

SENIOR TRAFFIC CONTROL AND LIGHTING TECHNICIAN

Salary Range: 32 (Public Service Employees)

DEFINITION

Under general supervision, provides lead direction to assigned traffic maintenance staff; performs skilled electronic, electro-mechanical, microprocessor control, and electrical work in the installation, modification, maintenance, and repair of traffic signals and lighting control equipment; sets priorities and directs the work of assigned staff on a project or day-to-day basis; installs, configures, and maintains the unit's specialized signal software databases; conducts complex new construction traffic signal inspections; operates road striping equipment, paints traffic control markings on pavement; installs, repairs and maintains traffic warning and other signs; performs related work as required.

DISTINGUISHING CHARACTERISTICS

This is the advanced journey-level, class in the traffic maintenance series that performs the most complex duties required to ensure that the City's streets lights, street signage, and traffic control systems are functioning in a manner that provides the highest level of safety for public use. Incumbents serve as the lead level worker responsible for the technical and functional direction of assigned staff. Responsibilities include inspecting and attending to assigned areas in a timely manner, and performing a wide variety of tasks in the maintenance and repair of City traffic control systems. This class is distinguished from the Traffic Maintenance Supervisor in that the latter is the full supervisory level class in the series responsible for organizing, assigning, supervising and reviewing the work of assigned staff involved in street lights and signs maintenance operations and related activities.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from the Traffic Maintenance Supervisor, and exercises technical and functional direction and trains assigned staff.

EXAMPLES OF DUTIES, KNOWLEDGE, AND ABILITIES

Duties may include, but are not limited to the following:

- Provides technical and functional direction to assigned traffic maintenance staff; reviews and controls quality of work; assists in completing employee evaluations; participates in performing routine maintenance and repair work.
- Plans, schedules, prioritizes and assigns street maintenance and repair work in consultation with the Traffic Maintenance Supervisor; communicates status of repairs to appropriate personnel, working cooperatively to schedule repairs in accordance with established priorities and special operational priorities.
- Trains and instructs employees in work methods, use of tools and equipment, and relevant safety precautions.
- Assists in developing work plans, procedures, and schedules.
- Performs the most complex maintenance, repair and adjustment of traffic control installations.

- Conducts new construction traffic signal inspections; provides continual review of plans and specifications; coordinates with contractor schedules for testing and surveying; and attends necessary meetings.
- Provides documentation of construction and construction-related activities; prepares daily inspection reports and records information related to work crews, equipment, and duration for extra work on City Public Works projects; reports discrepancies requiring corrective actions to the Public Works Director.
- Updates Signal Controller Software when new changes occur; converting downloaded log files from Opticom software to Excel spreadsheets; converts, deciphers, and incorporates data into database for troubleshooting and record keeping purposes for the Battery Back Up Software; tests new software to decide if and how it will be used by the unit.
- Installs all traffic devices such as cameras, Opticom, and other detection devices.
- Wires and tests all traffic control cabinets prior to installation and performs on-going inspections; performs annual certification of conflict monitors.
- Calculates and produces Signal Timing for traffic control systems for approval by division engineering staff.
- Performs skilled electrical and electronic work on traffic signal and related equipment; adjusts and replaces electronic, electrical, and mechanical components.
- Inspects, removes and repairs street light standards and auxiliary equipment such as control boxes, light fixtures, lamps and circuitry.
- Designs and constructs special test equipment for shop testing of electronic components; performs preventive maintenance and testing of equipment.
- Independently performs troubleshooting, diagnostic, and problem-solving activities.
- Meets with vendors regarding new traffic control equipment and software.
- Prepares reports and maintains schematic drawings, operations manuals, accurate work records, and problem and repair logs on related equipment.
- Paints striping and markings on roads in accordance with relevant codes and ordinances; applies reflective, rumble and other raised pavement surface markings.
- Removes and replaces sign posts and pours concrete to anchor posts; affixes signs to posts at proper height.
- Performs and assists in the installation of traffic warning, speed control, and other signs; paints traffic guards, barricades and raised traffic bars on pavement.
- Maintains and stocks signs and materials; refurbishes signs as necessary.
- Operates and maintains a variety of hand and power tools.
- Performs Underground Service Alert (USA) markings as specified and according to accepted guidelines and requirements.
- Utilizes aerial lifts to perform required installation and repair of devices and equipment.
- Investigates complaints and reports of signal and traffic light malfunctions.
- Acts as first responder to resolve emergency problems related to traffic control systems.
- Performs other duties as assigned.

