

**DIVISION 282  
ELECTRICAL AND ELEVATOR LICENSING**

**Electrical Contractors**

**918-282-0000****Electrical Contractors in General**

(1) An electrical contractor license is a specialized license allowing a company to engage in the business of making electrical installations. This license is in addition to the licensing and bonding required by the Construction Contractors Board.

(2)(a) Generally, the contractor is required to have a full-time general supervising electrician to supervise the electrical work and sign permits; and

(b) Generally, the electrical installations are required to be made by individuals holding an appropriate electrical license.

(3) Exceptions to Sections (1) and (2). Certain statutory exemptions are in ORS 479.540. Different electrical contractor categories and requirements are in ORS 479.630 and this division of rules.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96

**918-282-0010****Electrical Contractor License**

An electrical contractor:

(1) Shall continuously employ at least one full-time general supervising electrician except as otherwise exempted;

(2) Is not authorized to make, direct, supervise or control the making of an electrical installation, unless properly licensed; and

(3) Shall display its electrical license at each of the contractor's places of business. If the contractor has multiple places of business, a facsimile of the license may be posted. The object of this requirement is to display the scope of electrical authority held by the contractor.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730 & 479.820

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0850; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0060

**918-282-0015****Electrical Contractor's Responsibilities**

Electrical contractors engaged in the business of making electrical installations that require a signing supervising electrician shall assure that all electrical work is made by, or under the direct supervision or control of, a continuously employed full-time signing

supervising electrician acting within the scope of their license.

(1) Signing supervising electricians shall perform supervisory duties for only one contractor for which they are registered. Registered signing supervising electricians shall provide direct supervision or control through one of the following:

(a) Be on the job site;

(b) Have on the job site a continuously employed full-time supervising electrician; or

(c) Be available in person, or have a supervising electrician available to meet with the jurisdictional inspector at the job site within two business days following the request.

(2) Electrical contractors who have more than one designated continuously employed full-time signing supervising electrician shall assign only one signing supervising electrician responsibility for the work being performed under each valid permit.

(3) When an electrical contractor has only one designated signing supervising electrician, the electrical contractor may not use a different signing supervising electrician until the designated signing supervising electrician has discontinued the signing supervising electrician responsibilities and written notice has been provided to the division. The electrical contractor shall not continue electrical work until another signing supervising electrician is employed and written notification is provided to the division.

(4) Electrical contractors shall notify the division in writing who their signing supervising electrician(s) is. Notification shall be provided within five days of entering into or termination of that relationship.

(5) Worker leasing companies, as defined in ORS 656.850, shall notify the division within five business days of any contractual relationship or change in a contractual relationship with an electrical contractor. Notification shall include the name of the electrical contractor and a list of employed licensed electricians, including signing supervising electricians, leased to the electrical contractor. Electrical contractors and signing supervising electricians who utilize worker-leasing companies are responsible for assuring compliance with the provisions of ORS Chapter 479 and the rules adopted thereunder.

Stat. Auth.: ORS 479.630

Stats. Implemented: ORS 479.730

Hist.: BCD 5-2001, f. 6-7-01, cert. ef. 7-1-01

**918-282-0017****Elevator Contractor Electrical License**

An elevator contractor licensed under this section:

(1) Shall continuously employ at least one full-time general supervising electrician or limited elevator journeyman to act as a signing supervisor to obtain and sign elevator plan approval permits;

(2) Is limited to electrical work associated with the installation, alteration, repair and maintenance of elevators. This work is limited to the wiring from the load side of the main disconnecting means for the elevator; and

(3) Is authorized to make, supervise, direct or control the making of an electrical installation only if properly licensed.

Stat. Auth.: ORS 479.630 & 479.840

Stats. Implemented: ORS 479.630

Hist.: BCD 21-2002(Temp), f. 8-30-02, cert. ef. 9-1-02 thru 2-27-03; BCD 34-2002, f. 12-20-02, cert. ef. 1-1-03; BCD 12-2004, f. 8-20-04, cert. ef. 10-1-04

### **918-282-0020**

#### **Limited Sign Contractor License**

A limited sign contractor:

(1) Shall employ at least one full-time limited journeyman sign electrician;

(2) Is limited to the electrical work authorized by a limited journeyman sign electrician license; and

(3) Is authorized to make, direct, supervise or control the making of a sign installation only if the contractor is a sole proprietor who is also licensed as a limited journeyman, a general supervising or a general journeyman electrician.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00

### **918-282-0030**

#### **Limited Energy Contractor License**

A limited energy contractor:

(1) Continuously employs at least one full-time Class "A" limited energy technician, Class "B" limited energy technician or general journeyman to act as a signing supervising electrician to obtain and sign permits;

(2) Is limited to electrical work on limited energy systems and the scope of work authorized under the employed signing supervisor's license; and

(3) Is authorized to make, direct, supervise or control the making of an electrical installation, only if properly licensed.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00, BCD 16-2001(Temp), f. & cert. ef. 11-26-01 thru 5-24-02; BCD 8-2002, f. 3-29-02, cert. ef. 4-1-02; BCD 23-2002, f. 9-13-02 cert. ef. 10-1-02

### **918-282-0033**

#### **Limited Renewable Energy Contractor**

(1) In addition to the requirements of OAR 918-282-0000, a limited renewable energy contractor:

(a) Engages in the business of or makes the limited types of electrical installations limited to 25 kva and 600 volts nominal or less, specified in ORS 479.630(16);

(b) Continuously employs at least one general supervising electrician, general journeyman electrician or limited renewable energy technician to act as signing supervising electrician to:

(A) Obtain and sign permits; and

(B) Supervise the electrical installations authorized by ORS 479.630(16).

Stat. Auth.: ORS 479.630

Stats. Implemented: ORS 479.630

Hist.: BCD 23-2001(Temp), f. 12-28-01, cert. ef. 1-1-02 thru 6-29-02; BCD 9-2002, f. 3-29-02, cert. ef. 4-1-02; BCD 13-2006, f. 9-29-06, cert. ef. 10-1-06

### **918-282-0040**

#### **Limited Maintenance Specialty Contractor-HVAC/R License**

(1) A limited maintenance specialty contractor-HVAC/R (Heating, Ventilating, Air-conditioning and Refrigeration):

(a) May maintain, service, repair or replace commercial and industrial electrical products that use fuel or other forms of energy to produce heat, power, refrigeration or air conditioning;

(b) May maintain, service, repair or replace the equipment on the load side of the disconnect switch located at or on the electrical product; and

(c) Shall only make electrical modifications or install electrical products where the modification, the size or the type of the product installed is approved by the manufacturer for the equipment involved; and

(d) Shall install, maintain or repair 100 volt-ampere or less thermostat or associated control wiring beyond the electrical product in other than a one- or two-family dwelling only when the contractor employs one or more of the following to perform the work:

(A) General journeyman electrician;

(B) General supervising electrician;

(C) Class "A" limited energy technician; or

(D) Class "B" limited energy technician.

(2) License and Equivalent Requirements. This contractor:

(a) Shall provide proof of at least two years (4,000 hours) experience in installation, including set-up and testing, plus approved specialized training from a manufacturer, distributor, school, or apprenticeship program, or lawful on-the-job training in one or more of the following activities: Electrical repair, service, maintenance, installation or replacement of existing, built-in or permanently connected commercial or industrial heating, ventilation, air

conditioning, dehumidifying, filtering or refrigeration equipment;

(b) Shall agree to create an electrical training record within 60 days of hiring for each employee who will do the electrical work and:

(A) Maintain the record for as long as the employee remains with the contractor;

(B) Represent that only employees with electrical training will be used for electrical transactions under this license;

(C) Agree that the training records will be provided or made available to the division upon request; and

(D) Submit a list of all trained persons employed, or to be employed, to do electrical work authorized by this rule at time of the application and renewal. The list shall include all Class "B" limited energy technicians employed by the contractor and be updated within 30 days of changes.

