

POSITION DUTY STATEMENT

PM-0924 (REV 3/2006)

CLASSIFICATION TITLE Senior Transportation Electrical Engineer, Supervisory	DISTRICT/DIVISION/OFFICE 03/Traffic Operations/Office of TMC Electrical Systems	
WORKING TITLE Senior Transportation Engineer	POSITION NUMBER 903-350-3164-xxx	EFFECTIVE DATE

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:

Under general direction of the Chief, Office of Traffic Operations, the incumbent will have charge of varied and difficult transportation electrical engineering work involving field and office electrical/electronic systems and related traffic electrical engineering work. Responsible for the electrical development and electrical systems operation of the Regional Transportation Management Center (RTMC) and Kingvale Satellite Operations Center (SOC)

TYPICAL DUTIES:**Percentage****Job Description**Essential (E)/Marginal (M)¹

- | | |
|---------|---|
| 50% (E) | Direct the day to day support and implementation of the RTMC electrical systems including the ATMS system, CCTV, CMS, HAR's, RWIS, loop and wireless detector systems and all other Intelligent Transportation Systems (ITS) for the district. Coordinate with Headquarters Traffic Operations and provide district expertise and input regarding TMC system operations and development of future systems and deployment of new technologies. |
| 20% (E) | Direct and manage Census program for the district. Manage staff and resources used in delivering vehicle census data as required by HQ Census and FHWA. Working with the HQ Census program, prepare yearly unit budget needs and monitor expenditures. Monitor staff progress in meeting data collection goals. |
| 15% (E) | Oversee and advise construction and maintenance activities with regards to the installation and operation of field hardware and software; direct highway electrical engineering work in the preparation of designs, plans, specifications, and estimates for traffic control systems, traffic data collection and processing systems, and other electrical and electronic systems. |
| 5% (E) | Consult on Intelligent Transportation System (ITS) projects within the district and ensure compatibility with current operations. |

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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- 5% (M) Evaluate new technologies and determine applicability to existing system architecture.
- 5% (M) Review project reports for accuracy and completeness with regards to electrical and electronic systems.

SUPERVISION EXERCISED OVER OTHERS:

As a designated supervisor, will direct and assist the following classifications in covering the application of transportation electrical engineering tasks and administrative duties: Transportation Electrical Engineers, Electrical Engineering Technician III, and Office Technician,

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS:

- Knowledge of various phases of transportation electrical engineering and operations; mathematics related to electrical engineering; electrical and electronic theory and practices; modern electrical apparatus, communication, instrumentation; direct and alternating current circuits; methods, materials, tools and equipment used in electrical and electronic construction work; National Electrical Code and electrical Safety Orders of the Division of Occupational Safety and Health and Signal Operations.
- Knowledge of the functional and organizational characteristics of the Division.
- Knowledge of District functions, policies, procedures and operations.
- Knowledge of computers and the Department's standard software.
- Ability to do electrical and electronic design work; make neat and accurate drawings and technical sketches; make electrical calculations; inspect electrical installations; specify necessary equipment and materials; accurately interpret drawings, circuit diagrams, and specifications; maintain cooperative relations with employees whose work is being inspected; analyze situations accurately and take effective action; prepare correspondence and reports, and effectively verbally and in writing.
- The ability to work independently, learn quickly, analyze situations, and communicate tactfully and effectively with a variety of people with different backgrounds, experiences and attitudes.

CONSEQUENCE OF ERROR/RESPONSIBILITY FOR DECISIONS:

Will be responsible to make accurate engineering calculations; analyze situations regarding roadway electrical and electronic systems and design concepts. Wrong decisions could cause delays in project implementation and increase in project costs.

PUBLIC AND INTERNAL CONTACTS:

The Senior Electrical Engineer works closely with the North Region Capital Program and other statewide design staff, headquarters, and district personnel. Maintains close coordination and cooperation with staff members of cities, counties and other agencies when appropriate.

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PHYSICAL, MENTAL AND EMOTIONAL REQUIREMENTS:

Physical requirements for this position include sitting for long periods of time using a keyboard and video display terminal and may occasionally require bending, stooping and kneeling.

Mental requirements for this position include the ability to multi-task, adapt to changes in priorities, and complete tasks or projects with short notice; ability to organize and prioritize large volumes of varied documents; and the ability to concentrate in order to review and create documents and meet strict deadlines.

Emotional requirements for this position include: interaction with many people and the ability for employees to work together in a cooperative manner; ability to resolve emotionally charged issues reasonably and diplomatically; deal effectively with pressure, maintain focus, and intensity yet remain optimistic and persistent, even under adversity; consider and respond appropriately to the needs, feelings, and capabilities of different people in different situations; is tactful and treats other with respect; open to change and new information; and adapts behavior and work methods in response to new information, changing conditions, or unexpected obstacles.

WORK ENVIRONMENT:

While at their base of operation, employee will work in a climate-controlled office under artificial lighting. Employee may also be required to travel and work outdoors and may be exposed to traffic, dirt, noise, uneven surfaces, and/or extreme heat or cold.

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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