03-4-645

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

POSITION DUTY STATEMENT

PM-0924 (REV 3/2006)

CLASSIFICATION TITLE Caltrans Electrician II	**DISTRICT/DIVISION/OFFICE** District 3/Maintenance/Sunrise Region/Sacramento	
WORKING TITLE Caltrans Electrician II	**POSITION NUMBER** 903-659-6924-xxx	**EFFECTIVE**

As a valued member of the Caltrans team, you make it possible for the Department to improve the mobility across California by being innovative and flexible; reporting to work as scheduled; working cooperatively with team members and others; and treating others fairly, honestly and with respect. Your efforts are important to each member of the team, as well as those we serve.

GENERAL STATEMENT: Under the general supervision of a Caltrans Electrical Supervisor, the incumbent is responsible for the installation, maintenance, and repair of electrical and electronic devices associated with state facilities. The incumbent may also perform lead work as required involving training, timekeeping, and record keeping. The position requires the operation of light trucks, vans, automotive vehicles, and a 45-foot personnel hoists used to repair and maintain Caltrans electrical assets; therefore, a valid California Class C license is required, although a Class A or B is highly desirable. The incumbent may drive heavy trucks, when properly licensed. Incumbent may be required to operate equipment such as trenchers, backhoes, forklifts, air quality monitors, and cranes. This position is considered the full journey-level for this class.

TYPICAL DUTIES:

PERCENTAGE Essential (E)/Marginal (M)[1]	JOB DESCRIPTION
60 % (E)	Construct, maintain, troubleshoot and repair traffic signal systems, changeable message signs, extinguishable message signs, ramp metering systems, traffic count equipment, video surveillance and detection equipment, highway advisory radio equipment, building electrical systems, pumping plants, movable span bridge equipment, scale house systems, rest area systems, and highway lighting equipment. The incumbent is required to work on and around high voltage equipment and switchgear up to 12,000 volts (high voltage equipment is disconnected from source and locked out prior to work being performed on systems).
20% (E)	Inspect and operate equipment utilized in the performance of electrical work associated with state facilities. Equipment will include, but not be limited to, light trucks, personnel hoists, trenchers, backhoes, forklift, pavement saw, pipe threading equipment, conduit benders, voltage meters, resistance meters, amperage meters, high potential tester, hot-sticks, power monitoring equipment, air quality monitoring equipment, manual digging tools, electrical hand tools and battery test equipment.

[1] ESSENTIAL FUNCTIONS are the core duties of the position that cannot be reassigned
MARGINAL FUNCTIONS are the minor tasks of the position that can be assigned to others

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15% (E) Make material acquisition requests and repair time projections. May be required to attend meetings pertaining to state electrical facilities and provide concise, accurate reports regarding issues discussed. The incumbent may be required to train less experienced personnel in the duties required of a Caltrans Electrician. May be required to maintain work logs daily time keeping and maintenance records. May be required to attend state provided training classes, pertinent to maintenance activities associated with state facilities and achieve certification status where necessary.

5% (E) Remove graffiti from light poles, cabinets and other electrical facilities. Clean and paint electrical facilities; wash state owned vehicles; independently load and unload materials and equipment into a state vehicle or building; enter records into computer database; required to work independently on electrical projects.

SUPERVISION EXERCISED OVER OTHERS

None. The incumbent may function in a lead worker capacity when assigned by the supervisor and when working with less experienced electrical personnel.

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS

Must have knowledge of safety precautions and work procedures required in the maintenance and installation of traffic signal systems, movable span bridge systems, building code, highway information systems, highway lighting systems, pump plants and rest areas. Must possess valid Class C Drivers License, Class A or B highly desirable.

Must have the ability to make rough sketches and drawings related to electrical work. Read and interpret standard plans, specifications, schematics, maintenance manuals and manufacturer requirements. Estimate, order and install materials and generate written work reports. Trouble shoots and repair state facilities. Work independently, but establish effective communication and cooperation with other personnel assigned to a project. Inspect and write detailed reports regarding electrical projects. Instruct unskilled and semiskilled assistants. Establish a safe work environment. Ability to work safely around high-density traffic. Ability to work effectively alone or with others. Must be able to analyze various work situations accurately and make sound decisions.

Utilize progressive and logical trouble shooting techniques in the repair of electrical and electronic devices. Understand electrical diagrams, charts, and technical sheets, oral and written instructions. Interpret electrical codes as they pertain to state electrical facilities. An effective understanding of electrical and electronic formulas as they pertain to state facilities.

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CONSEQUENCE OF ERROR/RESPONSIBILITY FOR DECISIONS

Error in judgment, decision-making and trouble shooting skills may endanger co-workers and/or the public. Error may also cause a waste of time and waste of tax dollars through extra expense in the maintenance of highways, or damage to State equipment and facilities.