(3) Employment of 100 volt-ampere journeymen or technicians. A limited maintenance specialty contractor-HVAC/R may employ, or be a:

(a) Class "A" limited energy technician; or

(b) Class "B" limited energy technician allowing 100 volt-ampere or under thermostat, or associated control wiring involving any type of equipment on which the limited maintenance specialty contractor-HVAC/R is authorized to work.

Stat. Auth.: ORS 479.540(1), 479.550 & 479.730(5)

Stats. Implemented: ORS 479.730

Hist.: BCA 8-1992(Temp), f. 4-29-92, cert. ef. 7-1-92; BCA 17-1992, f. & cert. ef. 9-1-92; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0040; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00; BCD 23-2002, f. 9-13-02 cert. ef. 10-1-02

### **918-282-0050**

#### **Limited Maintenance Specialty Contractor License**

(1) A limited maintenance specialty contractor:

(a) May connect replacement appliances to existing junction boxes;

(b) May repair by replacement, as defined in OAR 918-251-0090, ballasts, lamp holders and equipment that are a part of lighting fixtures; and

(c) Shall not make electrical installations involving services, feeders or branch circuits.

(2) A firm that holds a valid limited maintenance specialty contractor license shall provide and maintain a list of employees in accordance with ORS 479.630 and shall designate to the division an individual within the firm who shall be responsible for compliance with applicable codes and rules for obtaining permits and calling for inspections.

(3) The applicant shall provide verification of one year of experience in appliance repair or replacement work as defined in statute.

(4) This contractor can convert to a limited maintenance specialty contractor-HVAC/R by meeting the requirements of OAR 918-282-0040 and paying an additional fee.

(5) Limited maintenance specialty contractor employees need not be licensed.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0860; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0070; BCD 4-1999, f. & cert. ef. 4-1-99; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00

### **918-282-0060**

#### **Restricted Energy Contractor License**

(1) A restricted energy contractor is limited to HVAC activities only, unless the board approves additional indorsements, at which time the contractor shall file separate proof of qualification.

(2) Applicants for this license shall:

(a) Designate the applicable indorsement sought;

(b) Attach a copy of the identification card to be used for the licensing period; and

(c) Provide a list of employees covered by the license and proof of experience:

(A) For the contractor, if the contractor is an individual; a partner if the contractor is a partnership; or a designated person employed by the corporation who actively supervises the restricted energy electrical activities in the case of a corporate contractor;

(B) That the qualifying person has on-the-job training, training from a manufacturer, distributor or school, or completed an apprenticeship program under the relevant **Electrical Specialty Code** or **One and Two Family Dwelling Specialty Code**; and

(C) That the person had at least two years of experience in the trade.

(3) In addition to the statutory requirements for identity of the contractor, the contractor shall issue an identification card to employees covered by the license upon employment, and annually thereafter showing:

(a) Name of employee;

(b) Date of issue;

(c) Contractor's name and the Construction Contractors Board identification number; and

(d) The expiration date coinciding with the contractor's license expiration.

(4) When the contractor's experience is based on a corporate supervisor or partner and that person leaves the entity, the contractor shall immediately amend the license and qualify another person or surrender the license for cancellation.

(5) The contractor shall maintain a current list of employees with the division.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 479.945

Stats. Implemented: ORS 479.945

Hist.: BCA 33-1991(Temp), f. & cert. ef. 9-30-91; BCA 44-1991, f. & cert. ef. 12-26-91; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-00440; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00

### **918-282-0070**

#### **Limited Pump Installation Specialty Contractor License**

(1) A limited pump installation specialty contractor:

(a) Makes the limited types of electrical installations specified in ORS 479.630;

(b) May direct, supervise or control these limited types of electrical installations;

(c) May make repairs or perform work on them without further license;

(d) Shall provide an updated list of employees annually;

(e) Shall designate to the division an individual within the firm responsible for compliance with applicable codes and rules; and

(f) Shall obtain permits and call for inspections.

(2) Installations under this license shall be limited to branch circuit wiring provided from the load side of a disconnect means external to panel boards.

(3) Employees of a limited pump installation specialty contractor need not be licensed.

(4) License and Equivalent Requirements. This license requires proof of one year of experience in residential pump installation, repair and maintenance or equivalent experience as approved by the board. If applicant is a business entity other than a sole proprietorship, the qualification shall be provided by a person designated by the entity. There is no examination for this license.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0870; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0080

### **Electrical Licensing Requirements**

#### **918-282-0100**

##### **Electrical Licensing in General**

(1) An electrical license is issued to an individual and allows the holder to make certain regulated electrical installations. Individual electrical licensing laws are in ORS 479.630. The following rules implement the individual electrical licensing laws. Application and examination requirements as well as

continuing education and renewal requirements are located in OAR division 30.

(2) When the rules refer to a "valid" electrical license, this means a license issued by the Electrical and Elevator Board that has not expired, or been suspended or canceled.

Stat. Auth.: ORS 479.730, 183.335

Stats. Implemented: ORS 479.730, 183.335

Hist.: BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; BCD 10-2006(Temp), f. 6-30-06, cert. ef. 7-1-06 thru 12-28-06; BCD 13-2006, f. 9-29-06, cert. ef. 10-1-06

#### **918-282-0110**

##### **General Licensing Exemptions**

In addition to the exceptions provided in ORS 479.540, electrical licenses are not required to:

(1) Replace light bulbs, fluorescent tubes or approved fuses, or to connect approved portable electrical equipment to permanently installed and properly wired receptacles;

(2) Do experimental electrical work or testing of electrical products in electrical shops, educational institutions, industrial plants or recognized testing laboratories;

(3) Operate, maintain, repair and replace broadcast equipment of commercial radio and television stations; or

(4) Install limited energy systems not exceeding 100 voltampere ("VA") in Class 2 and 3 systems limited to:

(a) Single station smoke or ionization detectors installed in buildings three stories or less in height;

(b) Closed circuit television systems installed in buildings three stories or less in height;

(c) Master Antenna Television ("MATV") systems installed in buildings three stories or less in height; or

(d) Intercom and audio systems installed in one- and two-family dwellings.

Stat. Auth.: ORS 479.730, 183.335

Stats. Implemented: ORS 479.730, 183.335

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0800; BCD 9-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0010; BCD 18-1999, f. 12-30-99, cert. ef. 1-1-00; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00; BCD 26-2002, f. & cert. ef. 10-1-02; BCD 8-2005, f. & cert. ef. 4-1-05; BCD 10-2006(Temp), f. 6-30-06, cert. ef. 7-1-06 thru 12-28-06; BCD 13-2006, f. 9-29-06, cert. ef. 10-1-06

#### **918-282-0120**

##### **Licensing Requirements for Electrical Work**

(1) No person or entity shall allow any individual to perform electrical work for which the individual is not properly registered or licensed.

(2) Owners, managers or agents of facilities having electrical employees shall report in writing to the division and the authority having jurisdiction, the names and license numbers of limited supervising manufacturing plant or limited maintenance electricians employed.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: DC 10, f. 4-13-72, ef. 5-1-72; DC 12-1981, f. 9-29-81, ef. 10-1-81; DC 10-1982, f. & ef. 3-1-82; Renumbered from 814-022-0120; BCA 2-1992(Temp), f. 2-28-92, cert. ef. 3-18-92; BCA 11-1992, f. & cert. ef. 6-26-92; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-260-0180; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00

### 918-282-0130

#### Fees

The division charges an application and license renewal fee as specified in ORS 479.840.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0830; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0040; BCD 17-2007, f. 12-28-07, cert. ef. 1-1-08

### 918-282-0140

#### General Supervising Electrician License

(1) A general supervising electrician when working for or as an electrical contractor requiring a signing supervisor may:

(a) Direct, supervise, make or control the making of any electrical installation;

(b) Design, plan and lay out work for the customers of the contractor with whom the supervising electrician is continuously employed; and

(c) Is the only individual authorized to direct, supervise or control the installation or alteration of an electrical service.