EMPLOYMENT STANDARDS

Knowledge of:

- Basic principles of supervision and training
- Principles, methods, materials, tools, and practices used in the repair of electronic, electrical and mechanical devices used in street lighting, and traffic control
- Components and parts of electronic and electrical devices used in traffic control equipment
- Principles, methods, practices in the design of traffic signals, timing plans and signal phasing
- Principles and practices of new construction traffic signal inspection
- Principles, procedures, and practices of information systems maintenance and operations
- Computer logic and mathematics
- Specialized computer software applications related to traffic control systems
- Techniques and materials used in traffic control painting and signing operations
- Applicable Federal, State and local laws, ordinances, regulations, and guidelines relevant to assigned duties, including provisions of the relevant California Motor Vehicle Code, Uniform Sign Chart and Manual of Uniform Traffic Control Devices (MUTCD) and the California Supplement of the MUTCD
- Proper traffic control (include warning signs and cones) to provide safe passage for the traveling public through the work area, as well as for the safeguard of workers
- Shop arithmetic
- Safe work methods and safety practices pertaining to the work
- Safe driving rules and practices
- English usage, spelling, vocabulary, grammar and punctuation
- Techniques for providing a high level of customer service to public and City staff, in person and over the telephone

Ability to:

- Plan, schedule, assign, and oversee activities of an efficient traffic maintenance program
- Identify and implement an effective course of action to complete assigned work
- Inspect the work of others and maintain established quality control standards
- Train others in proper and safe work procedures
- Inspect, test, repair and adjust complex traffic control devices
- Read and interpret plans, electronic drawings, and wiring diagrams
- Review and authorize change orders, claims, and progress payments within specific procedural guidelines
- Detect and locate faulty materials and workmanship and determine the stage of construction during which defects are most easily found and remedied
- Read, interpret, and apply complex technical publications, manuals, and other documents
- Observe, identify, and solve problems related to computer and network operations and procedures
- Use electronic test equipment such as voltmeters, signal generators, oscilloscopes, and frequency counters
- Skillfully and safely operate and maintain a variety of traffic control, painting and related equipment, and hand and power tools

- Work with contractors on City approved projects
- Organize own work, set priorities and meet critical time deadlines
- Use English effectively to communicate in person, over the telephone and in writing
- Effectively represent the department and the City in meetings with other departments, public and private organizations, and individuals
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines
- Establish and maintain effective working relationships with those contacted in the course of the work
- Meet the physical requirements necessary to safely and effectively perform the assigned duties.

Minimum Qualifications

Equivalent to the completion of the twelfth (12th) grade and four (4) years of responsible experience in the installation, modification, maintenance, and repair of traffic signals, lighting control equipment, or other industrial/commercial electrical systems. Experience in the oversight of projects or staff or in the installation, configuration, and maintenance of software programs is highly desirable.

GENERAL QUALIFICATIONS

License Requirements:

- A valid California Class C driver's license or higher with satisfactory driving record is required at the time of appointment. Individuals who do not meet this requirement will be reviewed on a case-by-case basis.
- A Work Zone Traffic Control Safety Certificate issued by the International Municipal Signal Association (I.M.S.A.), or successful completion of the Traffic Control Technician-CA State Specific Training Course thru the American Traffic Safety Services Association is required within twelve (12) months of appointment.
- Possession of the International Municipal Signal Association (IMSA) Traffic Signal Technician I and Traffic Signal Technician II certifications are required within twelve (12) months of appointment.

Physical Requirements:

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, and work in the field, on City streets and roadways, and at substantial heights; strength, stamina and mobility to perform medium physical work, operate varied hand and power tools and construction equipment; vision to read printed materials and a computer screen; color vision to determine correct colors for street and traffic signs, signals and markings; hearing and speech to communicate in person and over the telephone or radio; ability to perform field work that requires frequent walking at construction site areas to identify problems or hazards; finger dexterity to access, enter, and retrieve data using a computer keyboard or calculator and to operate above-mentioned tools and equipment; ability to bend,

stoop, kneel, reach, and climb to perform work and inspect work sites; lift, move, and carry materials and equipment weighing up to 50 pounds, and heavier weights with the use of proper equipment.

Working Conditions:

Employees partially work in an office environment with moderate noise levels, controlled temperature conditions and no direct exposure to hazardous physical substances; and partially work in the field and are occasionally exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, substantial heights, vibration, confined workspaces, chemicals, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff and/or public and private representatives, and contractors in interpreting and enforcing departmental policies and procedures. The incumbent may be required to work various shifts on evenings, weekends and holidays, and participate in after-hours on-call assignments.

Adopted: October, 2008

Revised: January, 2017

FLSA: NE

This job specification should not be construed to imply that these requirements are the exclusive standards of the position. Not all duties are necessarily performed by each incumbent. Additionally, incumbents may be required to follow any other instructions and to perform any other related duties as may be required by their supervisor.