

POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE Sr Bridge Eng	OFFICE/BRANCH/SECTION 59/Division of Engineering Services/Structure Construction	
WORKING TITLE Bridge Construction Engineer Technology Specialist	POSITION NUMBER 559-510-3185-xxx	REVISION DATE

As a valued member of the Caltrans team, you make it possible to improve lives and communities through transportation.

GENERAL STATEMENT:

This position reports directly to a Supervising Bridge Engineer in the Division of Engineering Services (DES) / Structure Construction (SC). The incumbent is responsible for providing expertise and management in meeting Project Delivery commitments, training program goals, and task management of workload and resources. Acts as a Subject Matter Expert (SME) for UAS, BIM4I, and digital construction tools within the Office and statewide. Provides training and technical support for field personnel within the Office and statewide.

CORE COMPETENCIES:

As a Sr Bridge Eng, the incumbent is expected to become proficient in the following competencies as described below in order to successfully perform the essential functions of the job, while adhering to and promoting the Department's Mission, Vision, Values, Strategic Imperatives and Goals. Effective development of the identified Core Competencies fosters the advancement of the following Leadership Competencies: Change Commitment, Risk Appetite, Self-Development/Growth, Conflict Management, Relationship Building, Organizational Awareness, Communication, Strategic Perspective, and Results Driven.

- Change Leadership:** Develops new and innovative approaches needed to improve effectiveness and efficiency of work products. Encourages others to value change. Considers impact and recommends changes. (Safety, Employee Excellence - Collaboration, Innovation)
- Dealing with Ambiguity (Risk):** Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Employee Excellence - Equity, Innovation, Integrity, Stewardship)
- Ethics and Integrity:** Demonstrated concern to be perceived as responsible, reliable, and trustworthy. Respects the confidentiality of information or concern shared by others. Honest and forthright. Conforms to accepted standards of conduct. (Employee Excellence - Equity, Integrity, People First, Pride)
- Problem-solving and Decision-making :** Identifies problems and uses logical analysis to find information, understand causes, and evaluate and select or recommend best possible courses of action. (Equity, Employee Excellence - Collaboration, Integrity, Stewardship)
- Teamwork and Collaboration:** Sets team structure. Organizes, leads, and facilitates team activities. Promotes team cooperation and encourages participation. Capable of cross functionality and working well with others on a team to achieve personal goals, team goals, and organizational goals. Takes responsibility for individual actions in order to achieve consistent results. (Equity, Prosperity, Employee Excellence - Equity, People First, Pride)
- Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Safety, Prosperity - Collaboration, Integrity, People First, Stewardship)
- Communication:** Expresses oneself clearly in all forms of communication. Gives feedback and is receptive to feedback received. Knows that listening is essential. Keeps others in the Division and other functional units informed as appropriate. (Employee Excellence - Collaboration, Integrity)
- Vision and Strategic Thinking:** Communicates the "big picture". Models the department's Vision and Mission to others. Influences others to translate vision into action. Future oriented, and creates competitive and break through strategies and plans. (Prosperity - Innovation, Integrity, Stewardship)
- Technical Expertise:** Depth of knowledge and skill in a technical area. (Safety, Employee Excellence - Innovation, Integrity, Pride, Stewardship)

TYPICAL DUTIES:

Percentage		Job Description
Essential (E)/Marginal (M) ¹		
35%	E	Responsible for the development and implementation of training programs to ensure staff meet the Department goal of a well trained workforce. Work with SC management and other Senior Specialists to identify, develop and deliver training focused on digital tools hardware use and workflow improvements, that is consistent with SC and Department Policies, Practices and Procedures. Provide mentoring and instruction in both informal and formal training environments.

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20%	E	Participates or chairs a SC Technical Team and assists in providing technical guidance and direction to SC staff through Bridge Construction Memos, technical manuals, and other training tools. Supports the SC Quality Manager Representative on the Quality Management System and in performing audits such as annual project record reviews. Works collaboratively with all other SC Senior Specialists to provide statewide consistency of services.
20%	E	Act as Structures Construction BIM expert supporting the BIM4I initiative, providing technical guidance and aligning digital delivery strategies with statewide goals. Participate in both Caltrans and external committees to advance digital construction technologies in support of BIM4I.
15%	E	Acts in a lead capacity for field testing, prototyping, and evaluation of emerging construction technologies. Oversee field demonstration and data collection for emerging products and provide feedback supporting field integration. Collaborate with internal and outside entities on development of new or improvement of existing technologies for use in SC field operations.
5%	M	Serve as SC lead on DRISI research projects; develop scopes, coordinate deliverables, and ensure alignment with Department innovation goals.
5%	M	Author and manage federal grant projects, including USDOT SMART and FHWA ADCMS grants, and ensure project milestones and deliverables are achieved. Seek participation in TRB construction-related committees, contributing to national research agendas and policy development.