(2) The general signing supervising electrician shall:

(a) Sign all permits;

(b) Ensure all electrical installations meet minimum safety standards;

(c) Be continuously employed as a general supervising electrician on the electrical contractor's regular payroll and be available during working hours to carry out the duties of a supervising electrician under this section;

(d) Ensure proper electrical safety procedures are used;

(e) Ensure all electrical labels and permits required to perform electrical work are used and signed;

(f) Ensure electricians have proper licenses for the work performed;

(g) Comply with corrective notices issued by the inspecting authority;

(h) Notify the division in writing within five days if the signing supervising electrician terminates the relationship with the electrical contractor; and

(i) Shall not act as a supervising electrician for more than one employer.

(3) If the general supervising electrician leaves the employment of the general electrical contractor or employer, electrical work which requires a general supervising electrician shall not be conducted until a replacement general supervising electrician is employed and written notice designating the supervising electrician is given to the division.

(4) License and Equivalent Requirements:

(a) The licensing requirements for a general supervising electrician are set out in ORS 479.630.

(b) To comply with the experience requirements, a nonjourneyman applicant relying on equivalent experience shall provide proof that applicant had:

(A) Qualifying experience to become a journeyman electrician, that is at least 8,000 hours of work experience with sufficient minimum hours in each area set out in OAR 918-282-0170; and

(B) Additional qualifying experience as a journeyman, that is at least 8,000 hours of work experience that is equivalent to journeyman work.

(c) A licensed journeyman only needs to document 8,000 hours of experience as a journeyman.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0880; BCA 28-1989, f. & ef. 12-7-89; BCD 8-1996(Temp), f. & cert. ef. 6-14-96; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0090

### 918-282-0150

#### Employment Requirements for Supervising Electricians Employed by Industrial or Manufacturing Plant

(1) Owners, managers or agents of an industrial or manufacturing plant, hospital, sewer plant, water plant, commercial office building, building occupied by the state or a local government entity or an institution employing individuals who install electrical wiring or equipment shall employ on regular payroll a registered professional electrical engineer, a general supervising electrician or a limited supervising electrician:

(a) To supervise, direct or control this work; and

(b) Who may also install, maintain, repair, or replace electrical wiring and electrical products as licensed.

(2) The general supervising electrician, limited supervising electrician or registered professional electrical engineer may be relieved from responsibility for future work under any permit signed by the supervising electrician or registered professional electrical engineer, if electrician or engineer has left or been discharged from the employ of a licensed electrical contractor or industrial plant, provided that notice in writing of termination is filed with the division

within five days by the general supervising electrician, limited supervising electrician or registered professional electrical engineer.

(3) The license or authority of the employer to continue with the electrical work shall, without further order or action by the division, be suspended until another general supervising electrician, limited supervising electrician or registered professional electrical engineer is employed and written notice given to the division by the general supervising electrician, limited supervising electrician or registered professional electrical engineer.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: DC 10, f. 4-13-72, ef. 5-1-72; DC 12-1981, f. 9-29-81, ef. 10-1-81; DC 10-1982, f. & ef. 3-1-82; Renumbered from 814-022-0115; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-260-0170

### 918-282-0160

#### Limited Supervising Electrician License

(1) A limited supervising electrician may:

(a) Direct, supervise, make or control the making of electrical installations limited to installation, maintenance, replacement and repair of electrical wiring and electrical products on or in an existing, operable manufacturing or industrial plant, hospital, sewer plant, water plant, commercial office building, building owned or operated by the state or a local government facility designated by the board or an institution owned or operated by the licensee's employer; and

(b) Design, plan and lay out work for the employer; and

(c) Shall sign all permits;

(d) Shall ensure electrical installations meet minimum safety standards; and

(e) Is not authorized to install or perform work on service equipment.

(2) License and Equivalent Requirements. The four-year experience requirement can be met by four years of experience as a limited journeyman manufacturing plant electrician.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0890; BCA 28-1989, f. & ef. 12-7-89; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0100

### 918-282-0170

#### General Journeyman License

(1) A general journeyman:

(a) Is authorized to make any electrical installation; and

(b) Shall work under the supervision, direction and control of a general supervising electrician unless doing the type of work that may be supervised, directed or controlled by a person holding a specific limited supervising electrician license, or the type of work requiring no supervision.

(2) A general journeyman working in a manufacturing or industrial plant without a supervising electrician or engineer is limited to maintenance work.

(3) License and Equivalent Requirements.

(a) Applicants for acceptance under equivalent requirements shall show proof of the following work categories and minimum hours of on-the-job training or experience:

(A) Stock room and material handling, 100 hours:

(i) Shop;

(ii) Service.

(B) Residential Wiring, 1,000 hours:

(i) Service and panel;

(ii) Conduit, flex, romex boxes, electric heating systems;

(iii) Wire pulling and taps;

(iv) Wiring devices and fixtures;

(v) Remodel and finish work.

(C) Commercial Installations, 1,000 hours:

(i) Services, switchboards and panels;

(ii) Conduit, flex, metal moldings, floor duct and boxes;

(iii) Wire pulling and taps;

(iv) Wire devices;

(v) Lighting fixtures — high voltages, explosion proof, perimeter lighting.

(D) Industrial Installations, 1,000 hours:

(i) Services, switchboards and panels;

(ii) Conduit, tray and boxes;

(iii) Wire pulling and taps;

(iv) Motor and equipment installations;

(v) Lighting fixtures — High voltage, explosion proof, security lighting.

(E) Intercommunication, Signal and Control Systems, 500 hours;

(F) Underground Construction, 100 hours:

(i) Tunnel rack work;

(ii) Ditch digging and material handling;

(iii) Conduit preparation.

(G) Trouble Shooting and Maintenance, 250 hours;

(H) Finishing and Fixture Hanging, 50 hours;

(I) Total Minimum Subject Hours, 4,000.

(b) Total Hours Required. Total electrical work experience shall be at least 8,000 hours. No more than 300 percent credit shall be allowed for subjects (A) through (H) for any one subject;

(c) Related Training Classes. Applicants shall submit transcripts with passing grades of "C" or better in graded

classes and a “pass” in non-graded classes in the following related electrical training classes:

- (A) Electrical mathematics;
- (B) Safety and accident prevention;
- (C) Care and use of hand and power tools;
- (D) Blueprint reading and electrical symbols;
- (E) Introduction to National Electrical Code;
- (F) Electrical fundamentals and basic theory, including AC and DC;
- (G) Electrical measuring devices;
- (H) Wiring methods;
- (I) Low voltage and limited energy circuits;
- (J) Residential, industrial and commercial calculations;
- (K) Motors, generators and transformers;
- (L) Practical circuit sketching;
- (M) Lighting circuits;
- (N) Fundamentals of electronics;
- (O) High voltage distribution and equipment.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0900; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0110; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00

### 918-282-0180

#### Limited Residential Electrician License

- (1) A limited residential electrician:
  - (a) Makes electrical installations on one- or two-family or multifamily dwelling units, not exceeding three floors above grade; and
  - (b) Shall work under the supervision, direction and control of a general supervising electrician.
- (2) License and Equivalent Requirements.
  - (a) Applicants for acceptance under equivalent requirements shall show proof of the following work categories and minimum hours of on-the-job training or experience:
    - (A) Stock room and Material handling, 100 hours:
      - (i) Shop;
      - (ii) Service.
    - (B) New Residential Wiring, 2,000 hours:
      - (i) Service and panel;
      - (ii) Conduit, flex, romex boxes, electric heating systems;
      - (iii) Wire pulling and taps.
    - (C) Intercommunication, Signal and Control System, 50 hours;
    - (D) Underground Installation, 100 hours:
      - (i) Ditch digging;
      - (ii) Material handling;
      - (iii) Conduit preparation.

