

CLASSIFICATION TITLE Transportation Engineer (Civil)	OFFICE/BRANCH/SECTION D3/NR Construction	
WORKING TITLE Transportation Engineer	POSITION NUMBER 928-502-3135-XXX	REVISION DATE

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

**GENERAL STATEMENT:**

Transportation Engineers perform engineering duties throughout North Region Division of Project Development and Construction. Based on annual workload, delivery commitments, and seasonal needs, incumbent may be assigned by the Department to a variety of positions in an office or field environment. When working in Project Development, incumbent will be under the direct supervision of a Branch Chief, a Senior Transportation Engineer. When working in Construction, incumbent will be under the direct supervision of an Area Construction Engineer, a Senior Transportation Engineer, in a field environment during the Construction season (typically late Spring through early Fall, as necessary to complete assigned tasks). In either environment, the incumbent will perform various transportation engineering tasks of average difficulty accomplished through understanding and applying Caltrans standards, manuals, guidelines, policies, directives and computer software applications. Travel is required. A valid California drivers license is required when operating a state owned or leased vehicle.

**CORE COMPETENCIES:**

As a Transportation Engineer (Civil), 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.

- **Creativity and Innovation:** Thinks beyond the confines of traditional models to recognize opportunities, seek creative solutions and take intelligent risks. (Employee Excellence - 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 - Collaboration, 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. (Safety - 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)
- **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 - Equity, Stewardship)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Employee Excellence - Integrity)
- **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 - Collaboration)
- **Forward Thinking:** Anticipates the implications and consequences of situations and takes appropriate actions to be prepared for possible contingencies. Anticipates and prepares for future developments. (Employee Excellence - Innovation, Pride)
- **Commitment/Results Oriented:** Dedicated to public service and strives for excellence and customer satisfaction. Ensures results in their organization. (Equity, Climate Action - People First)

**TYPICAL DUTIES:**

Percentage      Job Description  
Essential (E)/Marginal (M)<sup>1</sup>

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40%	E	When working in North Region Construction, duties include inspecting contractor construction activity to ensure compliance with the project plans and specifications. Collect engineering data, sample construction materials and perform materials and environmental testing. Develop, or assist in the preparation of, specifications, change orders, contract estimates, and various documents and reports involved in the construction of transportation projects. Assist in the review of contractor submittals including Critical Path Method (CPM) schedules, water pollution control submittals, temporary traffic control submittals, shop drawings, etc. Assist in the research and documentation of information used for the resolution of claims being brought against the State by the contractor. May provide oversight of activities related to encroachment permits for utility relocation, local agency, and special funded transportation projects. May assist with construction support functions in the North Region Construction Offices or North Region Materials Labs.
40%	E	When working in North Region Project Development, duties include the development, coordination, and review of engineering plans, specifications, estimates and reports, for highway, freeway, and transportation facility projects. Development of plans include producing and reviewing layouts, profiles, typical sections, title sheets, super elevation diagrams, drainage, construction details, grading, utilities, traffic striping, stage construction, detours, and quantity summaries. Provide review of technical studies, reports and packages produced by local agencies, developers, permit applicants and their consultants, for compliance with design standards and engineering principles. Produce and review project hydraulic design analysis and studies, storm water data reports, prepare and assemble contract specifications and documents for ready to list (RTL) submittal. Utilities research, field investigation, coordination and preparation of utility conflict plans. Coordination of safety, constructability and value analysis review meetings, review and provide comments on project plans and estimates to assess completeness and to correct errors and deficiencies and to develop or improve the final plans, specifications & estimate (PS&E) product. Provide CADD support and training for various design software, user best practices, resolution of issues pertaining to computerized design, plotter support, file support, and computer related equipment inventory management.
15%	E	Responsible for making engineering calculations, analyzing situations regarding transportation facilities or system design concepts, applying sound engineering principles. Works in a team or independently to complete assigned engineering tasks for the development of projects or administration of construction projects. Facilitate, schedule, participate in or conduct quality control or constructability reviews, safety review meetings, Value Analysis Studies, or participate as a team member of a Project Development Team. Review or reference encroachment permits, IGR/CEQA documents and local development plans. Respond or propose responses to inquiries, complaints, maintenance concerns, resolution of claims or pending litigation. Perform field reviews, investigations, inspections and prepare associated reports, diaries and documentation.
5%	M	Perform miscellaneous inspections and nonprofessional engineering duties as assigned on various active projects. Produce meeting minutes, maintain project files, attend training, perform special reviews, handle telephone inquires, attend public workshops, develop other staff, attend staff meetings and interpret new requirements. Prepare presentations, populate data bases and develop web based materials.

