STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

POSITION DUTY STATEMENT

PM-0924 (REV 7/2014)

CLASSIFICATION TITLE	OFFICE/BRANCH/SECTION	
CALTRANS ELECTRICIAN I	07/MAINTENANCE/SPECIAL CREWS/COMMERCE ELEC	
WORKING TITLE	POSITION NUMBER	EFFECTIVE DATE
CALTRANS ELECTRICIAN I	907-740-6938	

As a valued member of the Caltrans team, you make it possible for the Department to provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability. Caltrans is a performance-driven, transparent, and accountable organization that values its people, resources and partners, and meets new challenges through leadership, innovation and teamwork.

GENERAL STATEMENT:

The Caltrans Electrician I receives general direction on policies and procedures from the Caltrans Electrical Superintendent and general supervision from the Caltrans Electrical Supervisor and/or from an Electrician II lead person. The position is responsible for the Levels of Service on electrical inventory items in the Commerce Electrical Cost Center in District 7. Follows safety and health policies and procedures as contained in the Department's Injury and Illness Prevention Program; has knowledge of environmental, storm water, emergencies, natural disasters, accident prevention techniques, and safe work practices. There are times when the incumbent may work for other Supervisors and/or work units as required by operational needs. Follows and enforces CAL/OSHA and safety rules and regulations; the National Electrical Code and the District Maintenance Code of Safe Practices. The incumbent may receive training from other employees of the crew, region, district or headquarters. The incumbent is responsible for the proper maintenance/ operation of assigned equipment. Must have possession of a valid Class C driver's license.

TYPICAL DUTIES:

Percentage	Essential (E)/Marginal (M)[1]	Job Description
30%	E	Works as part of a crew or works independently to install, repair, maintain, and check portions of traffic signals, highway lighting, illuminated signs, flashers, bridges, public service facilities, navigational aids, subway pumping plants, surveillance stations, irrigation systems, tunnel lighting, ramp metering, truck weigh stations, park and rides, motors, building lighting, heating and air conditioning systems, including the wiring, conduits, pull boxes, poles, heads, controllers, and knockdowns.
30%	E	Operates equipment used by the assigned unit. Makes minor repairs, adjustments, emergency repairs; performs lube service; cleans equipment and maintains all pertinent records. Performs pre and postoperative equipment checks.
15%	E	Makes detailed checks of ramp meters and highway lighting systems to locate trouble or cause of failure, and inspects and tests both ramp meters signals and lighting systems for proper functioning.
15%	E	Responds to electrical emergencies and evaluates the situation and takes appropriate action.
10%	E	Makes daily work reports; keeps and maintains simple records. Make drawings of schematics, wiring diagrams, intersections, phase-diagrams, and corrections of them. May order and/or pick up supplies and equipment. May inspect for proper electrical operation and installation of contracts and permits for compliance with Standard Plans and Specifications.

[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.

SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS

No direct supervision. The Caltrans Electrician I may at any time be placed in charge of a work crew as the responsible person in charge per Chapter VIII, Maintenance Manual, Volume I.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

A high degree of analytical ability is required. Must be able to quickly locate cause or failure in electrical equipment and devise repairs promptly, establish and conduct preventative maintenance program on equipment assigned for maintenance. Must be able to determine when to require assistance. The person must have strong knowledge of electrical theory and practice, including power, lighting and control circuits; materials, methods, and equipment used in the installation, maintenance, and repair of electric and electronic devices. This pertains particularly to the repair of

highway lighting, ramp metering, surveillance stations, and bridge electrical systems. Methods, materials, and equipment used in electrical repair and less complex electronics as applied to various electrical control and measuring devices; and the Electrical Safety Orders of the Division of Industrial Safety and of the safety precautions required in the installation of traffic control devices. Ability to keep accurate written reports. Must be able to communicate well in writing, by telephone and two-way radio. Ability to read and interpret plans, detail drawings and wiring diagrams.

Know and understand the provisions of the California Vehicle Code as it pertains to the loading and operation of motor vehicles; and rules and regulations pertaining to highway maintenance practices. Must have the ability to work safely around high-density traffic and at various heights above traffic. Must have the ability to work effectively alone or with others.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Errors may expose incumbent, co-workers, and/or the public to possible injury or loss of life. Errors may also cause an inefficient use of time and tax dollars through extra expense in the maintenance of highways, or damage to State equipment and facilities. Errors may expose the State to liability for damages to public property and delay in project delivery.