- (E) Trouble shooting, 200 hours;
- (F) Remodeling, 500 hours;
- (G) Finishing and Fixture Hanging, 200 hours.
- (b) Total Hours Required. Total electrical work experience shall be at least 4,000 hours. No more than 300 percent credit shall be allowed for subjects (A) through (G) for any one subject;
- (c) Related Training Classes. Applicants shall submit transcripts with passing grades of “C” or better in graded classes and a “pass” in non-graded classes in the following related electrical training classes:
  - (A) Electrical mathematics;
  - (B) Safety and accident prevention;
  - (C) Care and use of hand and power tools;
  - (D) Blueprint reading and electrical symbols;
  - (E) Introduction to **National Electrical Code**;
  - (F) Electrical fundamentals and basic theory, including AC and DC;
  - (G) Electric measuring devices;
  - (H) Wiring methods;
  - (I) Low voltage and limited energy circuits;
  - (J) Residential calculations;
  - (K) Basics of motors, generators and transformers;
  - (L) Practical circuit sketching;
  - (M) Lighting circuits;
  - (N) Fundamentals of electronics;
  - (O) High voltage distribution and equipment.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0910; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0120; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00

### 918-282-0185

#### Limited Elevator Journeyman License

- (1) A limited elevator journeyman:
  - (a) Shall be employed by an appropriately licensed electrical contractor under ORS Chapter 479;
  - (b) Is limited to electrical and mechanical work on elevators. This work is limited to the wiring from the load side of the main disconnecting means for the elevator; and
  - (c) Shall not exceed the scope of work authorized by the employer’s license.
- (2) License Requirements. Applicants shall:
  - (a) Have a minimum of 8,000 aggregate hours of lawfully obtained on-the-job training in the elevator industry installing, repairing, altering and maintaining elevator mechanical and electrical equipment; and
  - (b) Complete a Board approved limited elevator journeyman apprenticeship program.
- (3) Applicants are required to provide documentation of work categories and minimum hours in:

- (a) Basic construction and maintenance safety and tools — 250 hours;
  - (b) Blue print reading — 250 hours;
  - (c) Material handling — hoisting and rigging — 500 hours;
  - (d) Guide rail systems installation and maintenance — 400 hours;
  - (e) Drive machines and systems; overhead equipment including beams and sheaves — 800 hours;
  - (f) Hydraulic systems and control valves — 800 hours;
  - (g) Car frames, platforms and enclosures — 500 hours;
  - (h) Doors, entrances and operators — 500 hours;
  - (i) Construction wiring and practices — 800 hours; and
  - (j) Adjusting elevator systems — 200 hours;
  - (k) Maintenance, circuit tracing, trouble-shooting, test equipment, periodic testing requirements — 1,000 hours;
  - (l) Alteration of existing equipment — 1,000 hours;
  - (m) Structure and operation of escalators and moving walks — 500 hours; and
  - (n) Related industry equipment — 500 hours.
- (4) Additionally applicants shall submit transcripts with passing grade of 70-percent or better in graded classes and a “pass” in nongraded classes in the following related training classes:
- (a) Basic construction and maintenance safety;
  - (b) Blueprint reading;
  - (c) Code-related requirements;
  - (d) Equipment testing procedures;
  - (e) Guide rail systems installation and maintenance;
  - (f) Pit equipment and maintenance;
  - (g) Car frames, platforms and enclosures;
  - (h) Hoisting and rigging;
  - (i) Overhead equipment including beams and sheaves;
  - (j) Hoist ropes and roping procedures;
  - (k) Structure and operation of escalators and moving walks;
  - (l) Drive machines and components;
  - (m) Hydraulic systems and control valves;
  - (n) Traction machines and components;
  - (o) Basic electrical theory;
  - (p) Circuit tracing;
  - (q) Basic electronics and solid state theory;
  - (r) Construction wiring and practices; and
  - (s) Electrical code and safety training.

Stat. Auth.: ORS 479.630

Stats. Implemented: ORS 479.630

Hist.: BCD 21-2002(Temp), f. 8-30-02, cert. ef. 9-1-02 thru 2-27-03; BCD 34-2002, f. 12-20-02, cert. ef. 1-1-

03; BCD 12-2004, f. 8-20-04, cert. ef. 10-1-04; BCD 13-2006, f. 9-29-06, cert. ef. 10-1-06

### 918-282-0190

#### Limited Journeyman Manufacturing Plant Electrician License

(1) A limited journeyman manufacturing plant electrician:

(a) Installs, maintains, replaces and repairs electrical wiring and electrical products on or in an existing and operable manufacturing or industrial plant owned or used by the licensee’s employer; and

(b) Is limited to repair and maintenance work if no supervising electrician or engineer is employed.

(2) License and Equivalent Requirements.

(a) Applicants for acceptance under equivalent requirements shall show proof of the following work categories and minimum hours of on-the-job training or experience:

(A) Installation of electrical circuits, 1,000 hours;

(B) Motors and generators, 500 hours:

(i) Dismantling and checking physical conditions;

(ii) Assembly and testing;

(iii) Repair and maintenance;

(iv) Internal and external connections to change direction of rotation and speed and for change of supply of voltage;

(v) Motor setting, drives, pulley, gears, coupling devices;

(vi) Related mechanical equipment: Traction units, cranes, winches and hoists.

(C) Manual and automatic controls, including magnetic and solid state, 1,000 hours;

(D) Trouble Shooting, 500 hours:

(i) Circuit analysis;

(ii) Use of test equipment;

(iii) Emergency repairs for temporary maintenance of service.

(E) Power distribution, 1,000 hours:

(i) Inside and outside, high and low voltage distribution systems, maintenance and replacement;

(ii) Transformer connecting, testing and repairing;

(iii) Switch gear and load centers, maintenance and repair;

(iv) Wiring, maintenance, repair and adjustment of control panels, instruments and relays.

(b) Total Hours Required. Total experience shall be at least 8,000 hours. No more than 300 percent credit shall be allowed for subjects (A) through (E) for any one subject.

(c) An applicant may substitute up to 1,000 hours of experience of any two or more of the following, provided the hours in any one subject are at least the minimum specified. Substituted experience shall be only for work experience beyond the 4,000-hour minimum category hours:

(A) Welders, welding, 100 hours:

(i) Soldering, brazing, welding (acetylene);

(ii) Welding (electric);

(iii) Maintenance and repair of welding equipment.

(B) Electric furnaces, 200 hours:

- (i) Forming electrodes;
- (ii) Mounting and connecting electrodes;
- (iii) Operation of equipment;
- (iv) Controls.

(C) Rectifiers, 100 hours:

- (i) Installing, replacing and testing rectifier units;
- (ii) Repairing related equipment.

(D) Meters, 100 hours:

- (i) Testing meters;
- (ii) Rebuilding meters;
- (iii) Minor repairs;
- (iv) Installation;
- (v) Calibration.

(E) Batteries, 100 hours:

- (i) Handling, testing, storing, maintenance;
- (ii) Minor repairs, terminals, case electrolyte;
- (iii) Rebuilding.

(F) Signal systems, 100 hours:

- (i) Installations;
- (ii) Testing;
- (iii) Service (minor);
- (iv) Overhaul.

(G) Lighting, 300 hours:

(i) Maintenance of indoor and outdoor lighting, general and special;

(ii) Set-up, operation, maintenance, dismantling, and storing of temporary and emergency lighting and portable power plants.

