

2020 NEC Proposed Amendments

600. IDAHO ELECTRICAL CODE.

Pursuant to Section 54-1001, Idaho Code, the Board adopts the 2020 National Electrical Code (herein NEC) with the following amendments:

01. Article 110.3(A) and 110.3(B). Shall not apply to submersible well pumps installed in swimming and marine areas; provided however, such articles shall apply to all other equipment required in the installation of a submersible well pump in such areas except for the actual submersible well pump itself.
02. Article 210.8 (A). Delete reference to 250-volt receptacles.
03. Article 210.8(A)(7) Sinks. Delete article 210.8(A)(7) and replace with the following: Sinks - located in areas other than kitchens where receptacles are installed within one and eight tenths (1.8) meters (six (6) feet) of the outside edge of the sink.
04. Article 210.8(A)(10). Delete article 210.8(A)(10) Laundry Areas.
05. Article 210.8 (F). Delete Article 210.8 (F) for GFCI protection for outdoor outlets.
06. Article 210.12 Arc-Fault Circuit-Interrupter Protection. Shall apply in full. Exception: In dwelling units Arc-Fault Circuit-Interrupter Protection shall only apply to all branch circuits and outlets supplying bedrooms. All other locations in dwelling units are exempt from the requirements of Article 210.12.
07. Article 210.52(E)(3). Delete and replace with the following: Balconies, Decks, and Porches. Balconies, decks, and porches having an overall area of twenty (20) square feet or more that are accessible from inside the dwelling unit shall have at least one (1) receptacle outlet installed within the perimeter of the balcony, deck, or porch. The receptacle shall not be located more than two (2.0) meters (six and one half (6½) feet) above the balcony, deck, or porch surface.
08. Article 230.67 Surge Protection. Delete NEC Article 230.67.
09. Article 230.85 Emergency Disconnects. Delete Article 230.85.
10. Article 314.27(C) Boxes at Ceiling-Suspended (Paddle) Fan Outlets. Delete second paragraph.
11. Article 320.23. Where the height of a crawl space does not exceed one and four tenths (1.4) meters or four and one half (4.5) feet, it shall be permissible to secure NM cables, that run at angles with joist, to the bottom edge of joist. NM cables that run within two and one tenth (2.1) meters or seven (7) feet of crawl space access shall comply with Article 320.23.
12. Article 334.10(3). Delete and replace with the following: Other structures permitted to be of Types III, IV, and V construction. Cables shall be concealed within walls, floors, or ceilings that provide a thermal barrier of material that has at least a fifteen (15)-minute finish rating as identified in listings of fire-rated assemblies. For the purpose of this section, cables located in attics and underfloor areas that are not designed to be occupied shall be considered concealed.
13. Pole Lighting. Poles used as lighting standards along roadways only (parking areas are not roadways) that are forty (40) feet or less in nominal height and that support no more than four (4) luminaires operating at a nominal voltage of three hundred (300) volts or less to ground, shall not be

considered a structure as it is defined as equipment by the NEC. The disconnecting means may be mounted to the pole or elsewhere in accordance with NEC, Article 225.32, exception 3. Special purpose fuseable connectors (model SEC 1791-DF or model SEC 1791-SF) or equivalent shall be installed in a listed handhole (underground) enclosure. The enclosure shall be appropriately grounded and bonded per the requirements of the NEC applicable to Article 230- Services. Overcurrent protection shall be provided by a (fast-acting – minimum - 100K RMS Amps 600 VAC) rated fuse. Wiring within the pole for the luminaires shall be protected by supplementary overcurrent device (time-delay – minimum - 10K RMS Amps 600 VAC) in break-a-away fuse holder accessible from the hand hole. Any poles supporting or incorporating utilization equipment or exceeding the prescribed number of luminaires, or in excess of forty (40) feet, may be considered structures, and an appropriate service disconnecting means shall be required per the NEC. All luminaire- supporting poles shall be appropriately grounded and bonded per the NEC. A service may not need a Watt Hour Meter.