PUBLIC AND INTERNAL CONTACTS

Maintain good relations with the public, Caltrans employees and employees/representatives of other government agencies. May have daily contact with other public agencies and private individuals in the course of their assignment. Incumbent may have contact with hostile people and is expected to maintain a favorable public image for the Department and the State.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Much of this position is labor intensive. The incumbent must have the physical ability to react quickly to errant motorists and do strenuous hand and mechanical labor. The incumbent must be able to interact well with employees and individuals from many different cultural backgrounds.

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 30% of the time on a year-round basis.

The remainder of the activity is labor intensive and includes but is not limited to the following:

Standing, Sitting, and Walking is described to equal 100% of the work time for a given period such as a work shift.

Lifting (floor to bench to floor) – Items up to 75 pounds may be lifted 1% of the time. Other lighter lifting includes lifting of materials in and out of equipment, ladders, 170 controllers, signal heads, street light luminaries, poles, digging trenches. (10%)

Transport and/or carry – Materials, which may weigh from 5 to 100 pounds, must be transported and/or carried from storage areas to vehicles and from vehicles to job sites, which may be on uneven terrain. Tools are transported and/or carried from a few feet to 100 yards and weigh from a few ounces to 50 pounds each. Tools may be transported and/or carried on uneven terrain. (15%)

Overhead reaching – Overhead work includes but not limited to pulling self up into many types of equipment, adjusting luminaries, installing lamps; adjusting Traffic Signal Heads, and loading material into/on equipment. (15%)

Other Reaching – Includes but not limited to setting cones, lubing and checking equipment, graffiti removal, shoveling, driving, shifting, sitting signs, picking up cones, re-lamping, using hand tools, working with conduit and wire, working in cabinets. (50%)

Pushing/Pulling – Includes but not limited to setting poles, pulling wire, tightening and loosening nuts on bolts. (40%)

Twisting - Done while driving equipment and on a continuous basis especially while backing up or turning around while operating a pilot car. Other twisting includes but is not limited to shoveling, setting down and picking up traffic cones, working in buckets. (15%)

Climbing/Balancing – Is done in and out of equipment, up and down banks/slopes, up and down and standing on ladders, hoist buckets, stairways (often with material or supplies), onto steps, walkways, and signs. (15%)

Bending/Crouching/Squatting/Crawling – Often done continuously throughout the day while operating equipment and performing physical labor. These activities are necessary when checking such things like pull boxes, cabinets, picking up and laying down tools and material, the incumbent 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, meters, and handling materials.

Fine Manipulation – This occurs less than 5% of the shift and usually while writing reports or manipulating controller keypad, knobs and levers on the equipment.

Importance of hearing and sight – These both are essential in order to work safely on the job because of the close proximity to fast moving traffic or large equipment. It will be necessary for the incumbent to work nights from time to time and sufficient night vision is necessary to perform work safely.

Hearing should be adequate with or without hearing aid to hear warning devices used for worker safety (i.e., look out alarm devices including vehicle horns used to warn employees of imminent danger at the work site) as per Chapter 13 of the Caltrans Injury Illness Prevention Program Safety Manual.

Height – Works on signs and on other structures, or in a hoist bucket from a height of over 45 feet.

WORK ENVIRONMENT

Required to work in a wide range of sometimes extreme conditions including heat up to 120 degrees, cold to 30 degrees, strong winds, rain, dust, noise, and/or on uneven surfaces.

Normal work shift is 5/40, Monday through Friday, 0700 to 1530 hours. The scheduling of the work days is at the discretion of Region Management. May be scheduled to work weekends and/or night shift as needed to meet operational needs with proper advance notice.

May work overtime due to emergencies, special work projects, or when the Department deems that it is necessary and with proper advance notice.

Personal safety requirements include but are not limited to (as per Injury and Illness Prevention Program):
A. Appropriate footwear in good and sturdy condition.
B. Either long or short sleeve 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.
E. For night work: reflective vest worn over white coveralls.

I have read, understand and can perform the duties listed above. (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)

EMPLOYEE (Signature)	DATE

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

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SUPERVISOR (Print)

SUPERVISOR (Signature)	DATE