STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

POSITION DUTY STATEMENT

PM-0924 (REV 7/2014)

CLASSIFICATION TITLE	OFFICE/BRANCH/SECTION	
Transportation Engineering Technician	District 03/North Region Division of Engineering	
WORKING TITLE	POSITION NUMBER	EFFECTIVE DATE
Design Technician	927-200-3175-xxx	

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 supervision of a Senior Transportation Engineer and functional direction from a Project Engineer (Lead Worker) or Designer Transportation Engineer or with information initiated by an engineer, the Transportation Engineering Technician-Design Technician uses analytical and computer-oriented processes and equipment in the preparation of designs, contract plans, estimates, reports and specifications for approval by the engineer. During the construction season, the incumbent may be loaned to construction to work as a construction inspector or materials tester, or in surveys. Travel to project sites will be required. Possession of a valid California Drivers License is required when operating a state owned vehicle.

TYPICAL DUTIES:

Percentage Essential (E)/Marginal (M)[1]	Job Description
35% E	Prepares project designs, plans, maps, estimates and reports under the direction of the engineer. Gathers and analyzes technical information as a team member for the design of transportation projects. Uses latest Computer Aided Design (CAD) and Computer Aided Design and Drafting (CADD) software applications to prepare project designs, plans, maps, and estimates. Performs mathematical calculations related to plans, maps, and estimates (quantities and costs). Assist in the preparation of roadway alignments, profile grades, superelevation, other geometric features, drainage facilities, and calculates traverses by completing mathematical calculations and using CAD programs on the Caltrans engineering workstation. Checks plans, maps, and estimates for completeness accuracy and conformity to standards. Some field work is required
35% E	Under the direction of the engineer, in preparation of plans and maps, completes the drafting of plans, working drawings, detailed drawings, boundary line maps, and calculating land areas using CADD software on the Caltrans engineering workstation.
10% E	Act as quality assurance technician for the branch, responsible for the accurate and efficient set up and delivery of project plans, maps, and estimates; prepares related reports and correspondence.
10% E	Act as trainer for the branch with regard to the accurate and efficient set up and delivery of project plans, maps, and estimates; in that plans and maps are in conformance with the Plans Preparation Manual. As a NR representative, coordinate with HQ Division of Design, CADD/GIS Support Office on updates to the Plans Preparation Manual and drafting standards.
5% M	Coordinate project needs within North Region, other Regions/Districts, Headquarters, local agencies, FHWA, private industry, and the general public; prepares related correspondence.
5% M	Make special technical studies, investigations, and transportation engineering surveys or road inventories; prepares related reports and correspondence.

[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

This position does not supervise other employees or act in a lead worker capacity; however responsibilities include a leadership role in the Computer Aided Design (CAD) and Computer Aided Design and Drafting (CADD) technology aspects of project development within the design branch.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Knowledge of: methods, materials, and equipment used in construction, surveying, and maintenance of transportation facilities; standards of alignment, grade of highways and other transportation facilities. Incumbent must have extensive knowledge of Computer Aided Drafting and Design software, the Highway Design Manual and the Caltrans Plans

Preparation Manual, and knowledge of word processing and spreadsheet software.

Ability to: prepare plans, and estimates for construction or maintenance of transportation facilities; make accurate, neat, and concise engineering calculations, documents, and correspondence; use word processing and spreadsheet software, make nonprofessional engineering decisions; perform drafting and mapping. Work with others cooperatively in a project team relationship; communicate effectively, both written and oral, with supervisors, fellow workers, and others. Must have the ability to incorporate new procedures or techniques and be able to receive instruction from the transportation engineer supervisor, leadworker, or designer on a continuous basis.

Analytical Requirements: must be capable of understanding transportation-engineering problems; must have a solid understanding of Geometry and Trigonometry; must understand traverse computations by conventional calculations and by computer applications. Must be able to obtain and analyze information from field survey notes and computer aided design programs; using and processing this information into earthwork quantities. Must know how contract item quantities are computed, and know the method of payment. Must be familiar with safe field review practices.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

The incumbent is responsible for the timely initiation and prosecution of project development tasks assigned and that all work complies with all applicable manuals, circular letters and directives. The incumbent is required to coordinate work with Headquarters, other Regions/Districts, their functional units, as well as other involved departments.
Failure to diligently prosecute the above may delay projects, increase cost, and result in a less than satisfactory product.

PUBLIC AND INTERNAL CONTACTS

At all times this assignment requires working effectively with other people. This includes personnel at levels within the North Region, District 1, other Districts, Headquarters, local agencies, FHWA, private industry, and the general public.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Employees will be required to sit for long periods of time using a keyboard and video display terminal. Employee must be congenial and tactful when dealing with others while effectively and cooperatively accomplishing tasks. Frequent telephone interaction is common and necessary. Employees will also work under field conditions, which will entail walking on uneven terrain under variable weather conditions

WORK ENVIRONMENT

While working in the design engineering office, the incumbent will work in a climate-controlled office under artificial lighting. There will be periodic field trips to project sites, travel to meet with agencies, the public, and for training classes.

During the construction season, the individual may be loaned to construction to work as a construction inspector or materials tester, or in surveys. Incumbent may be required to live away from their permanent residence during the workweek.

When working outdoors, incumbent may be exposed to dirt, noise, uneven surfaces, and/or extreme heat or cold. During field work, use of heavy duty clothes and boots is required. Periodic overtime work and out of town overnight travel may be required. Travel may require the use of State supplied vehicles that vary in size.

POSITION DUTY STATEMENT

PM-0924 (REV 7/2014)

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