



ELECTRICAL CURRENTS

Newsletter from the Office of the Chief Electrical Inspector

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● Upcoming Electrical Stakeholders Meetings

Stakeholder meetings will run through June 2008 at the locations listed below. It is important for you to stay up to date with changes that might affect you. You have an opportunity to get your questions answered and give the Electrical Program your valued input when you attend a stakeholder meeting. Please join us at 6:00 p.m., at one of the remaining stakeholder meetings near you.

Safety Tip of the Month!

Extension cords used outside should be specifically designed for outdoor, wet location use to guard against shock.

2008 Remaining Stakeholder Meetings

April 9	Clark County PUD, 1200 Fort Vancouver Way, Vancouver	May 20	3001 W. Broadway, Moses Lake
May 21	Cowlitz County PUD, 961 12 th St., Longview	May 21	Walla Walla University, CTC Room 105, Walla Walla
May 22	Pacific Power Auditorium, 500 North Keys Rd, Yakima	June 11	Hampton Inn, 3985 Bennett Dr, Bellingham

● 2008 Legislative Session

We are in the last days of the session. This is a list of all legislation currently being considered that might affect the Electrical Program:

- Senate Bill - HVAC/R mechanical regulation

You should visit the legislative web site for information on committee hearings and bill proposals that might affect you or the electrical industry at: <http://www1.leg.wa.gov/legislature>

● 2008 WAC Rule Process

We are in the last month of accepting WAC revision proposals and applications for the Technical Advisory Committee (TAC). March 31st is the last day for you to submit a proposal or application. See the November 2007 Special Edition Electrical Currents for details.

● Electrician and Trainee Certification Must Be Shown To An Inspector

The statement on the back of your certification card is clear. *"You must be prepared to show this card to a Department of Labor and Industries inspector. You cannot allow anyone else to use this card. You may be asked to provide a second piece of identification."*

RCW 19.28.321 requires L&I and city electrical inspectors to *"enforce the provisions of this chapter in their respective jurisdictions."* If an electrical inspector observes the work you have done or are doing under chapter 19.28 RCW, you must present your electrician or training certification and other means of identification when asked. If this request is refused the electrical contractor and administrator, and the individual worker will be subject to citation by the department.

● Grounding RV Power Pedestals In A Recreational Vehicle Park

A feeder is supplying several RV pedestals or sub-panels in a recreational vehicle park. Is each pedestal/sub-panel required to have a grounding electrode system installed?

No, the service supplying the feeder requires a grounding electrode system to be installed, but the pedestals/sub-panels do not require a separate grounding electrode system. NEC 551.76(A) contains the grounding requirements for RV site supply equipment.

Each pedestal/sub-panel must be grounded by a continuous equipment grounding conductor run with the circuit conductors from the service equipment or the transformer of a secondary distribution system. The equipment grounding conductor may be spliced using a listed means. The installation of the equipment grounding conductors must be made so that the disconnection or removal of a receptacle or other device will not interfere with, or interrupt, the grounding continuity.

NEC 551.76(C) prohibits a neutral conductor from being used as an equipment grounding conductor for a recreational vehicle or for equipment within the recreational park. The neutral conductor is only allowed to be bonded to the grounding system at the service point. Where lightning protection is desired, supplementary grounding electrodes may be connected to the equipment grounding system.

● **Please Be Aware! - Internet Electrical Equipment Purchases**

Please be alert and cautious when buying or specifying electrical equipment from the internet. Recently, we have had several cases where electrical equipment has arrived at the jobsite without a testing laboratory listing mark. Unlisted equipment cannot be installed in Washington.

If there is no listing mark, you will have to get a field evaluation from an approved testing laboratory, or in the case of industrial utilization equipment, you may prefer to get an engineering evaluation. Either of these options will cost you time and money. Make certain that the equipment you are buying on the internet is acceptable before clicking the BUY button. One recent case involved \$80,000 worth of lighting fixtures that cannot be installed.

● **Sign Disconnects**

A disconnecting means is required for each sign or outline lighting system (NEC 600.6(A)). Exit signs and cord connected signs do not have a disconnect requirement. The disconnect means must open all the ungrounded circuit conductors and be externally operable without opening doors or other mechanical parts. Note that the NEC definition for "within sight" says the equipment must be visible and within 50'.

For a sign or outline lighting system that is operated without a controller, the disconnect must be:

- External to the sign/system; and
- Within sight of the sign or be capable of being locked in the open position.

If the sign or outline lighting system is operated by an electronic/electromechanical controller that is external to the sign/system the disconnect means:

- Can be within the controller or within sight of the controller (Note: As written, the NEC allows the disconnect to be out of sight);
- Must disconnect the sign or outline lighting system and controller from all ungrounded conductors; and
- Must be designed so that all the disconnecting poles operate together and are capable of being locked in the open position.

The NEC allows the disconnecting means to be located remotely from the sign or outline lighting system in both cases. The disconnecting means may be a locking device on a circuit breaker or an externally operable switch with locking capability so long as all ungrounded conductors are disconnected at the same time.

● **Question of the Month**

Given: In general, on a single-motor circuit continuous duty 1 HP, 1-phase, 208 volt squirrel cage motor with a nameplate full load current of 12 amps. What is the minimum conductor ampacity? **Answers:** 8.8, 10.1, 11, 11.4

February's Question was: GFCI protection is required for all 125V, single-phase receptacles not exceeding 30 amperes located within 5 ft, measured horizontally from the inside walls of a hydro massage bathtub.