(d) Related Training Classes. Applicants shall submit transcripts with passing grades of "C" or better in graded classes and a "pass" in non-graded classes in the following related electrical training classes:

- (A) Electrical mathematics;
- (B) Safety and accident prevention;
- (C) Care and use of hand and power tools;
- (D) Blueprint reading and electrical symbols;
- (E) Introduction to **National Electrical Code**;
- (F) Electrical fundamentals and basic theory, including AC and DC;
- (G) Electric measuring devices;
- (H) Wiring methods;
- (I) Low voltage and limited energy circuits;
- (J) Industrial and commercial calculations;
- (K) Motors, generators and transformers;
- (L) Practical circuit sketching;
- (M) Lighting circuits;
- (N) Fundamentals of electronics;
- (O) Welding and cutting;
- (P) High voltage distribution and equipment.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0920; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0130; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00

### 918-282-0200

#### Indorsement for Manufacturing Plant Electricians

(1) Scope and Authority. The purpose of this rule is to allow manufacturing plant electricians to be employed by a general electrical contractor only when necessary to allow the plant owner or operator to change their method of maintaining their plant and equipment. This rule is adopted under ORS 479.630.

(2) For the purposes of this rule a:

(a) "General electrical contractor" is an electrical contractor employing a general supervising electrician;

(b) "Manufacturing plant" is the owner or operator of a manufacturing or industrial plant;

(c) "Manufacturing plant electrician" is a limited supervising electrician, limited journeyman manufacturing plant electrician or limited maintenance electrician whose license is authorized by ORS 479.630 and an apprentice, training for an applicable manufacturing plant electrician license.

(3)(a) A licensed manufacturing plant electrician, having specialized training to repair and maintain electrical systems and equipment owned or operated by the manufacturing plant, may be issued an indorsement to the electrician's license. This indorsement authorizes employment by an identified general electrical contractor and performance of electrical work consistent with the manufacturing plant electrician's license only at the premises of the identified manufacturing plant if the requirements of subsection (c) of this section are met;

(b) An apprentice manufacturing plant electrician at a manufacturing plant may be issued an indorsement authorizing employment by a general electrical contractor for continuance of the apprenticeship training at the premises of the identified manufacturing plant if the requirements of subsection (c) of this section are met;

(c) The indorsement in subsections (a) and (b) of this section may be granted if:

(A) The manufacturing plant:

(i) Chooses to contract all plant maintenance to one or more contractors;

(ii) Provides electrical maintenance through a general electrical contractor; and

(iii) Agrees to inform the division if it decides to again provide its own electrical maintenance and offer reemployment to the manufacturing plant electricians.

(B) The electrical contractor:

(i) Hires all of the manufacturing plant electricians who receive indorsements under this rule who want to continue working at the same facility;

(ii) Uses those electricians for substantially the same work being done by them for the same manufacturing plant facilities, provided this is within the scope of the license;

(iii) Keeps on file with the division, with annual updates, the names and status of all manufacturing plant electricians employed by the contractor and assigned to the account of the plant;

(iv) Continues electrical apprenticeship undertakings of the manufacturing plant for all electrical apprentices indorsed under this rule; and

(v) Retains or assigns, as needed, a separate supervising electrician, general or limited as required, to the account of the specific manufacturing plant for each plant or cluster of plants within a 20-mile area.

(4) This rule does not authorize a general electrical contractor to hire a manufacturing plant electrician who is not issued an indorsement under this rule.

(5) No indorsement shall be issued under this rule until after consultation with the board concerning the facts and circumstances of the proposed transaction by the manufacturing plant and receipt of an affirmative recommendation.

(6)(a) The indorsement terminates automatically, if:

(A) The underlying license is revoked, expires or is not timely renewed;

(B) The employment between the electrician and the contractor is terminated; or

(C) The agreement between the manufacturing plant and contractor is terminated.

(b) The indorsement does not terminate if the manufacturing plant hires electrical contractors in addition to the contractor covered under the indorsement.

(7) If a new electrical contractor is hired by the manufacturing plant to replace the electrical contractor covered by the indorsement, the manufacturing plant electricians are required to seek a new indorsement.

(8)(a) Notwithstanding any requirements to the contrary, any manufacturing plant apprentice who receives an indorsement and is transferred to a general electrical contractor under this rule is entitled to become a manufacturing plant electrician upon successful completion of apprenticeship training and passing relevant examinations;

(b) When the apprentice working under an indorsement becomes a manufacturing plant electrician, the prior indorsement continues; and

(c) The indorsement is continued for any other manufacturing plant electrician whose license is upgraded within the manufacturing plant electrician category.

Stat. Auth.: ORS 479.630

Stats. Implemented: ORS 479.730

Hist.: BCD 1-1995, f. & cert. ef. 2-9-95; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0185

### 918-282-0205

#### Limited Renewable Energy Technician

(1) In addition to the requirements of ORS 479.630(16), a limited renewable energy technician shall be employed by a limited renewable energy contractor or electrical contractor.

(2) Persons seeking to be licensed under this rule shall provide proof of completion of a board-approved apprenticeship program that includes:

(a) A minimum of 4,000 hours of on-the-job training in the following work areas:

(A) 1,500 hours total with a minimum of 1,000 hours in photovoltaics and a minimum of 500 hours in other renewable electrical energy system installations, including, but not limited to:

(i) Wire pulling and splices;

(ii) Conduit, flex, tray and duct;

(iii) Control panels and controls;

(iv) Wiring devices; and

(v) Removal and finish work of renewable electrical energy systems including wind, solar, micro-hydroelectricity, photovoltaic, fuel cells and engine generators for off-grid systems;

(B) 1,500 hours minimum in balance of system including, but not limited to, installation, removal and finish of inverters, batteries, regulation, metering, conditioning equipment and systems; and

(C) 1,000 hours in other related on-the-job training including, but not limited to:

(i) National Electrical Code requirements for design of system;

(ii) Troubleshooting;

(iii) Maintenance; and

(iv) Plan/blueprint reading; and

(b) A minimum of 288 hours of classroom or related training covering:

(A) Electrical mathematics;

(B) Safety and accident prevention;

(C) Care and use of hand and power tools;

(D) Blueprint reading and electrical symbols;

(E) Introduction to the **National Electrical Code**;

(F) Electrical fundamentals and basic theory, including alternating and direct current;

(G) Electrical measuring devices;

(H) Wiring methods;

(I) Related electrical statutes and rules;

(J) Fundamentals of electronics;

(K) Renewable electrical energy systems including, but not limited to, systems and devices as set forth in ORS 479.630(16)(b)(A);

(L) Class 2 and 3 circuits; and

(M) Basic mechanics -- applied physics and theory.

