

POSITION DUTY STATEMENT

PM-0924 (REV 7/2014)

CLASSIFICATION TITLE TRANSPORTATION ENGINEER/CIVIL	OFFICE/BRANCH/SECTION 02/MAINTENANCE & OPERATIONS TRAFFIC ENGINEER	
WORKING TITLE TRANSPORTATION ENGINEER/CIVIL	POSITION NUMBER 902-365-3135-004	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 the general direction of the Senior Transportation Engineer for Traffic Engineering & Operations, the incumbent is responsible for assisting in the implementation of the Intersection Control Evaluation (ICE) process for the District. The incumbent also collects data and prepares traffic studies for operational investigations, advance planning, and North Region Design. In this capacity, the incumbent also reviews Traffic Impact Studies prepared by consultants for local development projects that generate a significant amount of traffic on the State's facilities. Additionally, the incumbent prepares Plans, Specifications, and Estimates for project development. Technical support during construction of these facilities is also required. Duties include, but are not limited to the following:

TYPICAL DUTIES:

Percentage		Job Description
30%	E	Collects data and performs traffic studies pertaining to freeways, highways, and intersections in support of signal operations, operational investigations, advance planning, and north region design. Prepares written recommendations based on findings. Work involves knowledge and use of the Highway Capacity Manual (HCM) and various computer software programs such as Synchro, SimTraffic, SIDRA, and others.
20%	E	Conducts Traffic Engineering assessments for Intersection Control Evaluations (ICE) for safety and operational investigations. Assists District and North Region staff in the preparation of ICE reports.
20%	E	Provides technical assistance to the Local Development Review Office by reviewing and commenting on Traffic Impact Studies and/or ICE reports prepared by consultants.
15%	E	Prepares plans, specifications, and estimates on major and minor design projects for North Region Design. Provides technical support to construction personnel as needed. Occasionally serves as Project Engineer on Minor B projects.
10%	E	Prepares Project Initiation Forms (PIF) for projects initiated by the Traffic Engineering & Operations Office.
5%	E	Provides written and oral responses to internal and external inquiries. This may include consultation to Legal Division for traffic related issues.

¹ESSENTIAL 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 supervisor responsibilities.

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KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Possession of a valid Certificate of Registration as a Electrical Engineer is desirable, but not required. Graduation from a four-year curriculum in electrical/electronic engineering from an ABET accredited university is required. (Possession of a valid certificate as an Engineer-in-Training issued by the California State Board of Registration for Professional Engineers and Land Surveyors may be substituted for the required education).

Must have knowledge of the following:

Principles and practices of traffic engineering; Design and construction of highway lighting and traffic control systems, including electrical/electronic theory and instrumentation for physical testing and research; Power and lighting distribution systems; Modern highway lighting and traffic control equipment and apparatus; Computer software applicable to traffic operations, traffic signal operation, and traffic signal monitoring; Macroscopic and microscopic traffic models; Engineering mathematics; Effects of weather and time on electrical and electronic equipment, lighting devices, and their operation; The Department's safety and health policies and procedures, including the California Code of Regulations, Title 8 Industrial Regulations, Safety Orders, Code of Safe Practices, and Safety Manual; Operation and timing of traffic signals including fixed time and traffic actuated systems; Intelligent Transportation Systems (ITS) components and their use; Computers and their use; Caltrans Injury and Illness Prevention Program; Department Policies and Procedures.

Ability to:

Inspect the installation and operation of highway electrical components and recommend revisions; Read and understand highway plans, drawings, and field data which relate to highway lighting and traffic control devices; Prepare and review complex plans, cost estimates, and specifications for electrical projects; Perform engineering calculations to substantiate conclusions; Evaluate and implement utility relocation plans and reports; Analyze situations accurately and take effective action; Correlate plans, designs, drawings, and data with physical conditions; Prepare correspondence and detailed reports. Excellent writing skills required; Establish and maintain friendly and cooperative relations with those contacted in the course of the work; Follow directions and work independently; Correspond professionally, effectively, orally and in writing, with other Caltrans functional offices, local agencies, and the general public.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Incumbent is responsible for decisions necessary to complete the specific job assignments listed above. The consequences of poor decisions and/or inaction could include the following: adverse affects to the form, function, and safety of highway facilities; projects not delivered within required time frames; resources expended on proposals which do not meet minimum criteria; less than optimum traffic signal operation service to the public; insufficient information for managers to schedule and monitor program activities; incorrect costs applied to developers, local agencies or to the State; and additional costs and/or time delays to encroachment permits and construction projects.

PUBLIC AND INTERNAL CONTACTS

Contact with the public will be daily, primarily through phone and written contact, with occasional public presentations. Some presentations will be after normal working hours.

This position will require extensive contact within the District and North Region, including Design, Environmental, Office Engineer, Program Management, Right of Way, Advanced Planning, Construction, Permits, and Maintenance. Contact with Headquarters Traffic will be required on a regular basis.

Contact will be required with local government, city, county, private engineering consultants, and other State agencies concerning plan reviews, contracted projects, and electrical maintenance agreements. The employee will occasionally contact industry representatives to transmit or obtain relevant engineering information.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

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Incumbent will be required to use personal computers and telephones for long periods of time. Other physical activities will include regular fieldwork, lifting up to 50 pounds, light construction type activities, and occasional driving for long periods. Incumbent may be required to travel in state, but the travel is not very frequent.

Incumbent will be required to sustain mental activity needed for report writing, problem solving, researching, analysis and reasoning, and participating in meetings.

Incumbent will be required to develop and maintain cooperative working relationships; respond appropriately to difficult situations; recognize emotionally charged issues or problems; and display empathy to others.

Employee must have the ability to refrain from insubordination, follow supervisor's instructions, "get along" with supervisors and co-workers, avoid violent behavior, understand and follow Caltrans policies, and avoid disruptive or harassing behavior.

WORK ENVIRONMENT

Incumbent will primarily work in a climate-controlled office under artificial lighting. Incumbent will be required to traverse office complexes, parking lots, equipment repair shops, highways, sidewalks, roadside cut and fill slopes, and drainage facilities. Incumbent will be required to travel and work outdoors on occasion and may be exposed to dirt, chemicals, noise, uneven surfaces, extreme heat, extreme wet conditions and extreme cold.

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.

SUPERVISOR (Print)

SUPERVISOR (Signature)

DATE