



CLASSIFICATION NO. 444

Established: 9/89

Revised: 7/94, 5/06

FLSA: Non-Exempt

EEO: 7

## **TRAFFIC SIGNAL ELECTRICIAN**

### **CLASS CHARACTERISTICS**

Under direction, to perform skilled electrical work in the installation, maintenance and repair of traffic signals and street lighting systems in the field or shop; to lead the work of traffic control workers; and to do other work as required.

### **DISTINGUISHING CHARACTERISTICS**

The Traffic Control Section within the Transportation Maintenance Division of the Department of Transportation and Development is responsible for the traffic control devices on County roads. This section performs activities involved in the design, layout, construction, installation and maintenance of all traffic control devices including traffic signs, traffic signals, traffic control lines and symbols, pavement marking and channelization.

The Traffic Signal Electrician designs and installs electrical circuitry and performs preventive and corrective maintenance on electrical equipment and systems. The incumbent may be required to respond to emergencies at any hour of the day or night and in inclement weather.

The Traffic Signal Electrician differs from the Supervising Electrician which provides functional supervision over electrical projects and requires a Supervising Electrician's License. It further differs from the Traffic Signal Technician which maintains and repairs electronic components and systems and does not require a General Journeyman Electrical License.

### **TYPICAL TASKS**

Duties may include but are not limited to the following:

1. Installs, alters and maintains signals and wiring systems, electrical circuits, fixtures and equipment; interprets electrical schematics, plans and specifications; tests continuity of circuits to ensure electrical compatibility and safety of components.
2. Diagnoses malfunctioning traffic signals and other electrical equipment; tests circuits and electric components to locate broken connections and defective current-control mechanisms; detects, replaces and repairs defective parts or modules and electronic relays, switches and circuits to the modular and/or component level.
3. Develops and implements a preventive maintenance schedule; inspects signals for proper operation; tests and adjusts timing functions of traffic signal controllers, emergency preempt systems and auxiliary components.
4. Evaluates and reviews contractor's construction plans and subcontractor installations and repairs of traffic signal equipment and street lighting systems; inspects quality and safety of

work for compliance with specifications and local electrical codes.

5. Leads the work of traffic control workers assisting with signal maintenance; provides daily work direction; assigns and checks completed work; trains employees to install and maintain the electrical and structural components of traffic signal and street lighting systems.
6. Prepares and maintains accurate electrical and signal repair and maintenance records and reports; orders and/or purchases necessary repair materials, parts and components; documents compliance with local and national electrical codes.
7. Installs and maintains building and commercial electrical circuits and equipment as necessary.
8. Operates a variety of specialized equipment, including but not limited to: underground locating equipment, aerial bucket trucks, and/or computers with various traffic signal software programs.

### **REQUIRED KNOWLEDGE AND SKILLS**

Thorough knowledge of: Standard practices, methods, tools and materials of the electrical trade; local, state and national electrical codes; occupational hazards and safety precautions involving electrical work and exposure to moving traffic.

Working knowledge of: Traffic signal and lighting construction and maintenance techniques; electrical, solid-state and electromechanical practices and theory, including solid-state circuitry as applied to traffic signal maintenance and repair; basic supervisory techniques.

Skill to: Maintain and repair wiring and electrical systems and equipment; operate electrical testing and measuring devices; operate power and manual tools standard to electrical trade; use computers with a variety of signal industry software; use pole and line construction equipment; understand and interpret drawings and specifications; prepare and maintain accurate records and reports; understand verbal and written instructions; communicate effectively both orally and in writing; assign, review and train traffic control personnel, establish and maintain cooperative working relationships with County staff, other agency personnel, subcontractors and the public.

### **WORKING CONDITIONS**

Duties require squatting, kneeling, bending, balancing, climbing, digging, fine motor control, accurate color perception, and the ability to lift and carry up to 60 pounds, push 50 pounds, and pull 90 pounds. Duties also involve frequent exposure to electrical hazards, confined spaces, loud noises, exhaust fumes and dust, moving traffic, slippery and/or uneven surfaces, working at heights, and adverse weather conditions.

Must be available for after hours on-call emergency response to traffic signal and intersection warning beacon failures.

### **MINIMUM QUALIFICATIONS**

Minimum qualifications are used as a guide for establishing the minimum experience, education, licensure, and/or certifications required for employment in the classification. The following

minimum qualifications are established for this classification. Additional minimum qualifications and special conditions may apply to a specific position within this classification and will be stated on the job announcement.

**Experience:** None required.

**Licenses/Certifications:**

The following licensure/certifications are required at the time of hire.

- General Journey Level Electrician's License issued by the State of Oregon.

**PRE-EMPLOYMENT REQUIREMENTS**

Driving is required for County business on a regular basis or to accomplish work. Incumbents must possess a valid driver's license. Valid Class B Commercial Driver's License (CDL) with no restrictions in order to drive manual transmission and full air brake vehicles and Hazardous Materials endorsement required within 6 months of hire. Incumbents must possess and maintain an acceptable driving record throughout the course of employment.

Must pass a pre-employment drug test (DOT Regulations for CDL).

Employment is contingent upon passing a post-offer physical assessment. Accommodation requests will be reviewed on an individual basis in compliance with State and Federal legislation.

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