Stat. Auth.: ORS 479.630  
 Stats. Implemented: ORS 479.630  
 Hist.: BCD 9-2002, f. 3-29-02, cert. ef. 4-1-02; BCD  
 13-2006, f. 9-29-06, cert. ef. 10-1-06

**918-282-0210**

**Limited Journeyman Railroad Electrician License**  
**Repealed** BCD 16-2007, f.12-28-07, cert. ef. 1-1-08

**918-282-0220**

**Limited Journeyman Sign Electrician License**

- (1) A limited journeyman sign electrician:
- (a) Installs and services electrical signs and outline lighting;
  - (b) Shall be employed by a limited sign contractor;
  - (c) May extend a sign branch circuit not more than 15 feet if the dedicated branch circuit exists at that location; and
  - (d) Is not permitted to:
    - (A) Install a branch circuit from an electrical panel;
    - (B) Install control equipment not located on the same wall or post, inside or outside the building;
    - (C) Install branch circuits; or
    - (D) Perform work on service equipment.
- (2) A licensed apprentice, after completing the sixth period of apprenticeship training, may service signs without supervision. "Servicing" is the replacement of incandescent, high intensity discharge and fluorescent lamps and cleaning and painting the sign interior.
- (3) This license is not required to install the footing or pole, or to operate the equipment required to access or set in place an electric sign, or to clean and paint the sign exterior.
- (4) License and Equivalent Requirements. Applicants for acceptance under equivalent requirements shall show proof of the following work categories and minimum hours of on-the-job training or experience:
- (a) Stock room and material handling, 100 hours;
  - (b) Pattern and blueprints, 150 hours;
  - (c) Layout design, 500 hours;
  - (d) Assembly of display, 1,000 hours;
  - (e) Display painting and component parts, 250 hours;
  - (f) Display installation, service and maintenance, 1,250 hours; and
  - (g) Transportation and hoisting equipment maintenance and repair, 750 hours.
- (h) Related Training Classes. Applicants shall submit transcripts with passing grades of "C" or better in graded classes and "pass" in non-graded classes in the following related electrical training classes pertaining to sign installation:
- (A) Electrical fundamentals and basic theory;
  - (B) Wiring methods, under 600 volts nominal;

- (C) Wiring methods, over 600 volts nominal;
- (D) Conduit systems, raceways and boxes; and
- (E) Introduction to the National Electrical Code.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0940; BCD 119-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0150; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00; BCD 16-2007, f. 12-28-07, cert. ef. 1-1-08

**918-282-0230**

**Limited Journeyman Stage Electrician License**

- (1) A limited journeyman stage electrician:
- (a) Shall be employed by an electrical contractor;
  - (b) Shall only install temporary feeders, branch circuits and equipment used for the production of shows, exhibits, displays, festivals, conventions, stage, theater, film or video productions;
  - (c) Shall be authorized to perform maintenance on temporary equipment designed to be accessed by qualified personnel such as, but not limited to, electronic dimmers, pendant drops, cords, connectors, theatrical and film and video lighting fixtures operating at not more than 150 volts to ground; and
  - (d) Is not authorized to install or extend permanent wiring of the structures involved, or install, maintain or repair service conductors or service equipment.
- (2) License and Equivalent Requirements. Applicants for acceptance under equivalent requirements shall show proof of the following work categories and minimum hours of on-the-job training or experience:
- (a) Stage/film and video/event lighting, 750 hours;
  - (b) Stage/film and video/event dimmer distribution and applications, 250 hours;
  - (c) Three-phase temporary power distribution and power sources including service disconnects and generators, 500 hours;
  - (d) Stage/film and video lamp operator, 500 hours;
  - (e) Set construction, installation, maintenance and repair, 1,000 hours, a minimum of which shall be:
    - (A) Stockroom, 50 hours;
    - (B) Troubleshooting, 50 hours;
    - (C) Pre-rigging/rigging, 50 hours;
    - (D) Transportation and hoisting, 50 hours;
    - (E) Layout and design, 50 hours;
    - (F) Pattern and blueprint, 50 hours.
  - (f) Stage/film and video/event property, 1,000 hours, a minimum of which shall be:
    - (A) Repair of related equipment, 125 hours;
    - (B) Troubleshooting, 125 hours;
    - (C) Maintenance of related equipment, 125 hours.
  - (g) A minimum of 150 electrical-related training hours during the course of an apprenticeship or approved training program.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0950; BCA 11-1992, f. & cert. ef. 6-26-92; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0160; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00; BCD 22-2001, f. 12-28-01, cert. ef. 1-1-02; BCD 11-2005, f. 6-7-05, cert. ef. 7-1-05

### 918-282-0240

#### Limited Maintenance Electrician License

(1) A limited maintenance electrician:

(a) Maintains, repairs and replaces electrical installations on the premises of an industrial plant where the individual is employed;

(b) Maintains, repairs and replaces electrical installations on systems that are less than 600 volts phase to phase on the premises of a commercial office building, a building occupied by the state or by a local government entity or a facility designated by the board, where the individual is employed; and

(c) Is not authorized to make any new electrical installations or to perform any work on services.

(2) License and Equivalent Requirements. Applicants who did not complete an approved apprenticeship program shall verify 4,000 hours of on-the-job training or experience for the following work categories and minimum hours:

(a) Motors, generators and heating equipment, 500 hours;

(A) Assembly and testing;

(B) Repair and maintenance;

(C) Internal and external connections to change direction of rotation, speed and supply voltage;

(D) Motor setting, drives, pulleys, gears and coupling devices;

(E) In-place motor cleaning (maximum 100 hours credit);

(b) Controls, manual and automatic, including magnetic and solid state, 1,000 hours;

(c) Trouble shooting, 1,000 hours;

(d) Power distribution, inside and outside, high and low voltage distribution systems, maintenance and replacement, 500 hours;

(e) Lighting, 500 hours;

(f) Electrical oriented drawings, 100 hours;

(g) Total Hours Required. The minimum work hours under each subject shall not be less than the hours specified. No more than 300 percent credit shall be allowed under subjects (a) through (f) for any one subject;

(h) The applicant's on-the-job training or work experience shall be supervised by a:

(A) General supervising electrician;

(B) Limited supervising manufacturing plant electrician;

(C) General journeyman electrician;

(D) Limited journeyman manufacturing plant electrician; or

(E) Limited maintenance electrician;

(i) Required Educational Training. Applicants shall submit transcripts verifying successful completion, with passing grades of "C" or better in graded classes and a "pass" in non-graded classes, in the following subject areas:

(A) Electricity and electronics;

(B) Fundamental mechanical principles;

(C) Mathematics of the trade;

(D) Instrumentation and controls;

(E) Federal, state and local electrical laws, codes and rules;

(F) Blueprint reading, electrical drawing, pictorial, block, one-line and schematic drawings;

(G) Industrial electrical safety; and

(H) Certified cardiopulmonary resuscitation (CPR) course.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.630

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0970; BCD 8-1996(Temp), f. & cert. ef. 6-14-96; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0180; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00; BCD 16-2007, f. 12-28-07, cert. ef. 1-1-08

### 918-282-0250

#### Limited Maintenance Manufactured Structures Electrician

(1) A limited maintenance manufactured structures electrician:

(a) Is authorized to repair or maintain electrical wiring and equipment used in manufactured structures (manufactured dwellings and recreational vehicles) as defined in ORS 446.003; and

(b) Is not authorized to make new electrical installations or alterations of electrical wiring or equipment.

(2) "Repair" as used in this rule includes replacement.

(3) License and Equivalent Requirements. Applicant shall provide verified experience of:

(a) Two years of experience consisting of at least 4,000 hours in repair and maintenance of electrical problems of the type and nature found in manufactured structures while in the employment of a manufactured structures manufacturer, or performing similar work regardless of employment status, under federal preemption by the Manufactured Home Construction and Safety Standards Act of 1974, **42 USC Section 5401** and following sections, and the Manufactured Home and Construction and Safety Standards in **24 CFR Section 3280.801** dated October 25, 1995, and following sections, and **3282.401** to **3282.416** dated January 15, 1992;

(b) Two years employment as a limited maintenance manufactured structures trainee with a licensee or employer of a licensee;

(c) A combination of subsections (a) and (b) of this section equaling two years; or

(d) Equivalent experience equaling two years.

(4) A person may be employed as a limited maintenance manufactured structures electrical trainee provided all of the following conditions are met:

(a) The person only performs electrical work in the physical presence of the licensee;

(b) The number of trainees does not exceed the number of fulltime licensees;

(c) The employer and trainee enter into a training program where the employer commits to provide education, training and experience for the person to qualify; and

(d) The person submits a copy of the training program and name of trainee to the division.

(5) The examination shall cover applicant's knowledge of basic electrical principles of repair and maintenance of electrical wiring and equipment used in a manufactured structure.

