

**POSITION DUTY STATEMENT**

DOT PM-0924 (REV 08/2024)

CLASSIFICATION TITLE Transportation Engineer (Civil)	OFFICE/BRANCH/SECTION DES/SES/OEMWW/Water and Wastewater Branch	
WORKING TITLE Transportation Engineer	POSITION NUMBER 559-220-3135-021	REVISION DATE 12/26/2024

As a valued member of the Caltrans leadership team, you make it possible for the Department to provide a safe and reliable transportation network that serves all people and respects the environment.

**GENERAL STATEMENT:**

This position exists in the Office of Electrical, Mechanical, Water & Wastewater Engineering within Structures and Engineering Services. This is the entry, first working, and journey level of professional engineering work in Caltrans. Under the direction of the Senior Transportation Engineer, the Transportation Engineer (TE) (Civil) performs a wide variety of engineering work in either an office or field setting. The TE (Civil) functions as a designer for conducting various engineering and technical activities. Communicates effectively; interprets and applies the rules, regulations, and requirements of the State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCB), and Division of Drinking Water (DDW).

As part of your employment with DES there is a mandatory TE (Civil) Professional Development Rotation Program that applies to all permanent full-time TE (Civils) hired after January 1, 2017. Temporary relocation more than 50 miles from your permanent unit may be a necessary rotation assignment.

**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.

- **Managing Change:** Demonstrating support for organizational changes needed to improve the department's effectiveness; supporting, initiating, sponsoring and implementing change. (Cultivate Excellence - Innovation)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Safety First - Integrity)
- **Initiative:** Ability to identify what needs to be done and doing it before being asked or required by the situation. Seeks out others involved in a situation to learn their perspectives. (Enhance and Connect the Multimodal Transportation Network - 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. (Strengthen Stewardship and Drive Efficiency, Lead Climate Action - Engagement)
- **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. ( Advance Equity and Livability in all Communities - Engagement, Equity)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Safety First - Equity, Innovation)
- **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. ( Advance Equity and Livability in all Communities - Engagement, Pride)
- **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. ( Advance Equity and Livability in all Communities - Equity, Integrity)
- **Thoroughness:** Ensures that work and information is complete and accurate. Ensures that assignment goals, objectives, and completion dates are met. Documents and reports on work progress. (Cultivate Excellence - Pride)

**TYPICAL DUTIES:**

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

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45%	E	Performs designs and prepares engineering plans associated with water and wastewater systems of transportation facilities. Uses engineering principals, methods, codes, design guides, publications, equipment and computers to review engineering drawings showing the information necessary for constructing drinking water facilities requested by the customer, including layouts, typical sections, cross-sections, elevations, details and schematics. Conducts site visits to determine existing field conditions. Prepares, revises, or reviews National Pollutant Discharge Elimination System (NPDES), waste discharge requirements (WDR), drinking water permits and other water quality control-related tasks. Typical facilities include water and wastewater treatment, pumping, piping, and monitoring systems at safety roadside rest areas, highway maintenance stations, maintenance and inspection stations and toll structures. Prepares written water and wastewater specifications using standard special provisions, manufacturer's data and departmental guidelines and standards. Specifications are combined with the plans discussed above to form the construction documents package. Reviews or prepares detailed cost estimates to ensure the cost of the wastewater and water projects is within budget using industry standards and historical data.
25%	E	Conducts routine and emergency maintenance investigations for water and wastewater treatment systems at transportation facilities to ensure the safety, reliability and proper operation of the facility and its water systems to preserve and protect the investment in the facility and compliance with State laws and wastewater and drinking water permits. Performs water and wastewater field inspections, troubleshooting, testing, and provides technical engineering consultation to Caltrans maintenance personnel. Prepares reports and correspondence that outline the condition of the water and wastewater facilities and includes recommendations and estimates for necessary repairs. Collaborates with districts, other agencies and project team.
15%	E	Reviews plans, specifications and cost estimates for in-house designed and consultant designed water and wastewater systems at transportation facilities to ensure conformance with SWRCB, RWQCB and DDW, City and County requirements and standards. Review consultant contracts and task orders related work. Provide support as the task order engineer.
10%	E	Performs construction engineering for wastewater and drinking water systems at transportation facilities that includes providing technical engineering consultation for Caltrans construction field personnel, reviewing contractor shop plans and submittal and conducting field inspections and tests of completed work to ensure compliance with contract documents and water quality control requirements. Reviews and amends the contract plans and water quality control permits to reflect changes made and approved during construction by Caltrans construction field personnel.
5%	M	Develops water and wastewater design standards and details using engineering principals, methods, codes, state laws and requirements, design guides, publications, equipment, computers and previous projects to create standard engineering drawings for constructing typical water and wastewater facilities requested by customers. Acts as branch chief when needed.

