conversion of a RV to a food truck. Does it? My friend is anxious to start serving tacos during his trip across North America.
- **5.** I recently installed a disconnect switch for a mobile home, the switch enclosure was located 13" above finished grade and my inspector said this violates the minimum required height of the enclosure but could not cite any NEC Section. Is this true and where does it reside in the NEC?

- **6.** I am supplying a detached garage sub-panel with outside feeders supplied from a 50-ampere breaker, the sub-panel supplies a single 15-ampere lighting branch circuit and two-twenty ampere receptacle outlet circuits. The electrical inspector handed me a correction report stating, "code requires a 60-amp minimum", can you translate please?
- **7.** I have installed a self-contained hot tub for aboveground use; the top rim of the hot tub is 1' above an adjacent concrete patio. The inspector has failed me for never having a perimeter surface bonding inspection per 680.26(B)(2) for the adjacent concrete patio. Is the inspector correct?
- **8.** I was failed for installing a standard resistance type room heater in a pool equipment room. The inspector stated it needed to be listed for the now recognized corrosive environment. Is he correct?
- **9.** Per the 2023 NEC, are tamper resistant receptacles required in restaurants
- **10.** Are standard interior wall receptacles allowed to be located behind sliding barn doors?
- **11.** Are there currently any product standard evaluations or testing methods for the grounding and bonding performance of concentric and eccentric knockouts for cabinets, cutout boxes and meter socket enclosures?

- **12.** I am installing a new 3-phase 208 VAC branch circuit in a corrosive environment and have some left-over wiring from a previous job. Would the code allow me to mix 3 aluminum phase conductors with the NEC section 680.7 required EGC copper conductor?
- **13.** What is the minimum distance the NEC requires a luminaire to be located from a fuel dispenser? The dispenser is not located on the property of a repair garage.
- **14.**Can parallel feeders be tapped? If so, do I need to tap each individual set of the parallel feeders?
- **15.** I just completed an industrial process installation and noticed the equipment nameplate data was located inside the primary control cabinet, is the installer allowed to simply duplicate a 110.21 compliant machine nameplate data label to the outside of the control equipment enclosure that is visible after installation, or would it have to come from the manufacturer?
- **16.** My inspector failed me for terminating Type 2 SPD line conductors ahead of the service disconnecting means and is requiring me to install the conductors to a circuit breaker within the service equipment bus bars. Is this a requirement in the NEC?
- **17.** I have a two-gang box with different circuits installed, one for the sink light switch and the other for the countertop receptacle. Do I have to connect all the equipment grounds in the switch box together? Or can I just group the equipment grounds from the circuits together?

- **18.** I have found a supplier of Rigid Polyvinyl Chloride Conduit (PVC) online, but it does not appear the conduits are listed or have any markings. Does the NEC have listing and marking requirements for PVC conduit? Are there any specific markings we should look for on PVC conduit?
- **19.** An electrical panel has been damaged by fire, products of combustion, or water. The insurance company and building owner want the electrical contractor to clean the panel with soap and water and say that is sufficient to be reenergized. Can it just be re-energized and put into service? Who makes this call? How is this determined?
- **20.** I have installed a 1000 amp, 480/277 service with my GFPE. Can you help me understand the testing requirements referenced in this code?
- **21.** Is it OK to have the concrete encased grounding electrode rebar extension located outside of the structure exposed to the elements?
- **22.** A swimming pool installed within 4 feet of a chain-link metal fence. Do I bond the poles? Do I bond every link of the chain fence? How do I go about doing this?

- 23. Would a sewage ejector be considered a sump pump? I have wired a receptacle for an ejector located in an area where the receptacle is not required to be GFCI protected, however my lovely inspector is telling me the ejector requires GFCI protection per Section 210.8(D)(6). Who is correct?
- 24. I failed an inspection for securing 12 AWG NM cables directly to the lower edge of the floor joists. Why on earth is this an issue? It is a crawlspace for crying out loud! Please tell me there is a Section in the NEC that will help straighten out this inspector.
- **25.** I am installing a new panel to serve a new Tennant Finish from an existing service located 35 ft away. The inspector failed my service inspection and stated I would need to provide him with an updated available fault current calculation to determine if the new equipment SCCR was adequate. I told him that I only installed the Tennant finish panel equipment and there weren't any existing fault current labels, does the NEC still require this on existing installations?
- 26. I just failed my inspection, and oh boy am I angry about this one. I have installed a new branch circuit from an existing panelboard located in a Wendy's restaurant. The inspector has the nerve to tell me, the installation is gorgeous, and then hands me a correction notice which reads, "branch-circuit OCPD's cannot be in the bathroom, see Section 240.24(E) of the 2023 NEC." Is this for real?
- **27.** Are Surge protective devices required for fire alarm control panels? And if so where specifically can they be installed?
- **28.** Where a GEC is installed in aluminum EMT, is bonding required at both ends of the raceway?

- **29.** When sizing a generator for optional backed up loads for a home, would I utilize NEC Article 702 or 710? Does the generator really need to be sized for the <u>total</u> calculated standby loads?
- **30.** Can the neutral conductors that feed the power pedestals for an RV site be reduced in size?
- **31.** I installed an optional standby generator for the local ice cream shop, so they do not lose their freezers if the power goes out. The generator came equipped from the manufacturer with a "Generator Emergency Shutdown" device. My AHJ is claiming that I need to install a remote emergency stop switch or "red mushroom pushbutton" either on the generator or on the building. I thought the generator has this factory provided, so what is the issue here?
- **32.** Do I have to use "Noalox" or some other type of antioxidant compound on aluminum conductor terminations? I say no, but the old journeyman electrician at our shop says yes. Who is correct?
- **33.** I installed a direct buried feeder from the house to a new detached structure. In addition to the direct buried feeder conductors, I installed a green insulated type THHN/THWN copper conductor in the trench to serve as the equipment grounding conductor for the feeder. My AHJ failed the installation, is this a violation?
- **34.** Am I required to upsize the equipment grounding conductor when upsizing for voltage drop? If so, what size EGC would be required for a 100A feeder where the ungrounded conductors were increased in size from #3 AWG CU to #1 AWG CU conductors?