

# **SNOHOMISH COUNTY JOB DESCRIPTION**

## **TRAFFIC SIGNAL TECHNICIAN AND ELECTRICIAN II**

Spec No. 3218

### **BASIC FUNCTION**

To serve as advanced worker in the performance of journey level electrical and electronic work in the design, inspection and servicing of traffic signal and related data communication networks and in the installation, maintenance and repair of electrical systems, conduit, and equipment.

### **STATEMENT OF ESSENTIAL JOB DUTIES**

1. Maintains daily work records and prepares written reports as required, coordinates the preparation and purchase of materials, equipment and labor requirements for needed repairs and maintenance work; resolves technical problems encountered in the work; enforces safety rules and regulations; may provide onsite direction and oversight to subordinate employees as required to ensure that work is carried out according to plans, specifications, work orders and applicable codes.
2. Installs, maintains and repairs traffic control systems; tests and adjusts signal controllers including the phasing, sequencing and timing of signal controllers; tests adjusts and maintains auxiliary components including ITS and other technological improvements.
3. Participates in the design and construction of traffic signal systems including laying out signal head conduit runs and conduit size for roadways intersections, wiring, phasing, timing and loops of traffic signals.
4. Reviews traffic systems designed by consultants for technical adequacy; makes periodic inspections of contractor's work to ensure signal installations are constructed according to plans and specifications.
5. Maintains Public Works electrical machinery and equipment, including radio system equipment.
6. Cleans, paints, repairs and relamps signal heads as necessary; repairs and relamps pedestrian signal heads as necessary; repairs and replaces overhead and underground wires and fiber optic cables as necessary; installs overhead street signs as necessary.
7. Installs, maintains and repairs electrical distribution circuits in a variety of structures including all integral parts such as wiring, switch boxes, light fixtures, outlets and distribution panels.
8. Interprets blueprints, sketches and other instructions; may draw or sketch work to be performed.
9. Installs, tests, terminates and repairs fiber optic cable and auxiliary components.

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#### **STATEMENT OF OTHER JOB DUTIES**

10. May be assigned administrative support responsibilities, as needed.

11. Performs related duties as required.

#### **MINIMUM QUALIFICATIONS**

Four (4) years of experience in the installation, maintenance and repair of traffic signals including the electrical, electronic, and mechanical components of traffic signal systems; OR, any equivalent combination of training and/or experience that provides the required knowledge and abilities. Supervisory experience is preferred. Must pass job related tests.

#### **PREFERRED QUALIFICATIONS:**

A Commercial Driver's License is preferred.

#### **SPECIAL REQUIREMENTS**

A valid Washington State Driver's License is required.

A job offer will be conditioned on satisfactory results of a driver's license abstract.

International Municipal Signal Association (IMSA) Level III Field Certification or Bench Certification is required.

A valid Washington State Department of Labor Journey Electrician License (EL01) is required.

Possession of Certification by Fiber Optic Installer Association (FOA) or Building Industry Consulting Services International (BISCI) equivalent, or the ability to obtain one within the first year of employment, is required.

Possession of confined space entry certification and respirator operation certificate, or the ability to obtain one within first year of employment, is required. Must maintain valid confined space entry certification while in position.

Possession of or ability to obtain and maintain a valid State of Washington Traffic Flagging card within six (6) weeks of being hired.

Possession of a valid First Aid/CPR Card, or the ability obtain one within six (6) months of employment, is required.

All Traffic Signal Technician and Electrician II's are subject to random drug and alcohol testing.

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#### **KNOWLEDGE AND ABILITIES**

Knowledge of:

- ordering practices
- the design and construction of traffic signal systems
- tools, materials, methods and techniques associated with the electrical trade
- installation, maintenance and repair practices and procedures associated with traffic signal systems
- relevant electrical codes
- the hazards associated with the work
- safety rules and regulations
- basic first aid methods and procedures

Ability to:

- analyze and determine resource requirements for a variety of signal installation , repair and maintenance work
- layout, coordinate and direct the work of subordinate employees
- perform all phases of electrical work
- diagnose and troubleshoot defects in traffic signal systems and equipment and perform needed repairs
- design, maintain and repair traffic signal and auxiliary components including various communication and data systems
- use a wide variety of hand and power tools skillfully and safely under a variety of working conditions
- perform strenuous physical work
- read, interpret and apply relevant codes
- read, interpret and work from a variety of blueprints, drawings, sketches and work orders
- understand and follow oral and written instructions
- read, understand and follow safety rules and regulations
- establish and maintain effective working relationships with superiors, subordinates and co-workers
- deal courteously and tactfully with the general public
- maintain accurate and complete written records and prepare reports as required
- communicate effectively both orally and in writing
- install, terminate, test and repair fiber optic cable and auxiliary components

#### **PHYSICAL REQUIREMENTS**

The employee is required to walk when maintaining signal systems. Lifts up to fifty (50) pounds on a daily basis. Must be able to work at heights up to forty five (45) feet when climbing ladders and working in man lift buckets. Required to bend when looking into signal cabinets and getting in and out of man lift buckets. Must be able to see when reading plans and

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#### PHYSICAL REQUIREMENTS (Continued)

specifications. Physical dexterity is required to handle small electronic components and to splice wire.

#### SUPERVISION

The work is performed under the direction of an administrative superior as assigned and requires considerable independent judgement by the employee. The work is reviewed through status reports, staff meetings, and results obtained which maybe spot checked for technical adequacy, and conformance with work orders, plans and specifications. The employee may be assigned the responsibility for the direct day-to-day oversight of Traffic Signal Technicians and Electricians and other Public Works Electricians.

#### WORKING CONDITIONS

The work is performed both indoors and outdoors in all types of weather at work sites throughout the county. Employees are exposed to a variety of hazards such as working near traffic, around heavy equipment or high voltage power lines, and are exposed to dust, fumes, grease, inclement weather, etc. This position is on call 24 hours per day, on a rotational basis, responding to traffic signal emergencies and emergencies involving other electrical assets operated and maintained by Snohomish County. The work may involve working at considerable heights, in confined spaces such as crawl spaces and manholes, or from ladders, or a hydraulic boom truck.

Employees are required to work evenings, weekends and holidays as necessary.

Snohomish County is an Equal Employment Opportunity (EEO) employer.  
Accommodations for individuals with disabilities are provided upon request.

[EEO policy and ADA notice](#)

Class Established: October 1997 as Traffic Signal Technician and Electrician, Senior  
Previous Spec No. 811852  
Revised and Retitled: November 2009, May 2011  
Revised: May 2019  
EEO Category: 7 – Skilled Craft Workers  
Pay Grade: 242 – Classified Pay Plan  
Worker's Comp Code: 1501 - Hazardous