

CLASSIFICATION TITLE Sr Bridge Eng	OFFICE/BRANCH/SECTION 59/Engineering Services/Structure Construction	
WORKING TITLE Falsework Engineer	POSITION NUMBER 559-511-3185-003	REVISION DATE 09/13/2024

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

GENERAL STATEMENT:

Under the direction of a Supervising Bridge Engineer, the incumbent is responsible for developing and maintaining Division of Engineering Services (DES), Structure Construction's (SC) practices and procedures pertaining to falsework, temporary structures, temporary supports, guying, demolition, and related construction activities statewide. Incumbent is the single point of contact in communicating with various railroad agencies on matters pertaining to the work mention within. Incumbent serves as the chair for SC Temporary Structures Technical Team. Incumbent must possess and maintain a valid certification of registration as a civil engineer in California. Regular and punctual attendance is required. Travel may be required on short notice.

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, Equity, Climate Action, Employee Excellence - Collaboration, Equity, Innovation, Integrity, Pride)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Safety, Equity, Climate Action - Collaboration, Equity, Innovation, Integrity, Pride)
- **Continuous Professional Development:** Seeks to obtain knowledge and improve performance while supporting others in doing the same. (Safety, Equity, Climate Action - Collaboration, Equity, Innovation, Integrity, 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. (Safety, Equity, Climate Action, Employee Excellence - Collaboration, Equity, Innovation, Integrity, Pride)
- **Teamwork/Partnership:** Develops, maintains, and strengthens partnerships with others inside or outside of the organization through effective communication and collaboration. (Safety, Equity, Prosperity, Employee Excellence - Collaboration, Equity, Innovation, Integrity, Pride, Stewardship)
- **Organizational Awareness:** Contributes to the organization by understanding and aligning actions with the organization's strategic plan, including the mission, vision, goals, core functions, and values. (Safety, Equity, Climate Action - Collaboration, Equity, Innovation, Integrity, Pride)
- **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. (Safety, Equity, Climate Action - Collaboration, Equity, Innovation, Integrity, Stewardship)
- **Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Safety, Equity, Climate Action, Employee Excellence - Equity, Innovation, Integrity, Pride, Stewardship)
- **Technical Expertise:** Depth of knowledge and skill in a technical area. (Safety, Equity, Climate Action, Employee Excellence - Collaboration, Equity, Innovation, Integrity, Pride)

TYPICAL DUTIES:

Percentage	Job Description
Essential (E)/Marginal (M) ¹	

POSITION DUTY STATEMENT

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20%	E	Develop and recommend specifications, practices, and procedures for falsework, guying, temporary structures, temporary supports, and demolition. Maintain and update the Caltrans Falsework Manual, Bridge Removal Manual, Temporary Structures Manual, and related sections of the Bridge Construction Records and Procedures Manual. Develop and prepare training course material for temporary structures, falsework, guying systems, demolition, and temporary supports. May act in the role of lead instructor (amount of time will be more significant in years classes are given) or provide assistance to those that are teaching.
20%	E	Review plans and calculations for falsework, guying, temporary bridges, temporary supports, and demolition work received from Structure Representatives for conformance with the specifications and the practices and procedures of SC. Develop reports and statistics related to the acceptability of plans and calculations received.
20%	E	Develop and perform special research related to construction of falsework, temporary structures, temporary supports, guying, and demolition. Review project daily reports, contract change orders, project correspondence pertaining to falsework, temporary structures, temporary supports, guying, and demolition, and recommend action. Develop and maintain an information library on falsework, temporary structures, temporary supports, guying, and demolition for use by field engineers.
15%	E	Act as liaison between Structure Representatives and railroad companies. Act as a single point of contact for issues regarding trenching and shoring (T&S), and collaborate with Structure Construction's T&S Technical Team to address incoming issues. Provide consultant service to other Caltrans units. Interpret specifications, practices and procedures dealing with falsework, temporary structures, temporary supports, guying, demolition, and T&S issues and provide technical and administrative assistance to Structure Representatives and Bridge Construction Engineers.
15%	E	Conducts field inspections of falsework, temporary structures, temporary supports, guying systems, and demolition systems. Conducts field investigations of falsework, temporary structures, temporary supports, guying, and demolition incidents. Prepare incident reports.
5%	E	Through field inspections, remain cognizant of current means and methods of falsework, temporary structures, temporary supports, guying, demolition, and bridge construction. Provide input to field staff on solutions to more difficult falsework and temporary structure issues.
5%	M	Represents Structure Construction on various internal and external committees related to falsework, temporary structures, temporary supports, guying, and demolition.

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

The incumbent does not provide supervision to others. As a technical specialist, the incumbent provides technical or administrative guidance and directs or trains others in specialty areas of bridge falsework, temporary structures, temporary supports, guying, and demolition.

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. Must be able to possess and maintain a valid certificate of registration as a Civil Engineer in the State of California. Must have knowledge of: methods, tools, and equipment used in structure construction; methods of stress analysis for both statically determinate and indeterminate structures; mechanics, plane surveying and structural engineering as applied to structures; computer software used in the analysis of falsework, temporary structures, and structure design. Ability to: analyze situations accurately and adopt an effective course of action; dictate correspondence and prepare reports; present material effectively to groups and individuals. Must have the ability to analyze and develop solutions for difficult technical and administrative problems relating to Structure Construction work.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

POSITION DUTY STATEMENT

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Responsible for ensuring uniform administrative and technical control of structure projects within areas of expertise, and ensuring the safety of the public and employees. Incorrect decisions could create hazards to the public and structural failure and increase costs to the State.

PUBLIC AND INTERNAL CONTACTS

Regularly maintains written and oral communications with other DES subdivisions (Bridge Design, Structure Office Engineer (Specification and Estimating), Materials Engineering and Testing Services (METS), Geotechnical Services), Maintenance (Structure Maintenance & Investigations), Legal Division, Division of Construction, Structure Construction field personnel, District personnel, Contractors, and Railroad companies. Organizes and leads the Falsework Advisory Team Meetings twice a year as a collaboration event between Caltrans and Industry partners. May have frequent contacts with other State and Federal agencies dealing with areas of expertise, as well as suppliers and other specialists in the industry to maintain current state-of-the- art practices.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Must have the ability to analyze and develop solutions for difficult technical and administrative problems related to Structure Construction work. Ability to develop and maintain cooperative working relationships; respond to difficult situations; recognize emotionally charged issues and problems and acknowledge various responses.

WORK ENVIRONMENT

Incumbent will be exposed to various work environments. Regular punctual attendance is required. Work week will generally consist of five, eight hour days, but may vary or require extended hours. In an office setting incumbent must be able to sit and/or stand for long periods of time and will be exposed to artificial lighting in a climate-controlled area. Travel is required, therefore, incumbent must be able to travel using a car or commercial transportation. Incumbent will be required to perform field work. May be exposed to loud noises, dust, dirt, uneven surfaces, extreme temperatures, noise, vibration, odor, chemicals, and extreme weather conditions and sunlight while in the field. May be required to work in a wide range of sometimes extreme weather conditions, including heat up to 120 degrees Fahrenheit, cold as low as 15 degrees Fahrenheit, strong winds, rain, sleet, or snow.

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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