

SPECIAL EDITION

Significant Changes – 2020 WAC 296-46B – Effective October 29, 2020

In this issue, we review of some of the significant changes in the 2020 [WAC 296-46B](#) electrical rules. The WAC changes and the [2020 National Electrical Code](#) (NEC) will be effective October 29, 2020. This document does not cover all changes. We wrote it to help you become aware of some of the more important changes. We will soon have a complete version of the 2020 WAC 296-46B available at: <https://lni.wa.gov/licensing-permits/electrical/laws-rules-policies>. See the revision to WAC 296-46B-010(1) below to determine when the 2020 NEC and revised WAC rules will apply to your project.

WAC 296-46B-010(1) – Adopted standards – 2020 National Electrical Code (NEC)

The 2020 NEC will be effective October 29, 2020. We delayed the effective date to allow customers to focus on recovery from the effects of COVID-19 and give them more time to prepare for the new code requirements. We made a change regarding when new standards will apply to specific projects. Generally, new codes will apply if the electrical permit is issued on or after the adoption date of new codes with two exceptions: (a) New one- and two-family dwellings or multifamily dwellings where the issue date of building permits for the premises is before the adoption date; or (b) New installations where plan review is required by WAC 296-46B-900 when plans are received and accepted for review before the adoption date.

WAC 296-46B-110(1) Exception – Use of Nonmetallic Electrical Elbows for Other Than Electrical Installations

Generally, listed electrical conduit can only be installed and used in accordance with its listing (i.e., as an electrical raceway for electrical conductors). We added a new exception to accommodate installations such as underground geo-thermal piping systems to allow for ease of installation and maintenance of these piping systems. Listed electrical nonmetallic elbow fittings may be connected to piping other than electrical conduit for the purposes of enclosing mechanical piping systems. The elbows must be distinctively marked to indicate their use as non-electrical fittings prior to installation by painting them to match the color of the piping to which they are connected. This does not allow listed electrical conduit for other than electrical use.

WAC 296-46B-210(8) – Peninsular Countertop Receptacles

We eliminated a rule regarding receptacle placement for peninsular countertop spaces. Receptacles for peninsular and island countertops and work surfaces must comply with 2020 NEC 210.52(C)(2). At least one receptacle outlet must be provided for the first 9 ft² or fraction of countertop work surface, and an additional receptacle outlet must be provided for every additional 18 ft² or fraction thereof. For peninsular countertops, at least one receptacle must be located within 2 ft. of the outer end of the peninsula. Peninsular countertops are measured from the connected perpendicular wall.

WAC 296-46B-334 – Nonmetallic-Sheathed Cable

We amended the rules to keep policy and enforcement regarding use of nonmetallic-sheathed cable in taller buildings the same as current requirements. Revised building code rules allow Type IV mass timber buildings up

to 18 floors. We changed the construction type in our WAC rules from Type IV to Type IV-HT to keep installation allowances for nonmetallic-sheathed cables the same as it has been with previous Type III, IV, or V construction.

WAC 296-46B-553 and 555 – Floating Buildings and Marinas

In the 2020 NEC, requirements for floating buildings, previously in Article 553, were moved to Article 555 Marinas, Boatyards, and Commercial and Noncommercial Docking Facilities. We moved the requirements of WAC 296-46B-553 to WAC 296-46B-555 to correlate with the NEC. We eliminated some of these requirements, as well as some in the previous WAC 296-46B-555 as they are now covered in the NEC. In addition, we clarified that Article 398 open wiring on insulators is not an approved wiring method in or above any portion of a marina or docking facility.

WAC 296-46B-705(2) – Interconnected Electric Power Production Sources – Supply-Side Source Connections

We clarified rules regarding supply-side interconnections of interconnected power production sources. The disconnecting means, even though it is not a service disconnecting means must be installed using wiring methods specified for services in WAC 296-46B-230(7). In addition, the disconnecting means comply with NEC rules for services as specified in NEC 230.82(6) and 250.25 except that it is not required to be grouped with the service disconnecting means for the building or structure.

WAC 296-46B-908(10) – Class B permits

We added two items to the list of installations eligible for the Class B random inspection process. We expanded the replacement of not more than ten receptacles with GFCI or AFCI receptacles to include replacement with dual function AFCI/GFCI receptacles. In addition, we added the like-in-kind replacement of output cables for electric vehicle supply equipment to be eligible for Class B permits.