(6) This license is not required to perform electrical work on manufactured structures federally preempted by the Manufactured Home Construction and Safety Standards Act of 1974, **42 USC Section 5401** and following sections and the Manufactured Home and Construction and Safety Standards in **24 CFR Section 3280.801** dated October 25, 1995, and following sections, and **3282.401** to **3282.416** dated January 15, 1992.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 446.210 & 479.730

Stats. Implemented: ORS 446.210

Hist.: BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96

### 918-282-0260

#### Limited Building Maintenance Electrician License

(1) A limited building maintenance electrician:

(a) Is authorized to maintain, repair and replace the following electrical installations required on the premises of commercial office buildings, buildings occupied by the state or a local government entity or facilities designated by the board in electrical systems not exceeding 300 volts to ground:

(A) Electrical appliances;

(B) Light switches;

(C) Light fixtures;

(D) Fans;

(E) Receptacles; and

(F) Fluorescent ballasts.

(b) May be employed by the owner of a commercial office building or the owner's agent, neither of whom need to be licensed.

(2) Qualification Based on Employment and Experience Gained Prior to July 1, 1995. Prior to

August 1, 1998, an applicant can qualify by submitting independent documentation of at least one year of commercial office building maintenance experience, provided the experience was gained prior to July 1, 1995, and by passing a written examination. No applications shall be received under this section after August 1, 1998.

(3) License and Equivalent Requirements. The equivalent standards adopted by the board under ORS 479.630 include:

(a) Work Categories and Minimum Hours. Applicants who did not complete an approved training program must verify 2,000 hours of on-the-job training or experience in maintenance, repair and replacement for the following work categories and minimum hours:

(A) Electrical appliances, 100 hours;

(B) Light switches, 250 hours;

(C) Light fixtures, 200 hours;

(D) Fans, 100 hours;

(E) Receptacles, 250 hours; and

(F) Fluorescent ballasts, 300 hours.

(b) Total Hours Required. The minimum work hours under each subject shall not be less than the hours specified. No more than 300 percent credit shall be allowed for subjects (A) through (F) for any one subject.

(4) Required Educational Qualification by Training.

(a) Applicants shall attend 16 hours of approved electrical safety training before commencing any on-the-job activities or additional electrical training.

(b) Required Electrical Training. Applicants shall submit transcripts verifying successful completion, with passing grades, in the following subject areas:

(A) Basic electricity;

(B) Sources of electricity;

(C) Building electrical service;

(D) Measuring electrical energy consumption and electrical circuits;

(E) Protective devices (fuses and circuit breakers) and electrical symbols;

(F) Electrical conductors, insulation and raceways;

(G) Electrical boxes, receptacles, switches and solenoids;

(H) Motors and starters, maintenance and safety;

(I) Electrical testing meters;

(J) Basics of lighting;

(K) Light sources, fixtures and maintenance;

(L) Maintenance and safety;

(M) Scope of work allowed; and

(N) Applicable sections of the **Oregon Electrical Specialty Code**.

(c) Prior to performing any unsupervised electrical work as a trainee, applicant shall have a minimum of 80 hours of approved on-the-job training under the supervision of a competent licensed electrician whose scope of license allows all of the electrical activities of a limited building maintenance electrician, provided the training covers each of the electrical installations in subsection (3)(a) of this section.

(d) For the purposes of this section the following licensees can be the training electrician: General supervising electrician, limited supervising electrician, general journeyman, limited manufacturing plant journeyman, limited maintenance electrician and limited building maintenance electrician which includes a person licensed under section (2) of this rule.

(5) Definitions.

(a) "Commercial Office Building" is a building of which 75 percent or more of the office area is used for professional or service transactions, including storage of records. For the purpose of determining "office area," stairways, hallways, rest rooms and vehicle parking are excluded;

(b) "Government Building" means a building, or portion thereof, which is owned, leased or rented and used by the state or any county, municipality or other political subdivision of the state; and

(c) "Owner's Agent" means the owner's employee, or other person or entity under contract, who oversees the daily maintenance of the owner's property.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.630

Hist.: BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; BCD 16-1997, f. 9-30-97, cert. ef. 10-1-97; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00

### 918-282-0270

#### Apprentices

(1) An apprentice:

(a) Shall meet the following minimum requirements:

(A) General journeyman, Class A limited energy technician and Class B limited energy technician:

(i) Be 17 years of age to apply, 18 years of age to indenture;

(ii) Have a high school diploma, GED, or international equivalency; and

(iii) Have one-year high school algebra, integrated math 2 or its equivalent, with a grade of "C" or better, or equivalent community college mathematics placement test results.

(B) Limited journeyman manufacturing plant, limited maintenance, limited journeyman sign, limited journeyman stage and limited renewable energy technician:

(i) Be 17 years of age to apply, 18 years of age to indenture;

(ii) Have a high school diploma, GED or international equivalency; and

(iii) Have one-year high school mathematics with a passing grade, or equivalent community college mathematics placement test results;

(C) Limited residential:

(i) Be 17 years of age to apply, 18 years of age to indenture;

(ii) Have a high school diploma, GED, or international equivalency; and

(iii) Have one-year high school algebra, integrated math 2 or its equivalent, with a grade of "C" or better, or one-year high school math and completion of an algebra course as part of an approved apprenticeship program, with a grade of "C" or better, or equivalent community college mathematics placement test results.

(b) Shall be licensed;

(c) Assists a journeyman, general supervising electrician, limited renewable energy technician or limited residential electrician on the same job site and the same shift in performing electrical work authorized in the trade, or branch of the trade, in which the licensee is indentured; and

(d) Is not authorized to perform electrical work under a person holding a letter of authority card issued to State of Oregon employees.

(2) Apprentice licenses:

(a) Shall be issued to individuals enrolled in formal electrical apprenticeship programs recognized by the board and the Oregon Bureau of Labor and Industries under ORS Chapter 660; and

(b) May be issued to trainees enrolled in individually approved, employer-sponsored training programs leading to the limited journeyman license in OAR 918-282-0190. Individuals enrolled in these programs may be issued an electrical apprentice license only if the employer's program is approved by the board.

(3) Notwithstanding subsection (1)(c) of this rule, a final term apprentice with at least 6,500 hours of on-the-job training may work under indirect supervision at the discretion of the responsible supervisor on projects not exceeding eight hours duration and limited to 300 volts phase to phase or phase to ground.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.730

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0980; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0190; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00; BCD 23-2001(Temp), f. 12-28-01, cert. ef. 1-1-02 thru 6-29-02; BCD 9-2002, f. 3-29-02, cert. ef. 4-1-02; BCD 23-2002, f. 9-13-02 cert. ef. 10-1-02; BCD 2-2008, f. 2-21-08, cert. ef. 4-1-08

### 918-282-0280

#### Temporary Apprentice License

(1) A temporary electrical apprentice:

(a) Performs electrical work as a helper, learner or trainee not licensed or required to be licensed;

(b) Assists journeymen or general supervising electricians in electrical work within the State of Oregon at a specific job location for a period not exceeding 180 days;

(c) Shall be currently indentured in an approved apprenticeship training program outside Oregon; and

(d) Has been recommended through the state apprenticeship reciprocal agreement dated April 20, 1996, adopted by the Oregon Bureau of Labor and Industries.

(2) Upon written authorization from the Oregon Bureau of Labor and Industries Apprenticeship and Training Division, the division shall issue a temporary apprentice license showing the dates of temporary employment expiring 180 days from the date of issuance.

Stat. Auth.: ORS 479.630(14) & 479.680

Stats. Implemented: ORS 479.630 & 479.680

Hist.: DC 15-1987, f. & ef. 5-15-87; Renumbered from 814-022-0990; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-320-0200

#### **918-282-0290**

##### **Elevator Apprenticeship Program**

The National Elevator Industry Educational Program (NEIEP) approved by the Elevator Safety Board, now the Electrical and Elevator Board, is approved as an elevator apprenticeship program referred to in ORS 479.630 as a prerequisite for a limited journeyman elevator license.

