

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
DUTY STATEMENT**

CLASSIFICATION TITLE	DISTRICT/DIVISION/OFFICE	
Senior Bridge Engineer	DES-METS, Office of Structural Materials Structural Materials Testing Branch	
WORKING TITLE	POSITION NUMBER	EFFECTIVE DATE
Chief, Structural Materials Testing	559-318-3185-xxx	December 2014

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 Chief of the Office of Structural Materials, a Supervising Bridge Engineer, the incumbent is responsible for operation of the Structural Materials Testing Branch. This Branch consists of the Structural Materials Testing Laboratory ("Lab") and the Transportation Laboratory's Machine Shop, and provides quality assurance testing for structural materials product used in construction projects statewide, machine shop services for test samples, apparatus and instruments, as well as technical expertise and consultation on fasteners and structural materials products.

TYPICAL DUTIES

Percentage	Job Description
Essential (E)/Marginal (M)	

- | | |
|---------|--|
| 50% (E) | <p>Quality Manager of the Structural Materials Testing Laboratory: As Quality Manager of the Lab, maintains the Lab’s accreditation to the American Association of Laboratory Association (“A2LA”). In the course of maintaining this accreditation, the incumbent, under general direction, does the following: (1) plans, assigns and reviews work; (2) gives instructions, maintains discipline, establishes goals and prepares programs and budgets to reach these goals; (3) performs the more difficult work and directs analysis, quality assurance testing and special investigations pertaining to structural steel, fasteners, bridge bearings and joint seals, anchorage devices, earthquake retrofit, and other related structural products; (4) establishes and oversees the system for filing test records; (5) prepares correspondence and written reports as needed; (6) participates in training programs; (7) oversees proficiency testing programs; (8) works with Structural Materials Representatives to facilitate the timely verification of material quality; (9) attends and participates in meetings and conferences; and (10) helps prepare an annual budget.</p> |
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- 20% (E) Supervises Machine Shop Operations: Under general direction, plans, assigns and reviews work; gives instructions, maintains discipline, establishes goals and prepares programs and budgets to reach these goals.
- 20% (E) Works on various Technical Committees including, but not limited to: Mechanical Testing Committee, Post-tensioning Committee, Joint Seal & Bearing Pad Committee and the Ultimate Rebar Splice Committee. In this capacity prepares, reviews, edits, or recommends changes to plans, specifications and test methods.
- 10% (M) Consults, confers with and assists other Headquarters offices, District personnel, other public agencies, manufacturers, contractors, and private individuals in the area of structural materials and related products. Provides technical expertise and consultation concerning specialized structural materials and products, including fasteners, concrete anchorage devices and bonding materials, and concerning the testing of these materials. Evaluates new products of a structural nature.

SUPERVISION EXERCISED OVER OTHERS

Exercises direct technical and administrative supervision and has full management responsibilities over the activities of the Lab and the Machine Shop.

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS

Possession of a valid certificate of registration as a Civil Engineer issued by the California State Board of Registration for Professional Engineers is required. A well-rounded education and experience in the field of engineering is also required. Materials testing and structural engineering experience is desirable. The incumbent should have a thorough knowledge of highway and bridge construction materials as well as material inspection and testing procedures as required by Caltrans Standard Plans and Specifications, California Tests, ASTM, ANSI, AWS, AASHTO and other related specifications. The position requires the ability to analyze situations, structural materials and test data to perform structural engineering, and to oversee the use of computer programs used to control test machine operation. The ability to communicate effectively both verbally and in writing, to author professional engineering reports and to provide sound and accurate testimony in legal cases is also required.

The incumbent must be skilled in good management practices and must be able to exercise sound engineering judgment to analyze situations accurately, adopt an effective course of action, develop and maintain cooperative working relationships, and demonstrate capacity for assuming increasing responsibility. The incumbent must also be familiar with the Department's goals and objectives of equal employment, safety, labor relations, and must possess the ability to contribute effectively to them.

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The incumbent must be able to analyze and comprehend specification requirements and test methods relative to structural component design and testing, to recognize deficiencies in such design and testing, and to develop workable, effective specifications and test methods as the need becomes evident. The employee must be capable of analyzing test results accurately, must understand the significance and application of these results, and be able to take effective action on the basis of such results. A strong background in the strength of materials is necessary along with the ability to develop an in-depth knowledge of the performance of materials.

CONSEQUENCE OF ERROR/RESPONSIBILITY FOR DECISIONS

Employee is directly responsible for the quality assurance testing programs, special investigations and legal problems assigned to him/her. He/she is responsible to see that these programs are carried out in a professional and exacting manner and in accordance with existing policy, rules, work plans and guidelines.

Wrong decisions on the incumbent's part can result in loss of credibility, laboratory accreditation, a substantial loss of government funds as well as potentially affecting the safety of the traveling public.

PUBLIC AND INTERNAL CONTACTS

In the course of carrying out their duties, employee will maintain close communication with all personnel assigned to, or a part of, their work assignment. They will routinely confer with other state representatives in District and Headquarters offices, FHWA, industry and the general public to transmit or obtain relevant engineering information. They will be called upon to provide training and participate in training seminars for members of Caltrans.

WORK ENVIRONMENT

Employee will work in a climate-controlled office under artificial lighting. During the normal operation and maintenance of standard office machines will be exposed to chemicals and dust. Employee may be exposed to dirt, noise, and uneven surfaces.

PHYSICAL, MENTAL AND EMOTIONAL REQUIREMENTS

Employees will be required to sit for long periods of time using various standard office machines that includes but is not be limited to a computer, printer, copier and fax machine. Simple grasping and manual dexterity is required to manipulate small objects such as pens, pencils and paperclips. They may also be required to lift objects weighing up to 20 pounds. The employee must develop and maintain cooperative working relationships with coworkers, and meet and deal tactfully with the public and other Departments staff.

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I have read and understand the duties listed above and can perform them without reasonable accommodation. (If you believe you may require reasonable accommodation, please discuss this with the 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 the duties with and provided a copy of this duty statement to the employee named above.

Supervisor (Print)

Date

Supervisor (Signature)

Date