<sup>1</sup>ESSENTIAL 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 supervise, but on occasion, could act in a lead worker capacity. The incumbent will receive supervision from a Senior Transportation Engineer and/or direction from a Transportation Engineer/Civil, working as a lead worker.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

The incumbent must have knowledge of basic principles of physics, chemistry, and mathematics as applied to civil engineering; transportation facility planning and design principles. The knowledge of engineering surveying, methods, materials, tools, and equipment used in construction and maintenance of transportation facilities, and the methods of proportioning and handling Portland Cement Concrete and asphalt concrete. The handling of asphaltic oils and emulsions, testing of materials, computer application to transportation engineering; factors which influence the impact of highways and other transportation facilities on the environment; principles and practices involved in utility relocation.

The incumbent must have the ability to use Computer Aided Design and Drafting (CADD) software, word processing and spreadsheet software, access and extract information from database, do mapping and drafting and make neat and accurate computations and engineering notes and prepare reports. Prepare designs, plans and specifications for projects and perform basic drafting; inspect construction work and determine if it meets specification requirements; evaluate and implement utility

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relocation plans; prepare basic correspondence and reports; communicate effectively orally and in writing. The incumbent must be able to analyze situations accurately, identify potential conflicts, and adopt an effective course of action; review project schedules and determine appropriate level and timing of review; recognize issues that are significant and implement an effective course of action.

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**RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR**

The incumbent will be responsible to make accurate engineering calculations; take effective action to avoid delays; make sound decisions in the interpretation of contract plans and specifications. Omissions in plans and reports could lead to unnecessary change orders, claims, and delays; errors in judgment could result in a design project of lesser quality, which could increase project construction costs or increase the Department's exposure to tort liability.

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**PUBLIC AND INTERNAL CONTACTS**

The incumbent must be able to establish and maintain a professional and cooperative relationship with those contacted in the course of the work, such as with Region and District functions, contractors and their employees, local agencies and officials, regulatory agencies, utility companies, engineering consultants, developers and public stakeholders in order to transmit or obtain relevant engineering information. These contacts could be verbal or written, as needed, to perform assignments with the goal of protecting the State's interests and providing quality products on and for the State's infrastructure. Must be able to guide project teams to issue resolution and be able to build consensus within teams, identifying potential conflicts and using resolution techniques to resolve at the lowest level.

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**PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS**

The incumbent may be required to stand for long periods of time, walk on slopes or uneven terrain, move and transport bags of material samples to Materials Labs. May be required to lift and carry samples of materials, which weigh up to 50 pounds. Drive to and work at, various locations throughout the North Region. When at their base office setting, employee may be required to sit for long periods of time using a keyboard and video display terminal. In the course of the work, the incumbent must maintain cooperative working relationships within the working environment. Will be required to understand basic design engineering principles; make accurate engineering calculations, ability to research and compile data and prepare calculations for a variety of routine transportation improvement projects, prepare accurate daily diaries and construction records.

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**WORK ENVIRONMENT**

The incumbent will be required to work at various locations throughout the North Region. Temporary assignment away from one's "headquarter location" may be required. Employee will be notified of a change of assignment under the terms of the current Collective Bargaining Agreement. Employee will be reimbursed for travel expenses according to the Department's Travel Policies. May be required to work at night. Will be subject to noise, odors, dust, and extreme weather conditions. Incumbent must work with and about a variety of materials, construction and testing equipment. When in the office, either a construction field office or in a North Region Project Development branch, employees will work in a climate-controlled environment with artificial lighting.

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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
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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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