STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

POSITION DUTY STATEMENT

PM-0924 (REV 03/2006)

CLASSIFICATION TITLE	OFFICE/BRANCH/SECTION	
Caltrans Electronics Specialist	DISTRICT 4 / MAINTENANCE SPECIALTY REGION	
WORKING TITLE	POSITION NUMBER	EFFECTIVE DATE
Caltrans Electronics Specialist	904-760-6719-xxxx	JANUARY 9, 2014

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: (BRIEF SUMMARY OF THE MAIN PURPOSE AND FUNCTIONS OF THE POSITION. DESCRIBE THE SUPERVISORY RELATIONSHIPS (INCLUDING THE CLASSIFICATION OF THE SUPERVISOR OR MANAGER TO WHOM THE INCUMBENT REPORTS.) WHEN APPROPRIATE, IDENTIFY THE NEED FOR ANY CREDENTIAL OR LICENSE (SUCH AS A DRIVERS' LICENSE.)

This position will report to a Caltrans Electrical Supervisor. This position is assigned to perform electronic bench repairs on microprocessors, CCTV, traffic signal accessories, etc. In a repair facility such as the San Francisco Central Lab or the SFOBB Toll Electronics Shop. May also be assigned to perform troubleshooting and repairs in field locations.

TYPICAL DUTIES: (BRIEF DESCRIPTION OF IMPORTANT DUTIES. RELATED DUTIES MAY BE GROUPED TOGETHER. USE ADDITIONAL SHEET IF NECESSARY.)

Percentage Essential (E)/Marginal (M)[1] Job Description

SPECIFIC RESPONSIBILITIES:

65% (E) Troubleshoots complex internal circuits on all electronic devices, CCTV equipment, computers and peripherals, and microprocessor based units that are brought in from Highway or Toll Bridge installations for the purpose of shop repairs, modifications, or the ensure the reliability and conformance to standard operating specifications of the unit using Voltage Ohm Meter, Digital Multi-Meter, fluke DMM, A/C clamp-on Meter, Oscilloscope, Logic Probe, Electronic Signal Meter. Maintains the Toll Bridge ESS telephone system, SCADA, TRAC, and other specialized electronic equipment. Keeps proper records and history of work done on each unit.

20% (E) May work off-hours, as required, and supports the Maintenance Field Operations by assisting field electricians in troubleshooting complex system problems that may require the shop personnel expertise. Responds to emergency trouble calls that require complex work to electronic components such as the Toll Bridge consoles, TRAC computer problems, or intersection software replacements. Performs specialized lab work such as acceptance check on traffic signal cabinets, wiring of special circuits, fabrication of TRAC consoles, design functional electronic circuits for bridge or highway systems as required, evaluate new electronic test instruments, etc.

10% (M) Keep abreast of new technical advances and maintain their knowledge and understanding of new electronic circuits including the use of more efficient test instruments through developing advanced electronics skills. Performs other technical tasks either in the field or shop that may require specialized experience and knowledge.

5% (M) Prepare cost estimates for materials and 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

SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS

SUPERVISION EXCERCISED:

This position does not supervisor but in the absence of the Caltrans Electrical Supervisor, a Caltrans Electronic Specialist may at times be assigned to direct the Shop Crew and perform all the necessary paperwork that may be required for day-to-day operation.

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

POSITION DUTY STATEMENT

PM-0924 (REV 03/2006)

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS

KNOWLEDGE AND ABIILITIES REQUIRED:

Due to the nature of its responsibility, a Caltrans Electronic Specialist needs to have a special ability to deal with complex electronic circuitry and be resourceful enough to find details of microcircuit function, which they may need to complete its analysis. Knowledge of software, special numbering systems and electronic terminology is important. Ability to read and interpret plans, drawings and wiring diagrams.

ANALYTICAL REQUIREMENTS:

The effectiveness of the incumbent highly depends in their ability to make sound judgments and analysis of the problems that they are faced with. Therefore, understanding of the basic principles of electronics and forming logical solutions to each problem is very important in this position.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

A Caltrans Electronic Specialist is, on the average, highly trained and knowledgeable in performing his responsibilities, and is capable in making assessments of problems and making effective repairs to restore the system or unit to its operating state. In emergency situations where restoration of the system is vital, this individual will play an important role in our response system especially when a complex system is critical to the safety of other personnel or the motoring public. The incumbent makes routine decisions regarding their work responsibility. Error in judgment may result in an expensive fiscal burden and interruption of vital computer systems, especially on critical accounting and access equipment. In traffic signal systems, wrong decisions may result in Caltrans liability and added expense to repairs of such equipment.

PUBLIC AND INTERNAL CONTACTS

Incumbent will routinely contact or interact with other Caltrans personnel, contractors, and engineering consultants. These contacts may take the form of verbal or written communication relating to the assignment.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Physical: Incumbent must be physically capable of utilizing writing instruments, hand tools, and fine electronic tools associated with electronics design and repair. Incumbent may be required to bend, stoop, twist, power grasp, use fine manipulation, stand, sit, squat, lift and pull during performance of their duties. Incumbent must have good balance for walking on uneven surfaces, climbing ladders, climbing scaffolding and working on other structures associated with state facilities. Incumbent should have visual and color acuity adequate for performing the essential functions of the job.

Mental: Incumbent must be capable of understanding complex and specialized electronic equipment and performing the essential functions of the job in a reasonable and prudent manner, using logic and deductive skill to provide and end product that is safe and usable.

Emotional: Incumbent must have capacity for stable and reasonable interaction with supervisors, fellow workers and the general public during the performance of their duties.

WORK ENVIRONMENT

Incumbent must be comfortable working in an enclosed space such as the San Francisco Central Lab or the SFOBB Toll Electronics Shop, or out in various field locations where they may be exposed to the elements.

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.)

POSITION DUTY STATEMENT

PM-0924 (REV 03/2006)

EMPLOYEE (Print)	DATE
EMPLOYEE	DATE

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

SUPERVISOR (Print)	DATE
SUPERVISOR	DATE