

POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE Senior Transportation Engineer, CT	OFFICE/BRANCH/SECTION DES/GS/OGDPP	
WORKING TITLE Geotechnical Earth Retaining System Specialist	POSITION NUMBER 559-325-3161-XXX	REVISION DATE 06/21/2026

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 the Office Chief, the Senior Transportation Engineer will serve as a geotechnical earth retaining system specialist (ERS), responsible for developing and maintaining ERS related guidance and providing technical support to Geotechnical Services (GS) design staff on projects. The incumbent shall be well versed in Department's geotechnical policies and practices in order to assist staff at various stages of projects including planning investigations, evaluating analyses and design procedures. The incumbent shall lead or collaborate on technical teams and committees who are responsible for developing proposed ERS design guidance to be used on both Caltrans and local agency projects. The specialist will also assist in evaluating proposed research and innovative technologies related to ERS. The specialist will lead or assist with the development and delivery of training for GS staff and collaborate with cross-functional units.

CORE COMPETENCIES:

As a Senior Transportation Engineer, CT, 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 - Integrity, Stewardship)
- Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Employee Excellence - Integrity, Stewardship)
- 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. (Employee Excellence - 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. (Employee Excellence - Collaboration, Innovation, Stewardship)
- Teamwork/Partnership:** Develops, maintains, and strengthens partnerships with others inside or outside of the organization through effective communication and collaboration. (Employee Excellence - Collaboration, Integrity)
- Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Employee Excellence - Collaboration, 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 - Integrity, Stewardship)
- Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Employee Excellence - Innovation, Stewardship)
- Technical Expertise:** Depth of knowledge and skill in a technical area. (Employee Excellence - Innovation, Integrity)

TYPICAL DUTIES:

Percentage		Job Description
Essential (E)/Marginal (M) ¹		
25%	E	Lead or participate in GS technical teams responsible for developing or maintaining geotechnical policies, guidelines, specifications, and tools. Lead and participate in developing and delivering training programs for GS staff, Caltrans cross-functional units and industry.
25%	E	Participate in Division of Engineering Services (DES) ERS Committee that collaborates to develop, maintain, and review standards, policies, and guidance related to ERS. The committee also provides technical support to DES project delivery staff, other Caltrans divisions, special studies, research projects, other internal committees, and external organizations.

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15%	E	Managing Geotechnical Software inventory. Identify the need for software update and developing vetting plans that ensures GS software meets design standards; Maintaining the GS annual software purchasing request list (SCN 25 budget request); evaluating requests for new design software acquisition to ensure the requested software meets a legitimate business need and GS design requirements; and providing GS representation on DES software team.
15%	E	Maintain and monitor ERS policies, procedures and tools for GS to ensure consistency with DES policies and procedures. Assist or lead in development and maintenance of CA Amendments to ASHTO LRFD BDS related to ERS. Assist or lead in reviewing GS-related ERS AASHTO ballot items to evaluate proposed changes to national standards and specifications.
10%	E	Perform comprehensive reviews of geotechnical reports during all phases of project delivery, to ensure compliance with established geotechnical ERS design standards and guidelines. Provide technical design support to GS staff on projects to ensure site investigation plans are effective, design analyses are appropriate, and recommendations are suitable, constructible and cost effective for the site. Assist on Quality Reviews and analyze quality review data and trends as needed.
5%	E	Evaluate proposed new technologies and participate in review of DES research related to ERS.
5%	M	Work on special projects as designated by the Office Chief.

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 incumbent may need to act as a lead worker over other employees in the Transportation Engineer (Civil), Engineering Geologist, Transportation Engineering Technician, Foundation Driller, and administrative classifications.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

- A thorough knowledge of soil mechanics principles, soils behaviors under various stress systems, static/seismic soil behavior, laboratory testing, in-situ testing and procedures.
- Advanced course-work and technical knowledge specifically focused on geotechnical engineering and ERS.
- Extensive knowledge and experience in the design of earth retaining systems including conventional retaining walls, mechanically stabilized embankments (MSE), soil nails, non-gravity cantilever retaining walls, ground anchor ERS. A deep understanding of earth pressures theories and stability analysis used in evaluating ERS. This includes associated laboratory testing, in-situ testing, geotechnical field instrumentation as it relates to geotechnical investigations.
- A thorough knowledge of design guidance related to ERS in the Geotechnical Manual.
- The ability to work with various geotechnical engineering software including Slide2, Slope/W, Settle3, SNAIL, CTFlex, CTRigid, LimitState Geo, and Plaxis.
- The ability to acquire new knowledge through coursework and self-study in geotechnical engineering related to ERS.
- The ability to perform independent geotechnical analysis and design in an effective and efficient manner. The incumbent must reliably diagnose potential geotechnical problems and evaluate their impact on design options and provide viable geotechnical solutions and recommendations to Geotechnical Services staff and cross-functional units.
- A thorough knowledge of project delivery at Caltrans. The ability to produce concise, organized, logical, and effective reports, evaluations, and presentations. The ability to work in teams and interact with individuals and groups from the Department, governmental agencies, and private consulting firms.
- The ability to communicate effectively, both in written and oral form; ability to give effective presentations and training to GS staff.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

This position requires effective communication and timely response in all aspects of preparing and/or reviewing geotechnical design reports for internal-designed or contracted-out projects, requests for technical design support and emergency response. Delays in response to requests for services or failure to detect omissions and/or inadequacies in design and recommendations

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can affect public safety, result in tort liability, and result in contract delays, construction difficulties, wasteful practices and design, and substandard performance of completed work.

PUBLIC AND INTERNAL CONTACTS

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

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

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The incumbent may be required to sit and/or stand for long periods of time in both an office and field setting. The incumbent will use a telephone, keyboard/mouse and video display terminal. Must sustain physical and mental alertness while working in and about heavy equipment and the motoring public. Will be required to develop and maintain cooperative working relationships and respond appropriately to difficult situations. Employee may be required to drive a motor vehicle and may travel statewide.

Employee may occasionally be required to move materials weighing up to 50 pounds.

The incumbent must be able to sustain the mental activity needed to conduct necessary research, analysis, and synthesis of issues and make well-reasoned recommendations to management.

The workload is subject to frequent, substantial and unexpected changes that could affect the scheduling or completion of assignments. The incumbent must be able to handle multiple tasks, adapt to changes in priorities, and complete tasks or projects with short notice and work with others in a cooperative manner. The incumbent must have the ability to develop and maintain cooperative, collaborative working relationships and recognize difficult, emotionally charged and/or sensitive situations and handle them effectively and appropriately. Must deal effectively with pressure, maintain focus and intensity yet remain optimistic and persistent, even under adversity. The incumbent must be able to quickly recall Department policies and use their experience to quickly address issues.

The incumbent must behave in a fair and ethical manner toward others and demonstrate a sense of responsibility and commitment to public service. The incumbent must value cultural diversity and other individual differences in the workforce.

WORK ENVIRONMENT

While at their base of operation, employees will work in a climate-controlled office setting under artificial lighting. As a statewide organization, DES adjusts to periods of fluctuating workload to successfully deliver projects. The incumbent will be required to travel and perform fieldwork and will be exposed to dirt, uneven surfaces, extreme temperatures, noise, vibration, and odor associated with fieldwork as described in the previous section. The incumbent will be required to work around bulky/heavy materials and equipment used near project sites, and in close proximity to vehicles traveling on active roadways. DES employees may be given temporary assignments on DES projects throughout the State as workload demands.

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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