

Question of the Month

What is the ampacity of three parallel 4/0 Type W portable power cables with a temperature rating of 90°C connected to equipment terminals having a temperature rating of 75°C? - See correct answer on Page 2.

Note From The Assistant Director for Specialty Compliance Services

The Department of Labor & Industries is in the process of recruiting a Chief Electrical Inspector. Ron Fuller, the departing Chief Electrical Inspector, retired on December 31, 2012, after having held the position for 12 years and completing 21 years of state service. The recruitment notice was published on October 16, 2012 and closed on December 14, 2012. First round interviews are scheduled for January 16, 2013. Electrical industry stakeholders have been included on the interview panel. The department is committed to recruiting the best candidate for this most important position, and an announcement will be made as soon as the position is filled.

In the interim, Larry Vance, Electrical Technical Specialist, has been appointed as the Acting Chief Electrical Inspector. Larry has been working as an Electrical Technical Specialist in the Electrical Program from November 2007 to the present with a brief period from April 2010 through June 2011 when he was a Electrical Inspection Field Supervisor for L&I's Tacoma office. Prior to becoming an Electrical Technical Specialist, Larry was an Electrical Field Inspector from 2004 through 2007 and has eighteen years of electrical experience in the private sector electrical construction industry. He has held a Master Electricians certificate (ME01) since 2003.

Larry's unique experience working directly with the Chief Electrical Inspector, central office electrical program staff, industry stakeholders, the Electrical Board, and Field Electrical Supervisors and Field Inspectors, provides him with a deep understanding of the vision, mission, history, and authority of the Electrical Program. He is the most knowledgeable person with the required leadership skills who can perform these interim responsibilities and assist in the transition to a new Chief.

Railroad Installations

The scope of the National Electrical Code (NEC) 90.2(B)(3) says, "...installations of railways for generation, transformation, transmission, or distribution of power used exclusively for operation of rolling stock or installations used exclusively for signaling and communication purposes" (e.g., rail signal control houses; communications buildings; lift and swing bridges; switch heaters; railway yard, track switch, and yard area lighting)are not covered by the National Electrical Code.

These installations are not within the scope of the NEC and are not regulated by chapter 19.28 RCW. L&I's and authorized cities/towns' jurisdiction ends at the load terminals of the service disconnect supplying power to these installations.

L&I or an authorized city/town has jurisdiction over railway related facilities that are accessible to the general public (e.g., administrative facilities, passenger terminals, etc.) and other railway facilities (e.g., offices, employee lunch/break areas, warehouse spaces, vehicle garages, shops, etc.) that are not directly required to operate the railway. These facilities or portions of facilities not directly required to operate the railway must comply with all permitting, inspection, licensing, and certification laws of chapter 19.28 RCW.

Safety Tip of the Month!

- Read the manufacturer's instruction manual before using any space heater. Check to make sure the heater bears the mark of a certified testing organization.
- Keep space heaters at least three feet away from any combustible materials, such as bedding, clothing, draperies, furniture and rugs.
- Test space heaters frequently to ensure that the shut-off function works when heater is tipped or knocked over.

It is important to note that "light rail" systems are not considered a railway under federal law. Electrical aspects of light rail systems are regulated under chapter 19.28 RCW.

Electrical Certification Applicants Must Demonstrate Completion of Basic Trainee Classes

Effective July 1, 2013, all applicants for master, journeyman, or specialty electrician examinations, must demonstrate completion of basic trainee classes based upon the number of hours of work experience required to qualify for examination. This new requirement is a result of Senate Bill 6133 passed by the legislature in 2012. The amount of basic trainee classroom hours required for new applicants will be:

- Twenty-four hours where 2,000 or more; but less than 4,000 hours of work experience is required.
- Forty-eight hours where 4,000 or more; but less than 6,000 hours of work experience is required.
- Seventy-two hours where 6,000 or more; but less than 8,000 hours of work experience is required.
- Ninety-six hours where 8,000 hours or more of work experience is required.

Currently, only trainees renewing their training certificate are required to demonstrate completion of required basic trainee classes. You can find a list of currently approved basic trainee classes on the [Basic Classroom Instruction](#) page of our website.

Licensing and Certification required for Connection of Temporary Load Banks

Many facilities have alternate power sources (e.g., uninterruptible power supplies, generators, batteries, etc.) that require periodic testing which includes connecting a load bank and exercising the system using an actual load. Connecting a temporary load bank to the premises wiring system falls within the definition of "electrical construction trade" in accordance with [RCW 19.28.006](#). This work is required to be performed by licensed electrical contractors and certified electricians in accordance with [RCW 19.28.041](#) and [RCW 19.28.161](#), unless the work is performed by the owner of the property, or their regularly employed employees in accordance with [RCW 19.28.261\(5\)\(a\)](#).

Temporary wiring and connections are new installations that do not fall within the scope of work for the maintenance specialties as described in [WAC 296-46B-920\(g\), \(h\), \(i\), \(j\), \(k\), and \(l\)](#). Installation of wiring and connections between a temporary load bank and a premises wiring system is not maintenance, repair, and replacement of like-in-kind existing electrical equipment and conductors. An entity performing this work for a property owner must be an (01) general electrical contractor and the individuals performing the wiring and connections must be (01) general certified electricians and/or properly supervised trainees. If the work is performed at a one- or two-family dwelling, or a multifamily dwelling not exceeding three floors above grade, (02) Residential specialty electrical contractors and certified electricians may perform the wiring and connections.

All temporary wiring installations require electrical permits prior to performing the work. Some cities issue their own permits and conduct inspections. You may find a list of those cities on the [City Electrical Inspectors](#) page of our website.

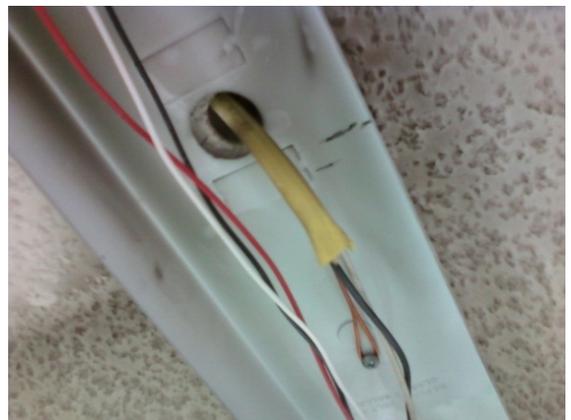
You must make requests for inspections for Labor & Industries electrical permits or from cities that issue permits and perform inspections no later than three business days after completion of the electrical/telecommunications installation or one business day after any part of the installation has been energized, whichever occurs first.

Ugly Installations

Online readers - click on the picture to open a larger image.

Violations: NEC 410.48 – Conductors exposed to physical damage; NEC 410.56 – Conductors not secured, subject to cutting and abrasion where passing through metal; 250.8 – Sheet metal screw not permitted for connection of equipment grounding conductor.

Answer to Question of the Month: 1080 amperes – NEC 400.5(A), 400.2



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

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