

POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE Senior Engineering Geologist	OFFICE/BRANCH/SECTION DES/GS/OGDN	
WORKING TITLE Senior Engineering Geologist	POSITION NUMBER 559-323-3751-xxx	REVISION DATE 03/20/2026

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

GENERAL STATEMENT:

Under general direction of the Office Chief, Office of Geotechnical Design North (OGDN) the incumbent will be the OGDN Senior Engineering Geologist Specialist (Sr EG Spec) for geologic hazards evaluation and mitigation, special study and Major Damage coordination. The Sr EG Spec will work independently in responsible charge to plan, organize and direct geotechnical studies of roadway and structure foundations related transportation projects with focus on geologic hazard evaluation and mitigation, rock mechanics and major damage response. The Sr EG Spec will act as the single focal point between the NR and CR Districts' Damage Assessment Teams and OGDN staff and be available on-call (24 hours) for first response to critically damaged facilities as part of the Damage Assessment Teams. The Sr EG Spec will work on and coordinate major damage projects, both unplanned and planned. The Sr EG Spec will mentor staff to improve necessary expertise, improve and implement policy, processes, procedures and standards, and achieve uniformity of both regular and emergency/major damage practices. The Sr EG Spec will work independently throughout NR and CR districts, which requires periodic travel to the various Districts, Headquarters and field sites for periods of several days.

CORE COMPETENCIES:

As a Senior Engineering Geologist, 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.

- **Flexibility and Managing Uncertainty** : Adjusts thinking and behavior in order to adapt to changes in the job and work environment. (Employee Excellence - Collaboration)
- **Decision Making**: Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Prosperity - Integrity)
- **Reliability**: Ability to demonstrate dependability in meeting commitments, and providing a consistent work product. Takes responsibility for individual actions in order to meet deadline demands. (Prosperity - Collaboration)
- **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. (Prosperity - Collaboration)
- **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. (Employee Excellence - Collaboration)
- **Customer Focus**: Considers, prioritizes, and takes action on the needs of both internal and external customers. (Employee Excellence - Collaboration)
- **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)
- **Planning and Results Oriented**: Organizes and executes work to meet organizational goals and objectives while meeting quality standards, following organizational processes, and demonstrating continuous commitment. (Prosperity - Innovation)
- **Technical Expertise**: Depth of knowledge and skill in a technical area. (Employee Excellence - Integrity)

TYPICAL DUTIES:

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

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45%	E	Using the understanding of engineering geology, provides technical support to clients, peers, OGDN staff and other stakeholders in the areas of engineering geology and geologic hazard evaluation and mitigations. This support includes the investigation of, evaluation of, and preparation of recommendations regarding: landslides, washouts and debris flows; slope instabilities; cut slopes in rock and rock-like materials; rockfall potential and mitigations; rock mechanics; groundwater occurrence and movement; material borrow and disposal sites; rippability; site seismic hazard assessments; writing and review of specifications; making written and verbal presentations of study results; and related designs, constructions, operations and maintenances.
25%	E	Using the understanding of engineering geology, as the single focal point between NR and CR Districts Major Damage Assessment Team and OGDN staff, and being available on call (24 hours) or first response to critically damaged facilities as part of the Damage Assessment Teams. Coordinating with Districts' Damage assessment Teams, Major Damage Coordinators and Maintenance Engineers, making prompt accurate damage response decisions, assisting the Districts in directing force account contractors, determining the requirement of a Director's Order, and developing plans, specifications and estimates for restoring operations of damaged facilities, supporting Construction, Design, Environmental, Maintenance, Right of Way and Legal units, and representing OGDN in approximate meetings with clients.
15%	E	Planning and conducting special investigation and prepares and/or reviews reports related thereto, answers correspondences, and serves as expert witness to Caltrans Legal.
10%	E	Mentoring staff to improve necessary expertise, improving and implementing policy, processes, procedures and standards, and achieving uniformity of both regular and emergency/major damage practices. Representing OGDN in technical committee.
5%	M	Developing, maintaining and improving database for regional instable slopes, landslides, washouts, rock falls and other frequent geologic hazard locations, and associated evaluations, investigations, recommendations and mitigations.

