

**Question of the Month** – When installing a photovoltaic system on a one- or two-family dwelling, where must the rapid shutdown initiation device be located? *See correct answer on Page 2.*

## New WAC Rules Available Online

The WAC 296-46B revision process is complete and the 2017 NEC® is now effective for all electrical permits purchased on or after July 1, 2017. You can download a copy of the 2017 WAC 296-46B from the [Laws and Rules](#) page of our website. Click [here](#) for a direct link to the document. A printed version will soon be available for purchase in all [L&I service locations](#). The cost of a printed copy is \$5.80.

## Safety Tip of the Month

Beat the Heat - How to avoid heat related illness:

- Stay hydrated with water, avoid sugary beverages.
- Stay cool by seeking shade or an air-conditioned area.
- Wear light-weight, light colored, loose fitting clothes.

## City of Sammamish to Assume Electrical Inspections

Labor and Industries was informed in June that the city of Sammamish will be taking responsibility for all electrical inspections within their jurisdiction on July 1, 2017. Permits and inspections for electrical installations within the city limits must be obtained from the city of Sammamish or at [www.mybuildingpermit.com](http://www.mybuildingpermit.com). For any questions regarding the city of Sammamish electrical permitting and inspection program, you may contact their permit center at 425-295-0531.


Do not purchase L&I electrical permits for work done in the city limits of Sammamish after July 1, 2017. L&I will continue to perform inspections on electrical permits already in progress or those purchased prior to July 1. Refunds are not allowed on any permit that has had an inspection.

## Defective PV Modules Bearing Intertek Certification Marks

Intertek has issued a [notification](#) that certain flat plate photovoltaic modules manufactured by Silicon Energy for the United States and Canada may not comply with relevant safety requirements resulting in overheating and module failure. In some cases, there has been partial melting or burning of the panel at the point of failure. Intertek recommends removing the modules from service if they bear the *cETLus* certification mark with adjacent Control Numbers 3182708 or 4003418.



## Requirements for Electrical Equipment - Recognized vs Listed Components

According to Underwriters Laboratories (UL), Recognized Components (identified by the  mark) are products that are incomplete in construction features or limited in performance capabilities. The Recognized Component Mark does not provide evidence of listing or labeling which the National Electrical Code or other installation codes or standards may require. The State of Washington does not approve Recognized Components as stand-alone products. Recognized components can only be used in a product that has been certified (listed) as an assembly (e.g., inside a listed industrial control panel).

RCW 19.28.010(1) requires all electrical equipment to be manufactured to an applicable electrical safety standard. WAC 296-46B-010(7) clarifies electrical equipment must be:

This document may contain hyperlinks to internet web pages. To access this PDF document online, go to:  
<http://www.ElectricalCurrents.lni.wa.gov>

- Manufactured to applicable electrical safety standards recognized by the department (Note: A variance request must be submitted for this approval. Manufacturer documentation of standards for each component will be required before approval will be granted.); or
- Approved by listing or field evaluation by an L&I approved electrical testing laboratory. Contact information for all approved electrical testing laboratories is available on our website at:

<http://www.lni.wa.gov/TradesLicensing/Electrical/Install/ProdTest/default.asp>.

The marks to the right are some of the more common “listing” marks used to indicate a product has been certified by a product testing laboratory. A listing mark will always be accompanied by the product name (e.g., portable lamp, industrial control panel, etc.) to help you in ensuring that the listing is appropriate to the use of the product.



## Permit Fees for Low-Voltage HVAC (Thermostat) Control Cable

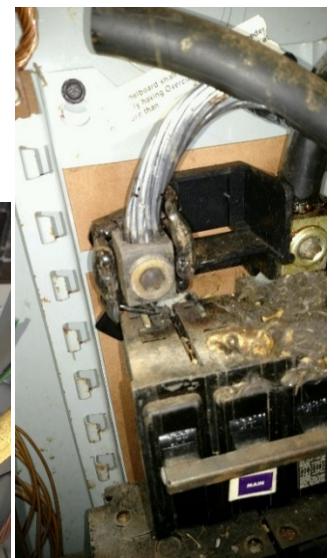
A separate permit fee is always required for low-voltage installations of HVAC control cable and/or thermostats unless a Class B label is used for like-in-kind replacement of an HVAC unit. There are two options for permits for low-voltage (thermostat) cable installations (i.e., the Class B random inspection process and the standard electrical work permit).

Class B random inspection labels may be used for repair or replacement of low-voltage devices (e.g., thermostats), or for installation of low-voltage devices or wiring where the installation does not exceed five thousand square feet. The Class B random inspection process may also be used for like-in-kind replacement of an electric/gas/oil furnace not exceeding 240 volts and 100 amps, or an air conditioning unit or heat pump not exceeding 240 volts and 40 amps. When a Class B label is used for a like-in-kind replacement of an HVAC unit, the low-voltage (thermostat) cable associated with the like-in-kind replacement is included on the same Class B label. For installation of low-voltage cable to a new HVAC unit, however, a separate label is required. Like-in-kind replacement of a furnace along with installation of a new heat pump would require two Class B labels. One for the like-in-kind replacement including all associated low-voltage cable, and one for the new low-voltage cable to the new unit. Of course, the branch circuit to the new heat pump would require a standard electrical work permit and installation of the branch circuit is not within the scope of the HVAC specialties.

A standard electrical work permit may be used for low-voltage HVAC control cable and thermostats. If a standard permit is used, the fee must be as stated in [WAC 296-46B-906\(5\)\(a\)](#). The fee is currently \$46.80 for the first thermostat (and associated cable) and \$14.50 for each additional thermostat inspected at the same time as the first. This fee item only applies to thermostats and associated cable that control a single piece of utilization equipment or a single furnace and air conditioner combination. Installation of low-voltage devices and control wiring for energy management control systems require the fees stated in [WAC 296-46B-906\(5\)\(b\)](#). This fee is based on the square footage of the installation and is currently \$54.30 for the first 2500 square feet or less, and \$14.50 for each additional 2500 square feet or portion thereof. When purchasing a standard permit online or using the permit fee worksheet, the “Thermostat” item is used for installations or modifications of thermostats and all associated low-voltage control wiring.

**Answer to Question of the Month:** 2017 NEC® 690.12(C) – An initiation device or devices shall be located at a readily accessible location outside the building. A rapid shutdown switch must be labeled in accordance with 690.56(C)(3).

**Ugly Picture:** *If viewing this document online, click on the pictures to open larger images.* It is easy to forget to complete a task. Get in the habit of double-checking your work to make sure important elements of each installation are completed properly. Costly damage may result if every electrical termination is not properly installed. The additional reminder to use a calibrated torque tool required by 2017 NEC® 110.14(D) may help.



This document may contain hyperlinks to internet web pages. To access this PDF document online, go to:

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

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

This document is available in alternative formats to accommodate persons with disabilities. For assistance, call 1-800-547-8367. (TDD/TTY users, please call 360-902-5797.) Labor & Industries is an Equal Opportunity employer.