<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**

This position does not supervise, but may function as Project Engineer directing the work of a team of consultant, engineering, architectural and technical personnel.

**KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS****Knowledge of:**

- Principles of wastewater and drinking water quality control, treatment, water rights, water resource management; environmental, chemical, civil, agricultural, geotechnical, and environmental engineering principles relating to biological, and chemical factors relating to the treatment and disposal of sewage and industrial, and biological, and chemical factors relating to the control of water pollution and quality, and the management of surface and groundwater.
- Wastewater (sewage and industrial) engineering methods, materials, equipment, codes, regulations and safety procedures used in the design, construction and maintenance of wastewater systems
- Water supply (potable) engineering methods, materials, equipment, codes, regulations and safety procedures used in the design, construction and maintenance of water supply systems
- Computer-Aided Drafting and Design (CADD), Microsoft Teams and remote meeting tools
- Consultant oversight work and contract management
- Principles and practices of environmental and water protection

**Ability to:**

- Evaluate cases of water quality degradation and pollutions or nuisance conditions and make recommendations and prepare water and wastewater systems designs for their control to protect water quality.

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- Conduct construction and maintenance inspections, monitor and prepare reports and correspondence related to storm water grading and drainage systems, water and wastewater installations
  - Interpret and apply SWRCB, RWQCB, and DDW laws, codes, rules, regulations pertaining to water quality control engineering and water pollution control in California
  - Prepare correspondence and make effective oral and written reports
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### RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Employee has professional responsibility to assure the safety of the traveling public at a cost that is an effective use of public funds. Errors in judgment and decisions could affect public safety or result in liability for the Department. Failures could be catastrophic due to loss of life, disruption in goods movement, or delays to the traveling public.

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### PUBLIC AND INTERNAL CONTACTS

Maintains communication with all personnel assigned to the various projects. Meets with and discusses job progress and issues with other branches, offices, divisions and districts usually at the rank-and-file level, although sometimes at the senior level. Communicates with outside agencies and departments concerning permits and approvals. Examples of these agencies include the State Fire Marshal, State and local health departments, the Division of the State Architect, SWRCB, RWQCB, local fire and health departments and local gas, water, sewer and electric utilities. Most outside agency contacts are at the working level although sometimes they are at the supervising or manager level. Communicates with construction personnel, usually at the rank-and-file level, although sometimes at the senior level. Communicates with contractors and suppliers usually at the working level such as sales person and engineers although sometimes at the supervising level. Communicates with maintenance personnel on routine and emergency issues, usually at the working level or lead worker level, although sometimes at the manager level.

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### PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Employee must be able to:

- Move, lift or carry for a medium distance up to 40 pounds (for example a tool case or test equipment)
  - Move or remove utility and manhole covers with tools (up to 100 pounds)
  - Climb and descend ladders up to 20 feet in length at a time for total distances of up to 90 feet
  - Work on elevated catwalks and landings
  - Work in confined spaces, near operating heavy machinery and with energized low voltage (less than 600 volts) power systems
  - Work along highways and near construction sites
  - Fly in commercial aircraft routinely throughout the State
  - Drive a State automobile for up to 8 hours or more a day
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### WORK ENVIRONMENT

While at their base of operation, employees will work in a climate-controlled office under artificial lighting. Employees may also be required to travel and work outdoors and may be exposed to dirt, noise, uneven surfaces and/or extreme heat or cold. Traveling and driving to various locations and field inspections is required. Possession of a valid Driver's License is required when operating a state owned, leased or personal vehicle to perform these duties. 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.

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EMPLOYEE (Print)

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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.

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SUPERVISOR (Print)

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SUPERVISOR (Signature)

DATE

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