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

Supervision is not a requirement of this position, but the Specialist may act as a leadworker and mentor of employees in the Engineer, Geologist, Transportation Engineering Technician, or Foundation Driller classifications and will at times coordinate necessary teamwork.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Satisfactory performance in this position requires:

- Thorough knowledge of geologic processes, concepts, and principles; engineering geologic concepts and principles; hydrogeologic and geophysical concepts and principles.
- Knowledge and ability to interpret stereo aerial photographs; conduct geologic and geophysical exploration; perform geologic mapping and drafting; interpret field and laboratory test data and ability to incorporate that information into an analysis pertaining to site requirements.
- Extensive knowledge and experiences in developing and conducting geotechnical site investigation, including site readiness, filed exploration, drilling, testing and sampling, CPT, geotechnical instrumentations, geophysics, laboratory testing, and evaluation and use of geotechnical investigation results in transportation projects.
- Knowledge of geotechnical related construction of transportation projects, including construction methods, specifications, testing and quality control practices.
- Knowledge of Caltrans' project development, delivery and management processes, procedures and standards.
- Knowledge of Caltrans Geotechnical Services' Quality Management System and Quality Management Plans.
- Ability to accurately develop and estimate scope, schedule and cost for conducting geotechnical investigation for transportation projects.
- Ability to work independently, making sound decisions based on possibly limited available information.
- Ability to communicate effectively, both in written and oral form.

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- Ability to interact effectively and professionally with individuals and groups, both internal and external.
 - Ability to travel to and work at construction sites and other field conditions throughout California is required.
 - Ability to conduct oversight and review of consultant-prepared and Caltrans-prepared geotechnical reports, plans, specifications, special provisions for foundation investigations, earthwork design, construction and design-build projects.
 - Ability to effectively lead a diverse multi-disciplinary staff and train individual staff
 - Ability to perform and review geotechnical and geological calculations. Must be capable of analyzing lab and in-situ test results and understand the significance and application of the said results. Must recognize potential geotechnical problems and reliably assess their impact on design and construction options.
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RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

This position requires effective and timely response in all aspects of preparing and reviewing Geotechnical Design Reports and Foundation Reports developed by Department personnel and private consultants. Delays in response to requests for services or failure to detect omissions and/or inadequacies in design recommendations could affect public safety, and result in tort liability, contract delays, construction difficulties, substandard performance of completed facilities and loss of public funds.

PUBLIC AND INTERNAL CONTACTS

This position requires frequent contact concerning engineering, geologic and project management issues related to in-house developed projects and projects developed by engineering consultants. The incumbent will also have regular communication with Department personnel, engineering and engineering geology consultants, contractors, manufacturers, vendors, local and federal agencies, and other State personnel. The incumbent is often required to make project-related presentations to internal functional units and external groups including the general public.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

The incumbent will be required to work at field and construction sites, move and transport heavy equipment and materials, work with exploratory equipment and collect field data. Hiking up or down steep terrain will be required for assessing geohazards such as landslides as undeveloped sites that are often rugged and heavily vegetated and may contain ticks, poison oak, critters, or wood and rock debris.

Field and construction site surfaces are often uneven, may have open excavations and or located on steep slopes or may be located within a lane closure adjacent to nearby traveling vehicles. Working in existing urban/rural freeway and highway environments may contain trash or debris as well. Weather conditions can vary between icy, slippery and wet to hot and dry. The incumbent must have the ability to navigate these sites and withstand exposure to the adverse conditions for long periods of time.

Must be able to transport for long distances packing material and/or use field engineering equipment such as, but not limited to hand augers, surveying equipment, slope inclinometer equipment and core boxes (full and empty). Other physical requirements of the job include the ability to transport equipment listed above (weighing 50 lbs or less), reach overhead, push or pull, twist, climb, balance, bend, crouch, squat, crawl, and perform fine manipulation. Hearing and sight are both essential to job performance because the incumbent must be able to hear and see directions, traffic, equipment, and other warnings or hazards thereby allowing the incumbent to perform duties safely. Corrected hearing is acceptable and corrected sight must meet the CA DMV minimum visual acuity requirement. Night vision must be good for safety when working after dark since then cumbent will be required to work at night and under artificial light.

While in the office, employees will be required to remain stationary for long periods of time using a keyboard and computer.

The incumbent will be responsible to ensure that assigned tasks are carried out in a professional, safe, and exacting manner and in accordance with existing policy, specifications, rules, work plans and guidelines.

The incumbent must grasp the essence of new information and master new technical and engineering knowledge; must have the ability to multi-task, adapt to changes in priorities, and complete tasks or project meeting strict deadlines with, at times, short notice.

The incumbent must possess the ability to develop and maintain cooperative working relationships, have a positive, productive, and friendly attitude, and maintain a willingness to learn while exposed to a variety of work environments.

WORK ENVIRONMENT

While at their base of operation, incumbent will work in a climate-controlled office under artificial lighting. As a statewide organization, DES adjusts to periods of fluctuating workload to successfully deliver projects. Incumbent will be required to travel and perform fieldwork and will be exposed to dirt, uneven surfaces, extreme temperatures, noise, vibration, and odor associated

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with fieldwork. The incumbent will be required to work around bulky/heavy materials and equipment, and in proximity to vehicles traveling on active roadways. DES employees may be given temporary assignments on DES projects throughout the State as workload demands.

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

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

SUPERVISOR (Print)

SUPERVISOR (Signature)

DATE