



Traffic Signal and Street Light Technician I/II

Summary

Install, maintain, repair, and upgrade traffic signals, street lights and other related electrical and electronic equipment; may exercise technical supervision over less experienced staff.

Class Characteristics

General supervision is provided by a higher-level supervisor or manager; responsibilities may include the indirect supervision over less experienced staff.

Traffic Signal and Street Light Technician I

This is the entry-level class in the Traffic Signal and Street Light Technician series where incumbents learn and perform basic duties pertaining to traffic signal and street lighting maintenance and repair. Employees at this level are required to have sufficient training and experience to maintain and repair general electrical and electronic equipment. However, they are not expected to have specialized traffic signal experience. Employees receive on-the-job training on the fundamentals of traffic signal design, installation, and maintenance work and are expected to perform work with greater independence as they acquire knowledge and experience.

This class is distinguished from the higher-level class of Traffic Signal and Street Light Technician II because the latter is the journey level class where incumbents perform the full range of duties with less supervision.

Traffic Signal and Street Light Technician II

This is the full journey-level class in the Traffic Signal and Street Light Technician series where incumbents perform the full range of duties pertaining to traffic signal and street lighting maintenance and repair. Employees at this level are required to have sufficient training to independently maintain and repair specialized traffic signal and lighting equipment.

This class can be distinguished from the lower-level class of Traffic Signal and Street Light Technician I because the latter is the entry-level class where employees receive on-the-job training on the fundamentals of traffic signal design, installation and maintenance, initially performing the more routine duties of the series as they acquire the specialized knowledge and experience.

Essential Duties, Skills, and Demands of the Position

The duties, skills, and demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with a disability to perform the essential duties, skills, and demands.

Duties:

Perform a wide range of inspections and preventative maintenance work on traffic signals, controllers, and street lights; replace defective equipment, including poles and other electrical systems, as necessary; test electrical and electronic equipment including traffic signal heads, street lights, controllers, auxiliary equipment, and other systems to ensure that they operate as intended; ensure electrical compatibility and safety of components; perform adjustments or repairs to solve problems.

Respond to knockdowns and/or malfunctions of traffic signal and street light equipment; repair, replace, modify, and install traffic signal equipment including signal heads, poles, controllers, lights, circuitry, switches, fuses, timers, and cabinet parts; make field repairs of traffic signal controls and auxiliary equipment; perform electrical system wiring and installations; locate conduit, cables, and other underground devices to perform work; replace lamps; investigate complaints and reports of malfunctions; advise management if continued operation of equipment would present a problem or a hazard.

Check intersections for proper signal operations and operate specialized computer programs to make signal timing changes as directed, ensuring that proper timing is restored after repairs are made; install or upgrade signal equipment including loops and vehicle detectors based on engineering drawings; consult with traffic engineering staff or factory representatives to identify and resolve technical problems; may reconstruct and refurbish traffic signal equipment or defective electrical equipment in the shop using appropriate tools and methods; inspect and test equipment installed by contractors.

Interpret complex electrical plans, specifications, and schematics; ensure conformity with codes, regulations, and safety requirements; read and draw electrical blueprints; locate and mark underground utilities, cables, conduits, and loop wires to prevent damage; maintain accurate maps and schematic drawings; perform general electrical maintenance and repair work as assigned.

Maintain accurate manual and computerized work records, logs and other documents; prepare work orders and help maintain adequate inventory of materials and supplies; prepare work estimates; prepare a variety of reports.

Perform traffic safety work including resetting and removing of temporary traffic control signage and delineation (cones, barricades, etc.) as required.

Coordinate with outside contractor for repairs, electrical hookups, and city projects.

Perform Underground Service Alerts (USA).

Maintain tools and equipment in a safe and efficient manner; clean shop and equipment as necessary; follow proper safety procedures in a variety of hazardous environments including high voltage areas.

Engage and pursue ongoing education and training opportunities to stay current with new best practices and updated technology.

Perform related duties as assigned.

Skills/Abilities:

Perform the full range of traffic signal and street lighting maintenance and repair duties.

Repair a wide variety of traffic signal control equipment and devices.

Make traffic timing changes as directed.

Perform general electronic and electrical maintenance, installation and troubleshooting work.

Perform inspections and diagnose system problems and malfunctions using appropriate testing equipment.

Use appropriate judgment and initiative pertaining to work methods and tools.

Read and understand technical manuals, blueprints, schematics, diagrams, plans, specifications, and USA markings.

Estimate time, material, and equipment needed to complete assignments.

Prepare and maintain accurate records and logs.

Operate office equipment including computers and supporting word processing, spreadsheet, and database applications.

Communicate clearly and concisely, both orally and in writing.

Establish and maintain effective working relationships with those contacted in the course of the work.

Physical Demands and Work Environment:

While performing the duties of this job, the employee will be frequently required to sit, stand, and walk, and to use hands to finger, handle, or feel objects, tools, or controls. The employee will frequently be required to enter data into a terminal, personal computer or keyboard device and operate office equipment requiring repetitive arm/hand movement. Duties also include frequent talking and hearing, both in person and on the telephone. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and the ability to adjust focus. The employee will frequently climb ladders and aerial lifts at heights over 35 feet; duties also require frequent bending, reaching, kneeling, and twisting. Duties will frequently involve lifting and/or moving up to 50 pounds, and occasionally up to 90 pounds. Duties are often performed in an outdoor environment with frequent exposure to outside weather conditions including wet, hot and/or humid conditions. Work also includes exposure to moving mechanical parts, fumes or airborne particles, toxic or caustic chemicals, vibration and high voltage electricity. The noise level in the work environment may be moderate to loud, depending upon specific conditions.

Qualifications

Knowledge of:

Principles, methods, materials, tools, and practices pertaining to the traffic signal and street lighting maintenance trade.

Installations and maintenance of traffic signal and street lighting apparatus and equipment.

Electrical codes and regulations.

Operation and maintenance of a variety of hand, power, and shop tools used in electrical work.

Basic mathematics.

Safe work methods and safety regulations pertaining to electrical work.

Office procedures, methods, and equipment including computers and applicable software applications such as word processing, spreadsheets, and databases.

Education and Experience

Any combination equivalent to the education and experience likely to provide the required knowledge and abilities would be qualifying. A typical way to gain such knowledge and abilities would be:

Traffic and Signal Street Light Technician I/II

Education:

Equivalent to graduation from high school.

Traffic and Signal Street Light Technician I

Experience:

One year of experience in the installation, maintenance, or repair of electrical services or equipment. Successful completion of electrical trade school or technical college coursework may be substituted for the required experience on a year-for-year basis.

Traffic and Signal Street Light Technician II

Experience:

Two years of responsible experience similar to Traffic Signal and Street Light Technician I in the City of Petaluma.

Traffic and Signal Street Light Technician I/II

Certifications/Licenses:

Possession of a valid California Class C driver's license.

Possession of a valid Traffic Signal Technician Level I certificate from the International Municipal Signal Association (IMSA).

Failure to obtain the required certification may result in release from probation or termination.

Traffic and Signal Street Light Technician II

Certifications/Licenses:

Possession of a valid Traffic Signal Technician Level II certificate is desirable.

Additional Requirements:

Must be willing to work outside normal working hours when necessary.

Must be available to work standby and be on call.

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