

Question of the Month – For an on-site residential septic system with one 120-volt pump, how many branch circuits are required by the Department of Health (DOH) to supply the system? *See correct answer on Page 2.*

Electrical Inspector Positions Available

Are you an experienced (01) general journey level electrician looking for a new challenge? Have you ever thought about becoming an electrical inspector? If you enjoy working with people, the time may be right for you. As an electrical inspector, you will need to foster good relationships with

electrical contractors, electricians, and the public. If you want to help ensure electrical safety in Washington and help electrical contractors and electricians by enforcing laws related to the underground electrical economy, this could be just what you are looking for. It is a great job with a great benefit package. Inspectors have a challenging workload inspecting a wide variety of interesting and complex electrical installations. You can get more information and apply for present and future openings by visiting the [Find a Job at L&I](#) page of our website.

Stakeholder Meeting Notice – Sign and Residential Specialty Scopes of Work

The department has received two petitions from stakeholders to modify the (04) Sign and (02) Residential specialty worksopes. The (04) Sign specialty petition seeks to include energy efficient retrofitting of exterior luminaires that are mounted on a pole or other structure. Current language allows the sign specialty to service, maintain, or repair these luminaires with like-in-kind components, which prohibits modifications such as LED retrofits. The (02) Residential specialty petition seeks to allow residential specialty electricians and contractors to perform wiring in multi-family residential buildings up to 7 stories high based on the type of construction. Currently, residential specialty electricians are limited to multi-family buildings not exceeding three stories above grade. The department has begun the formal rulemaking process to consider input from all stakeholders regarding this issue. A special stakeholder meeting is scheduled for Tuesday, September 26, 1:00 p.m. in the Orcas Room, fifth floor of [Tacoma Rhodes Center](#), 949 Market Street, Tacoma, WA. A parking garage is located on the west side of Market Street with a sky bridge leading to the fifth floor of the Rhodes Center.

Focus on improving Inspection Response Time

We are on a mission to improve our inspection response time. One of the issues making our response times suffer is, having to make too many trips to get an inspection done. Leading any installation code items are corrections for not being able to gain access, work not ready to inspect, and work where only some of the previous corrections were completed.

It is not a perfect world, but we all can improve if everyone works together. When we reach a point where we are inspecting most jobs within 24 hours, we should get fewer phone calls about when we are coming and access likely improves because we are more predictable. Everybody saves time when we have access instructions that get us in without making phone calls, and we get inspections done within 24 hours more often. When inspectors make wasted trips because they did not get access, jobs are not ready, or basic code violations were found – all of which cause another trip for everyone - our 24-hour response time suffers.

To improve response time, we need to search out and remove waste in our processes and help others do the same. Most of today's inspectors were not inspectors before the last recession. Many installers are new to the electrical trade as well. Everybody is hiring. That puts all of us in training mode. Everybody has a role in the inspection process; together we can find ways to improve.

Safety Tip of the Month

Never defeat an electrical safety device. When shock or fire protection is defeated, everyone is in danger. Remember the tragedies that caused those devices to be required. Nothing is important enough to put others in danger!

Corrections related to installation code violations are also very costly. Below are the top ten installation code corrections issued to electrical contractors last year.

- 1) NEC 110.3(B) Listed and labeled electrical equipment not installed in accordance with the manufacturer's installation instructions included in the listing and labeling.
- 2) NEC 210.8(A) Ground-fault circuit-interrupter protection requirements for dwellings.
- 3) NEC 408.4(A), 110.22(A) Failing to ensure accurate labeling of the panel schedule or circuit directory, or the disconnecting means not properly labeled.
- 4) NEC 210.12(A) Arc-fault circuit-interrupter protection requirements for dwellings.
- 5) NEC 250.104(B) Bonding of metal piping systems including gas piping.
- 6) WAC 296-46B-250(2) Concrete encased electrode required for new building or structure that is built upon a permanent concrete foundation.
- 7) NEC 110.12(A) Failing to seal unused openings in electrical equipment.
- 8) NEC 110.7 Wiring integrity – completed wiring installations shall be free from short circuits ground faults, or any unpermitted connections to ground.
- 9) NEC 314.20 Flush-mount device boxes not flush with combustible surfaces or more than ¼” recessed from non-combustible surface.
- 10) NEC 314.25 Each box shall have a cover, faceplate, lampholder, or luminaire canopy.

We can improve response times significantly if jobs done by licensed electrical contractors pass inspection on the first try. Is there something administrators, contractors, installers, or the department can do to improve? Please give me your feedback at ElectricalProgram@lni.wa.gov.

Requirements for Wiring in Exterior Walls – Siding Nail Installation

WAC [296-46B-010](#)(6) was recently changed. To provide additional protection to wiring from damage by siding nails, the language underlined below was added:

Prior to completion of an exterior wall cover inspection, either:

- a) the exterior shear panel/sheathing nail inspection must be completed by the building code inspector and where siding nails or fasteners which penetrate into the wall cavity are to be used, all siding must be installed; or
- b) all wiring and device boxes must be a minimum of 2 ½ inches from the exterior surface of the framing member; or
- c) all wiring and device boxes must be protected by a steel plate a minimum of 1/16 inch thick and of appropriate width and height installed to cover the area of the wiring or box.



Notice that there are three options – a) or b) or c). The new requirement for installation of the siding was placed as an addition to paragraph a), the first option of requiring the shear panel/sheathing nail inspection to be completed. The second and third options of placing all wiring and device boxes at least 2 ½ inches from the exterior surface of the framing member (i.e., stud), or protecting the wiring and boxes with steel plates is still available.

Typically, if the exterior walls of a dwelling are of 2X6 studs, there won't be a problem because the wiring and deep device boxes will have at least 2 ½ inches of clearance. Exterior walls with 2X4 framing will typically require the siding to be installed unless additional protection for your wiring is provided.

Ugly Picture: *If viewing this document online, click on the picture to open a larger image.* Do not leave it up to the inspector to find hazardous damage like this. If you install wiring before the sheathing or siding is installed, it is your responsibility to protect your wiring and make sure it is not damaged before inspection.



Answer to Question of the Month: Two – [WAC 246-272A-0238](#), enforced by DOH (not L&I) requires audible and visual alarms for all septic pumps. Pumps and alarms must be on separate circuits.

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<http://www.ElectricalCurrents.lni.wa.gov>

Electrical Section Internet Address: <http://www.ElectricalProgram.Lni.wa.gov/>

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