PUBLIC AND INTERNAL CONTACTS

Required to maintain good relations with members of the public and employees from the same and other departments within Caltrans, as well as other agencies. May have contact with other public agencies and private individuals almost daily in the course of assignment. Contact may be with hostile public, and employee is expected to maintain a favorable public image for the State.

PHYSICAL, MENTAL AND EMOTIONAL REQUIREMENTS

The incumbent must be physically capable of utilizing writing instruments, hand tools, and manual digging tools and electrical tools. May be required to bend, stoop, twist, power grasp, use fine manipulations, stand sit, squat, lift and pull during performance of normal duties. Must have good balance for walking on uneven surfaces, climbing ladders, climbing scaffolding and working on other structures associated with state facilities. Should have visual and color acuity adequate for performing the essential functions of the job. Much of this position is labor intensive. Incumbent must have physical ability to react quickly to errant motorist and do strenuous hand and mechanical labor.

The incumbent must be capable of understanding and performing the essential functions of the job in a reasonable and prudent manner, using logic and deductive skill to provide an end product that is safe and usable. Must have capacity for stable and reasonable interaction with supervisors, fellow workers and the general public during the performance of his/her duties.

Note: For standing, walking and sitting, along with several other activities, typical duties are used as examples in various situations to give ranges for the activities. Generally, activities can be broken down into operating equipment 35% of the time on a year-around basis. The remainder of the activity is labor.

Carrying – Bagged/boxed material, which may weigh 50 to 100 lbs., must be carried from storage areas to vehicles and from vehicles to job sites, which may be on uneven terrain. Tools are carried a few feet to 100 yards and weigh a few ounces to 50 lbs. each. Tools may be carried on uneven terrain.

Overhead reaching – Overhead work includes pulling yourself up into many types of equipment from 0 to 30 times per day, repairing equipment, holding up signs off a ladder, servicing equipment on the lube hoist, signaling other workers, and throwing/loading material in equipment.

Other Reaching – Setting cones, lubing and checking equipment, shoveling, driving, using digging bar, shifting, holding signs picking up cones; often done on a continuous basis, over 60% of the work shift.

Twisting - While driving equipment, the incumbent may twist on a continuous basis, especially while backing up or turning around while operating a hoist. Other twisting is done while setting down and picking up traffic cones which weigh 10 lbs.

Climbing/Balancing – Climbing is done in and out of equipment, up and down banks and used in fine manipulation of ladders, stairways, (often with a load of material or supplies); onto steps and walkways to do engine checks on equipment.

Bending/Crouching/Squatting/Crawling – The incumbent often bends continuously throughout the day while operating equipment and performing physical labor. All of these activities are necessary when picking up and laying down tools and material. The Operator also crawls around and underneath equipment while checking and servicing equipment.

Simple Grasping – This activity is necessary about 95% of the shift; climbing in/out and around equipment, operating equipment, using hand tools and handling materials.

Fine Manipulation – This occurs less than 2% of a day and usually while writing reports or manipulating the knobs and levers on the equipment. A higher percentage of the time would be saw or similar equipment.

Importance of hearing and sight – both are essential on the job because the operator must hear directions and equipment, and must see in order to perform his/her duty safely.

Hearing should be adequate to hear warning devices used for worker safety, i.e. look out alarm devices, including vehicle horns used to warn employees of eminent danger at the work site. Corrected hearing is acceptable.

Sight needs to be corrected to the State of California Department of Motor Vehicles standards for safe vehicle driving. Night vision must be good for safety when working after dark.

WORK ENVIRONMENT

The incumbent may work under various climates and conditions. Work may be performed inside of climate-controlled building, but most operations will take place alongside, over or upon state highway and right of ways. The incumbent will be exposed to noise, inclement weather, dirt, odors, uneven surfaces, heights up to 250 feet above pavement or water, confined spaces, concrete products, cleaning solvents, high speed traffic conditions and moving construction equipment. The incumbent must be willing to work odd hours, swing shift, night shift, and weekends and be available for trouble calls outs.

Personal safety requirements include:

A. Work boots, in good and sturdy condition, must be worn to provide foot and ankle support protection.

B. Either long or short sleeved shirts provided by Caltrans, or a safety vest is to be worn over non-safety shirts or coats.

C. Long pants. No shorts or cutoffs.

D. Provided safety gear; hard hat, safety glasses, hearing protection devices, face shields, gloves, respirator, chaps, or other safety gear must be worn when required by the Department.

I have read, and understand the duties listed above and can perform them either with or without reasonable accommodation. (If you believe you may require reasonable accommodation, please discuss this with your hiring supervisor. If you are unsure whether you require reasonable accommodation, inform the hiring supervisor who will discuss your concerns with the Reasonable Accommodation Coordinator.)

EMPLOYEE (Print)	DATE
EMPLOYEE (Signature)	DATE

I have discussed with and provided a copy of this duty statement to the employee named above.

SUPERVISOR (Print)	DATE
SUPERVISOR (Signature)	DATE

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