WAC 296-46B-920(2)(a) – Residential Specialty Scope of Work

We clarified the work scope of the 02 Residential specialty to state that the allowance for wiring of ancillary structures means structures located on the same property and under the same ownership as the dwelling structure(s).

WAC 296-46B-920(2)(f) – HVAC/refrigeration Scope of Work

We modified the scope of work for the HVAC/refrigeration specialties to allow repair, replacement, and maintenance of line voltage flexible supply whips not over six feet in length to include a whip used for a unit being replaced where the new unit has a lower maximum overcurrent protection size. This is due to the prevalence of more efficient HVAC units with lower current ratings. It should be noted that replacement of an HVAC unit with one having a lower maximum overcurrent protection rating must be inspected using a regular permit as it is not like-in-kind or eligible for the Class B random inspection process.

In addition, a change was made to allow the HVAC/refrigeration specialties to install low voltage Class 2 control circuit wiring in other than residential occupancies regardless of the number of stories above grade if the installation is made in a previously occupied and wired space and is restricted to the HVAC/refrigeration system.

WAC 296-46B-920(2)(g) – Nonresidential Maintenance Scope of Work

We modified 07 nonresidential maintenance scope of work to include replacement of overcurrent/overload devices for the purposes of replacement of electrical equipment where the new equipment has a lower ampere rating than the equipment being replaced. Typically, newer equipment is more efficient than older equipment of the same size and may require lower rated overcurrent/overload protection such as a circuit breaker, set of fuses,

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or overload heater. It should be noted that replacement with a lower rated device is not like-in-kind and must be inspected using a regular electrical permit.

WAC 296-46B-925(28) and 940(17) – Submersible Well Pump Installers – Testing With A Temporary Portable Generator

Firms and workers that are not licensed electrical contractors or certified electricians that install submersible well pumps and associated wiring in well casings have always been able to set the pump in the well along with the submersible pump wiring to the pump, but not perform any connection of the pump wiring or raceway to the permanent supply. We amended these sections to include exemptions from electrical contractor licensing and electrician certification requirements to allow testing of the pump by cord and plug connection to a portable generator provided all temporary wiring and equipment must be removed immediately upon completion of testing. This allowance was existing department policy as published in a previous Electrical Currents newsletter.

WAC 296-46B-970 – Continuing Education and Classroom Education – Definition of Electrical Theory

This section describes requirements for continuing education and basic classroom education for electricians and trainees. The minimum amount of electrical classroom education required for trainees to learn the electrical trade and become certified electricians must consist of only basic electrical theory, currently adopted National Electrical Code, and use of the electrical laws or rules. Some course providers not familiar with basic electrical theory have tried to provide classroom instruction for industry related tasks such as troubleshooting, conduit bending, equipment installation methods, or even workplace safety practices as a substitute for basic electrical theory education for trainees. Learning industry related tasks is very valuable, but cannot be substituted for the minimal amount of foundational classroom education required by the electrical laws. All trainees learning to become electricians must have a foundation of the workings of electricity established by knowledge of basic electrical theory. We added a definition to clarify electrical theory means basic principles of electricity such as: magnetism, ohm's law, and circuit properties such as voltage, current, power, resistance, inductance, capacitance, reactance, impedance, etc., in series, parallel, and combination AC and DC circuits.

WAC 296-46B-971(5) – Training Schools – Clarification of Completion Roster

Electrical training schools are different from basic classroom education in that completion of a training school program not only fulfills a portion of the basic classroom education requirements, but it credits the person completing the program with work experience hours. We changed this section to clarify the information a training school provider must send us in a completion roster. We eliminated the requirement to send us an enrollment roster because this information was not useful.

WAC 296-46B-990 – Serious Noncompliance with Electrical Laws or Rules

Our inspectors are tasked with enforcement of all electrical laws and rules for safety to life and property. Occasionally, they encounter folks violating the law who have no regard for electrical safety or those who enforce the laws. They know the law but choose to ignore it. An example would be a person who creates a fake electrician certificate and presents it to an inspector, or someone who is cited for a violation then continues to violate the laws or rules intentionally. We amended this section to clarify that willful or intentional violation is serious noncompliance with the electrical laws and rules and can result in higher penalty amounts and potential suspension or revocation of an electrical contractor's license or electrician's or administrator's certificate.

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