

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
DUTY STATEMENT**

CLASSIFICATION TITLE	DISTRICT/DIVISION/OFFICE	
Senior Bridge Engineer	DES-METS-Office of Structural Materials	
WORKING TITLE	POSITION NUMBER	EFFECTIVE DATE
Chief, Quality Assurance and Source Inspection Branch, Vallejo	559-318-3185-xxx	

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 regularly and on time; 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

Under the general direction of a Supervising Engineer in Sacramento, the incumbent is responsible for operation of the Bay Area office of the Office of Structural Materials. The primarily geographical area of responsibility is the counties of Contra Costa, Marin, Solano, Napa, Sonoma, San Francisco, San Mateo, Santa Cruz, Alameda Lake, Mendocino, Humboldt, and Del Norte. However, the area of responsibility may extend to any area of the state as well as out-of-state locations as so directed by the Supervising Engineer.

TYPICAL DUTIES

Percentage	Job Description
Essential (E)/Marginal (M)	
45% (E)	Directs and coordinates construction of bridges and other major structures as it relates to the primary assignment of conducting source inspections and tests of manufactured products. Directs and coordinates staff assigned to the North Bay and Redwood Empire field office to provide shop inspections of fabricated steel bridge components, seismic retrofit members, precast products, and the field inspection of welding and erection of structural steel bridges, bar reinforcements, and structural members.
35% (E)	Inspects toll bridges and other structures for determining safety, planning repairs or alterations, exercises engineering knowledge and judgment in passing on problems related to the interpretation of plans or specifications, the adequacy of working drawings, the quality of materials and workmanship, the procedures for testing and inspection of metals, concrete, composites, chemical products, wood, asphaltic products, and other construction materials used principally in highways and bridges. Makes the more difficult judgments as to acceptance and rejection of materials and works towards maintaining a cooperative working relationship with industry. Provides consultation and support to resident engineers on materials problems and attends preconstruction and prefabrication meetings.
10% (E)	Reviews engineering designs and specifications for compatibility with current commercial practice and recommends changes to take advantage of new materials

and processes. Recommends controls for the fabrication of structural steel and prestressed concrete bridges. Carries on the more complex and difficult specialized technical studies and investigations and provides support for Department researchers investigating new products and manufacturing processes.

- 10% (M) Has overall responsibility in establishing the budgetary needs for personnel, office and laboratory facility, testing equipment, and automotive equipment for the branch. Maintains a safety program for personnel and security program for office facility, writes technical articles, dictates correspondence, is responsible for seeing that all necessary inspection and test reports are processed in conformance with established Department practice and that all such documents are accurately and promptly forwarded to designated recipients. Assists in the establishment of training programs and works as a trainer as needed. Provides the necessary supervisory and administrative guidance for the efficient functioning of the office operation and writes all necessary correspondence, requests, and reports to carry this out.

SUPERVISION EXERCISED OVER OTHERS

Plans, assigns, and checks work, gives instructions, maintains discipline and makes decisions in directing and coordinating the work of the North Bay and Redwood Empire office. Trains engineering, technical, and clerical personnel, evaluates the performance of personnel and takes appropriate corrective action when needed.

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS

Must have a working knowledge of fabrication procedures and practices related to structural steel bridge fabrication and erection and the manufacture of precast prestressed concrete. Through knowledge of highway and bridge construction materials and inspection and testing practices and procedures, as required by Department specifications, ASTM, AASHTO, AWS, ASTM, AWWA, AREA, and other national reference specifications. The incumbent should be familiar with Department Standard Plans and Specifications, ASTM, AISC, AASHTO and other related specifications. The position requires the ability to analyze situations, materials, engineering and test data to perform structural engineering calculations.

The incumbent must have knowledge of methods of stress analysis for structures, along with methods of determining stresses in structures and of design practices.

The incumbent must have the ability to conduct inspection work on all types of structures, including bridges.

Must be able to prepare comprehensive reports, prepare correspondence, and communicate effectively orally and in writing and maintain a cooperative working relationship with other employees and private industry.

The incumbent must be skilled in good management practices and be able 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 be familiar with the Department's goals and objectives on affirmative action, safety, labor relations, and must possess the ability to effectively contribute to them.

Must be able to perform engineering calculations related to highway designs, the testing and manufacturing processes of materials. Must be able to analyze test methods and reports, contract documents, quality assurance programs and to develop and write new test methods as the need develops. Must be able to make an economic analysis of operational costs to effectively develop budgets.

CONSEQUENCE OF ERROR/RESPONSIBILITY FOR DECISIONS

Employee is directly responsible for the inspection, testing and quality assurance programs for the North Bay and Redwood Empire field office. The employee is responsible to see that the inspection, testing and assurance programs are carried out in a professional manner and in accordance with all contract documents, existing policy, rules, and guidelines. The employee must maintain confidentiality regarding manufacturing processes and procedures of area industries relative to manufacturing processes and new materials.

Complex projects require initiative, experience, and independent judgment. Delay of safety projects may lead to accidents and injuries. The consequences of not exercising the above responsibilities could lead to late delivery of projects cost overruns and inefficient use of staff. Wrong decisions can result in the acceptance of inferior materials or products having a decreased service life and/or decreased effectiveness. This can result in a loss of substantial amounts of government funds, contract claims, and delays to contract completion. In addition, release of confidential material could result in legal actions and loss of the integrity of the Office. Such damage to our public relations will reduce effectiveness through a loss of mutual confidence with private industry.

PUBLIC AND INTERNAL CONTACTS

Maintains close communications with subordinates, supervisor, other inspection offices, private testing laboratories, and the Districts and Headquarters offices. Maintains fair, impartial, effective relationship with materials suppliers, fabricators, and manufacturing plants that supply various products for highway and bridge construction. Confers with other state or public representatives, representatives of FHWA, and the general public to transmit or obtain relevant engineering information. Follows the Department's established chain of command when communicating internally and follows Department procedure when corresponding with private

industry. Represents and makes oral presentations within the Department, as well as at public affairs, all within the Department's guidelines. Discusses materials problems with resident engineers and attends preconstruction and prefabrication conferences as necessary.

This position requires daily contact with District design and project engineers as well as engineering consultants to discuss issues such as the completeness of plans, project delivery, project schedules, and specification reviews. This position also has frequent contact with other Department offices such as Budgets, Maintenance, Construction, Administration and Civil Rights.

On occasion, the incumbent receives calls from contractors, legislative staff, the media and the general public.

WORK ENVIRONMENT

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

PHYSICAL, MENTAL AND EMOTIONAL REQUIREMENTS

Employee may be required to sit for long periods of time using a keyboard and video display terminal, and reviewing and consulting staff work. Employee may be required to sustain the mental activity needed for report writing, auditing, problem solving, analysis and reasoning; will be required to develop and maintain cooperative working relationship and respond appropriately to difficult situations. Employee may be required to travel statewide and participate in field investigations. When working in the field employee may be required to stand for long periods of time; pull, push and squat to examine materials; climb uneven terrain; maintain mental awareness and physical agility when working in the proximity of the motoring public. Employee may be required to drive a motor vehicle. Employee may occasionally be required to move equipment and test materials weighing up to 50 lbs.

I have read and understand the duties listed above and can perform them with/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's Name (please print)

Employee's Signature

Date

Duty Statement

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

Supervisor's Name (please print)

Supervisor's Signature

Date