- 14.** Article 422.5 (A)(7). Delete Article 422.5 (A)(7) GFCI protection for dwelling unit dishwashers.
- 15.** Article 480.7(B) Battery Emergency Disconnect. Delete.
- 16.** Article 675.8(B). Compliance with Article 675.8(B) will include the additional requirement that a disconnecting means always be provided at the point of service from the utility no matter where the disconnecting means for the machine is located.
- 17.** Article 682.10. Shall not apply to submersible well pumps installed in swimming and marine areas; provided however, such articles shall apply to all other equipment required in the installation of a submersible well pump in such areas except for the actual submersible well pump itself.
- 18.** Article 682.11. Add the following exception: This article shall not apply to service equipment that is located on or at the dwelling unit and which is not susceptible to flooding.
- 19.** Article 682.13. Add the following exceptions:
 - a.** Exception No 1. Wiring methods such as HDPE schedule eighty (80) electrical conduit or its equivalent or greater and clearly marked at a minimum “Caution Electrical” to indicate that it contains electrical conductors shall be approved. It shall be buried whenever practical, and in accordance with the requirements of the authority having jurisdiction. The use of gray HDPE water pipe rated at two hundred (200) PSI (e.g. SDR-7 or DR-9) is suitable for use as a chase only when the following conditions are met:
 - i.** When internal conductors are jacketed submersible pump cable.
 - ii.** When used in continuous lengths, directly buried, or secured on a shoreline above and below the water line.
 - iii.** When submersible pump wiring terminations in the body of water according to 682.13 Exception No. 2 are met.
 - b.** Exception No 2. Any listed and approved splices required to be made at the submersible well pump itself, outside of a recognized submersed pump sleeve or housing, when wires are too large to be housed inside such sleeve, shall be covered with a non-metallic, impact resistant material, no less than one quarter (.25) inches thick, such as heavy-duty heat shrink or other equivalent method approved by the authority having jurisdiction. (e.g. install a heat shrink over the sleeve or housing that the

submersible well pump is installed in, and then recover (apply heat) the heat shrink over both the HDPE and the water line). At least six (6) inches shall be over the sleeve and at least twelve (12) inches over the HDPE and water line.

c. Exception No. 3. Pipe, conduit, PVC well casing, or other electrically unlisted tubing may be used as a chase, but not as a raceway, to protect conductors or cables from physical damage. Conductors or cables within a chase shall be rated for the location.

20. Article 682.14. Add the following additional exception: For installations of submersible well pumps installed in public swimming and marine areas, submersible well pumps shall be considered directly connected and shall be anchored in place. Ballast is an acceptable form of anchoring.

21. Article 682.14(A). Add the following exception: For installations of submersible well pumps installed in public swimming and marine areas, motor controller circuits such as remotely located stop pushbutton/s, disconnect/s, relay/s or switches shall be permitted as a required disconnecting means. Such circuits shall be identified at a minimum as “Emergency Pump Stop”, or “Emergency Stop” with other obvious indications on the visible side of the enclosure, that it controls a submersible pump in the body of water.

22. Article 682.15. Add the following exceptions:

a. Exception No. 1. Submersible pumps, and their motor leads, located in bodies of water, and that are rated sixty (60) amperes maximum, two hundred fifty (250) volts maximum of any phase, shall have GFCI or Ground Fault Equipment Protection designed to trip at a maximum of thirty (30) milliamps or less, protected by means selected by a licensed installer, meeting listing or labeling requirements, and inspected by the AHJ prior to submersion in bodies of water.

b. Exception No. 2. Installations or repair and replacement of submersible pumps located in bodies of water, that are rated over sixty (60) amperes, and rated at any voltage, shall be evaluated by a qualified designer or experienced licensed contractor, or involve engineering or be engineered, for each specific application, with the goal of public safety. Whenever possible, GFCI or Ground Fault Equipment Protection designed to trip at a maximum of thirty (30) milliamps or less, meeting listing or labeling requirements, shall be installed, and inspected by the AHJ prior to submersion in bodies of water.

23. Article 690.12 Rapid Shut Down. Add following Exemptions:

a. PV systems not installed on or in buildings, PV output circuits and dc to dc converter output circuits that are installed in metallic raceways or metal clad cables, or installed in enclosed metallic cable trays, or are underground shall not be required to comply with Article 690.12. Detached structures whose sole purpose is to house PV system equipment shall not be considered buildings and thus may have roof mounted PV systems without rapid shutdown equipment according to this exception.

b. PV system circuits installed on or in buildings without the presence of a utility supplied power source shall not be required to comply with Article 690.12 where all of the following apply:

i. The minimum distance to bring electric utility power lines or service conductors to the building is 1000 feet or greater;

- ii. The building has a minimum setback distance of 100 feet from any building or structure located on adjacent properties;
- iii. A lockable service entrance rated AC disconnect is installed outside at a readily accessible location; and
- iv. The AC disconnect has a permanent placard or label with the following words or equivalent:

WARNING

SOLAR PV SYSTEM IS NOT EQUIPPED WITH RAPID SHUTDOWN

The warning placard or label shall comply with Article 110.21(B).

24. Article 706.15 Off Grid Systems. Replace 706.15 with the following. For one-family and two-family dwellings, a disconnecting means or its remote control shall be located at a readily accessible location.