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 supervision is exercised. Receives general direction for assignments from a Supervising Bridge Engineer. Responsible for independent actions as a technical specialist, provides technical or administrative guidance and directs or trains others in specialty areas of structure design and construction.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Possession of a valid Driver's License is required when operating a state or personal vehicle on official business in performance of their duties driving to various field locations as required. Possession and maintenance of a valid certificate of registration as a Civil Engineer in the State of California. Possession of FAA Part 107 Remote Pilot Certificate is highly desirable. A thorough knowledge of methods and design and construction of various types of bridge and transportation related structures; materials, methods and equipment used in construction of structural and heavy civil work. Knowledge of the economics of structure design and construction, contract administration and laws and codes governing construction by contract. Ability to plan and lead the work of others; analyze situations accurately and adopt an effective course of action; prepare clear and concise written correspondence, reports, articles for publication, and address an audience effectively. Ability to analyze and develop solutions for difficult technical and administrative problems relating to construction work. Develop new construction techniques and materials. This position requires knowledge of stress analysis, strength of materials, properties and uses of construction materials; mathematics as applied to civil engineering; methods, materials and equipment used in construction and maintenance of transportation structures; surveying and the methods of proportioning and handling Portland cement concrete. Must be able to use and reference the Bridge Construction Records & Procedures, other Structure Construction (SC) manuals, the Construction Manual, and Caltrans' Safety Manuals. Knowledge of applicable California Test Methods and ASTM tests used on bridge and building construction materials.

Must have a working knowledge of and the ability to follow and apply the information contained within Director's Policy and Deputy Directives applicable to SC. Must be proficient in the use of Excel, MS Word, Civil3D, Microstation, and other engineering related computer programs and software. Must have a basic knowledge in the use of Access, VISION, and PRISM. Must have a working knowledge of resource estimating, allocations and expenditures as used in construction. Must have the ability to develop and deliver training to a group.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

The incumbent is responsible for independent action and must exercise initiative in carrying out assigned duties. The timeliness of efforts will be crucial to achieving field office efficiencies and implementation of construction engineering, contract administration, and e-Construction activities; and initiate, develop, and make recommendations on changes in policies and procedures. This impacts the overall efficiency of the statewide construction program. Failure to carry out these responsibilities could result in inefficient project delivery and loss of construction industry and public confidence in the Department as a responsible public agency.

PUBLIC AND INTERNAL CONTACTS

Exercises wide latitude for project contacts with Structure Design and Maintenance, Headquarters Units, Districts, public and private agencies, and contractors. Incumbent must be able to establish and maintain open communication with those contacted during the course of work.

ADA Notice

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PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Ability to develop and maintain cooperative working relationships; respond to difficult situations, recognize emotionally charged issues and problems and validate the various responses. Incumbent must be able to climb steep inclines and perform work from heights which may be over 100 feet above ground or water. Must be able to sit while driving for long periods of time. Must be able to carry and/or use field engineering equipment such as, but not limited to surveying equipment, concrete testing equipment and equipment for testing smoothness (including a profilograph). Hearing and sight are both essential to job performance because the engineer must be able to hear directions, traffic and equipment and must see to perform his/her duties safely. Corrected hearing is acceptable. Sight must be corrected to the State of California, Department of Motor Vehicles standards for safely driving a vehicle. Night vision must be good for safety when working after dark. Incumbent must be able to walk, stand or sit for long periods of time while using a keyboard and video display terminal. Other physical requirements of the job include the ability to lift and/or carry 50 pounds or more, reaching overhead, pushing or pulling, twisting, climbing, balancing, bending, crouching, squatting, crawling, and fine manipulation.

WORK ENVIRONMENT

While at their base of operation, incumbent will work in a climate-controlled office under artificial lighting. In the office setting, must be able to walk, stand or sit for prolonged periods of time. As a statewide organization, DES adjusts to periods of fluctuating workload to successfully deliver projects. Incumbent will be required to travel and perform fieldwork. May be exposed to loud noises, dust, dirt, uneven surfaces, extreme temperatures, noise, vibration, odor chemicals, extreme weather conditions and sunlight while out in the field. May be required to work in a wide range of sometimes extreme weather conditions, including heat up to 120 degrees, cold as low as 15 degrees, strong winds, rain, sleet or snow. Incumbent may be required to work on urban roadways at night under artificial light. Work consists of five, eight-hour days. Travel, overtime and/or night work may be required. May work around bulky/heavy materials and equipment used in the vicinity of inspection areas. May also be exposed to the motoring public. Extensive travel may be required; therefore, incumbent must be able to travel using a car or commercial transportation. Regular and punctual attendance is required. DES employees may be given temporary assignments on DES projects throughout the State as workload demands.

Personal safety requirements include:

- Work boots, in good sturdy condition, must be worn to provide foot and ankle support and protection.
- Either long or short-sleeved shirts and a safety vest, must be worn on or around the job site.
- Long pants must be worn on or around the job site. No shorts or cut-offs are permitted.
- Provided safety gear (i.e., hard hats, safety glasses, safety vests, hearing protection devices, gloves, respirator and other safety gear) must be worn when required by the Department.

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.)

I agree that by providing my electronic signature for this form, I agree to conduct business transactions by electronic means and that my electronic signature is the legal binding equivalent to my handwritten signature. I hereby agree that my electronic signature represents my execution or authentication of this form, and my intent to be bound by it.

EMPLOYEE (Print)

EMPLOYEE (Signature)	DATE
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I have discussed the duties with, and provided a copy of this duty statement to the employee named above.

SUPERVISOR (Print)

SUPERVISOR (Signature)	DATE
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