Stat. Auth.: ORS 460.085 & 479.730

Stats. Implemented: ORS 460.085

Hist.: DC 13-1983, f. & ef. 6-17-83; Renumbered from 814-022-0030; BCD 19-1996, f. 9-17-96, cert. ef. 10-1-96; Renumbered from 918-250-0040; BCD 23-2000, f. 9-29-00, cert. ef. 10-1-00; BCD 21-2002(Temp), f. 8-30-02, cert. ef. 9-1-02 thru 2-27-03; BCD 34-2002, f. 12-20-02, cert. ef. 1-1-03; BCD 12-2004, f. 8-20-04, cert. ef. 10-1-04

#### **918-282-0300**

##### **Class I Oil Module Electrician License**

**Repealed** BCD 16-2007, f. 12-28-07, cert. ef. 1-1-08

#### **918-282-0310**

##### **Class II Oil Module Electrician License**

**Repealed** BCD 16-2007, f. 12-28-07, cert. ef. 1-1-08

#### **Limited Energy Licensing**

#### **918-282-0345**

##### **Class "A" Limited Energy Technician License**

Scope of work. A Class "A" limited energy technician:

(1) Is allowed to install, alter and repair all limited energy systems; and

(2) Shall also be licensed as an electrical contractor or shall work for a licensed electrical contractor, limited energy electrical contractor, or for one employer in an industrial plant.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.905, 479.910 & 479.915

Hist.: BCD 23-2002, f. 9-13-02 cert. ef. 10-1-02

#### **918-282-0355**

##### **Licensing Requirements for Class "A" Limited Energy Technician**

(1) License and Equivalent Requirements. Applicant shall have a minimum of 6,000 hours of lawfully obtained experience. Experience must be verified as established in OAR division 30. This experience shall be obtained as follows

(a) By successful completion of a board-approved Class "A" limited energy apprenticeship program; or

(b) Through limited energy electrical experience equivalent to a Class "A" board-approved limited energy apprenticeship program.

(2) Persons utilizing lawful experience may meet equivalent experience requirements by providing verification as required by OAR 918-030-0030 through 918-030-0050.

(3) Applicants for approval under equivalent requirements must show proof of the following work categories and minimum hours of on the job training or experience:

(a) Stock room and materials, 150 hours:

(A) Shop;

(B) Service;

(b) Limited energy wiring, 2,400 hours:

(A) Installation;

(B) Wire pulling;

(C) Splices;

(D) Conduit;

(E) Flex;

(F) Tray and duct;

(G) Control panels and controls;

(H) Wiring devices;

(I) Removal and finish work;

(c) Trouble shooting and maintenance, 375 hours;

(d) Outdoor installation, overhead and underground, 75 hours; and

(e) Trade-specific installations, 3,000 hours of which at least 750 hours must be from paragraph (A) below:

(A) Protective signaling, including but not limited to;

(i) Fire alarm;

(ii) Nurse call;

(iii) Security;

(B) Medical;

(C) Data and telecommunications;

(D) CCTV, paging and sound;

(E) Instrumentation and HVAC;

(4) Total Hours Required. Total electrical work experience shall be at least 6,000 hours. No more than 300 percent credit shall be allowed in work categories (a) through (d) in Section (3) of this rule.

(5) Related Training Classes. Additionally, applicants shall have a minimum of 432 hours of related classroom training as outlined in the following:

- (a) Electrical mathematics;
- (b) Safety and accident prevention;
- (c) Care and use of hand and power tools;
- (d) Blueprint reading and electrical symbols;
- (e) Introduction to the National Electrical Code;
- (f) Electrical fundamentals and basic theory, including AC and DC;
- (g) Electrical measuring devices;
- (h) Wiring methods;
- (i) Related electrical statutes and rules;
- (j) Fundamentals of electronics;
- (k) Transformers;

Stat. Auth.: ORS 479.730, 183.335

Stats. Implemented: ORS 479.905, 479.910, 479.915 & 183.335

Hist.: BCD 23-2002, f. 9-13-02 cert. ef. 10-1-02; BCD 16-2006(Temp), f. 6-30-06, cert. ef. 7-1-06 thru 12-28-06; BCD 13-2006, f. 9-29-06, cert. ef. 10-1-06; BCD 16-2007, f. 12-28-07, cert. ef. 1-1-08

#### **918-282-0360**

##### **Class "B" Limited Energy Technician**

Scope of work:

(1) A Class "B" limited energy technician is allowed to perform limited energy electrical activity that does not include protective signaling as defined in ORS 479.905.

(2) A Class "B" limited energy technician shall also be licensed as an electrical contractor, work for a licensed electrical contractor, or for one employer in an industrial plant. The scope of limited energy electrical work cannot exceed either that which the signing supervisor is authorized to perform, or that work which the individual is licensed to perform.

Stat. Auth.: ORS 479.730

Stats. Implemented: ORS 479.905, 479.910 & 479.915

Hist.: BCD 23-2002, f. 9-13-02 cert. ef. 10-1-02

#### **918-282-0365**

##### **Licensing Requirements for Class "B" Limited Energy Technician**

(1) License and Equivalent Requirements. Applicant shall have a minimum of 4,000 hours of lawfully obtained experience. Experience must be verified as established in OAR Division 30. This experience shall be obtained as follows:

(a) As an apprentice in a board-approved limited energy electrical activity apprenticeship program; or

(b) Through limited energy activity equivalent to an apprenticeship program, and the completion of a board-approved 32 hour training program.

(2) Persons utilizing lawful experience may meet equivalent experience requirements by providing verification as required by OAR 918-030-0030 through 918-030-0050.

(3) Applicants for approval under equivalent requirements must show proof of the following work categories and minimum hours of on the job training or experience:

(a) Stock room and materials, including shop and service: 100 hours;

(b) Limited energy installations, including cables and supports, wire pulling and splices, conduit, flex, tray and duct, control panels and controls, wiring devices, removal and finish work: 1,650 hours;

(c) Trouble shooting and maintenance: 250 hours; and

(d) Occupation specific applications including 2,000 hours in any of the following:

(A) Communications systems, including data telecommunications, intercom, paging;

(B) Specialized control systems, including HVAC, medical, boiler, clock, instrumentation, or other limited energy systems; and

(C) Limited energy electrical activity defined in ORS 479.905(4).

(4) Total Hours Required. Total electrical work experience shall be at least 4,000 hours. No more than 300 percent credit shall be allowed in work categories (a) through (d) in Section (3) of this rule.

(5) Applicants shall also have a minimum of 288 hours of class or related training covering:

(a) Electrical mathematics;

(b) Safety and accident prevention;

(c) Care and use of hand and power tools;

(d) Blueprint reading and electrical symbols;

(e) Introduction to the National Electrical Code;

(f) Electrical fundamentals and basic theory, including alternating and direct current;

(g) Electrical measuring devices;

(h) Wiring methods;

(i) Related electrical statutes and rules;

(j) Fundamentals of electronics;

(k) Transformers;

(l) Lighting circuits; and

(m) Basic mechanics -- Applied physics and theory.

Stat. Auth.: ORS 479.730 & 183.335

Stats. Implemented: ORS 479.905, 479.910, 479.915 & 183.335

Hist.: BCD 23-2002, f. 9-13-02 cert. ef. 10-1-02; BCD 12-2005(Temp), f. & cert. ef. 6-10-05 thru 12-6-05; Administrative correction 12-20-05; BCD 10-2006 (Temp), f. 6-30-06, cert. ef. 7-1-06 thru 12-28-06; BCD 13-2006, f. 9-29-06, cert. ef. 10-1-06