

POSITION DUTY STATEMENT

PM-0924 (REV 01/2022)

CLASSIFICATION TITLE Transportation Engineer (Civil)	OFFICE/BRANCH/SECTION ODST/HPMS Branch	
WORKING TITLE Transportation Engineer	POSITION NUMBER 913-155-3135-XXX	REVISION DATE 05/09/2024

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:

The Transportation Engineer, Civil, under the direction of a Senior Transportation Engineer, in the Highway Performance Monitoring System (HPMS) Branch within the Office of Highway Systems Information and Performance, is responsible for collecting, analyzing, validating, and reporting HPMS data to the Federal Highway Administration (FHWA).

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. (Safety First, Cultivate Excellence - Innovation, Integrity)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Safety First, Strengthen Stewardship and Drive Efficiency - Integrity, Pride)
- **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. (Safety First, Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement, Innovation)
- **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 First, Cultivate Excellence - Engagement, Integrity)
- **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. (Safety First, Strengthen Stewardship and Drive Efficiency - Engagement, Pride)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network - Engagement, Integrity, Pride)
- **Interpersonal Effectiveness :** Effectively and appropriately interacts and communicates with others to build positive, constructive, professional relationships. Tailors communication style based on the audience. Provides and is receptive to feedback. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement, Innovation)
- **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. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement, Integrity)
- **Technical Expertise:** Depth of knowledge and skill in a technical area. (Safety First, Cultivate Excellence - Innovation, Integrity)

TYPICAL DUTIES:

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

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50%	E	Utilizes a variety of computer software and programming tools, including but not limited to ArcGIS, MS Office, Oracle, Google Earth, Civil 3D, MicroStation, Power BI, Tableau, Python, and others, to compile, edit, and enter engineering data into the HPMS database in accordance with FHWA standards. Processes state highway system and non-state system traffic data with electronic data upload and manual entries; traffic data includes Annual Average Daily Traffic (AADT), K-factor, D-factor, and percent truck data. Processes all state highway system and non-state system pavement data with electronic data upload and manual entries; pavement data includes international roughness index (IRI), rutting, faulting, and cracking percent. Maintains an accurate and reliable sections catalog based on a statewide linear referencing system for HPMS data submittal. Uses Google Maps, CT Earth, field reviews, or other methods to obtain current geometric data on sampling locations on the state roadway network. Checks and compiles statistical and engineering reports involving traffic and roadway data for the preparation of California Public Road Data; reports include miles, lane miles and vehicle miles traveled (VMT) by county, urban area, and Metropolitan Planning Organization (MPO) region.
25%	E	Works with the cities, counties, MPOs, regional transportation planning agencies, and with federal agencies to collect roadway inventory, traffic, and pavement data. Collects and processes inventory data from local or regional agencies. Computes the total mileage and lane miles within each geographic jurisdiction. Collects and processes traffic data from local or regional agencies; may use local data to supplement the collected data under traffic count contracts. Collects and processes pavement data from local or regional agencies; may use local data to supplement the collected data under pavement condition data contracts. Collects future forecast, typically 20-year, traffic data from local or regional agencies. Maintains a good working relationship and collaboration with local agencies and partners, and demonstrates to them the substantial benefits by maintaining good quality data.
15%	E	Checks data accuracy and evaluates data quality using federal software and other querying techniques. Makes corrections to ensure that proper data is reported. Runs queries to check data for errors, inconsistencies, or unusual conditions; troubleshoots data errors involving invalid codes or conflicting information (cross edits).
5%	M	Prepares statistical and engineering reports involving traffic and roadway data for various federal, state, local agencies, and research institutions. Prepares technical reports, memorandums, and other correspondence to various State, federal, and local agencies describing the assumptions, results, and conclusions from gathered data.
5%	M	Makes presentations to managers, stakeholders, and the public regarding HPMS branch activities and results. Travels to meetings, conferences, or training may require the operation of an automobile on public roadways. Performs other job related duties within the scope of the classification as assigned.

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

This is not a supervisory position but the incumbents may be required to serve in a lead capacity role.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

- Knowledge of highway capacity analysis, travel demand forecasting, AADT, K factor, D factor, VMT.
- Knowledge of highway system elements, functional classifications, state post mile system.
- Knowledge of highway design, alignment geometry, cross sections.
- Knowledge of pavement surface types, IRI, rutting, faulting, cracking percent.
- Demonstrated capability and experience to gather, compile, analyze, and interpret data, prepare concise technical reports, and express ideas effectively, both orally and in writing.
- Demonstrated ability to conduct, administer, plan, and manage consultant contracts.
- Demonstrated ability to maintain cooperative relationships with individuals in the districts as well as in the industry and academia, nationally and internationally.
- Demonstrated ability, or preferably have relevant experience, in using computer software and programming such as ArcGIS, MS Office, Oracle, Google Earth, Civil 3D and Microstation, Power BI, Tableau, Python, and R in collecting, compiling, organizing, and analyzing data.
- Demonstrated capability and experience to read and interpret project plans and as-built drawings to work with highway inventory staff.
- Familiar with Federal and State regulations that apply to the performance and feasibility of departmental transportation system information.

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RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

This position is responsible for the identification and coordination of the needs of varied stakeholders in the development of the annual HPMS submittal to FHWA; effective guidance and timely completion of technical reports; serving as a department subject matter expert to answer questions; and developing reports and recommendations concerning highway information. Incorrect decisions will directly lead to ineffective, uncoordinated, or unproductive execution of data from State and local roads. Programmatic impacts of wrong decisions can mean the loss of resources, funding support, federal reimbursement, and legislative support.

PUBLIC AND INTERNAL CONTACTS

The incumbent has frequent contact with a number of program and Departmental managers, staff, academic personnel, consultants, and other public agency and industry representatives. Maintaining a professional and calm attitude while responding promptly to requests from our internal and external contacts is vital to the success of the office.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

The incumbent may be required to sit and engage in focused mental activity for long periods using a telephone or a computer, reading reports and other technical documents, or performing technical calculations and compositions. It is important that the incumbent cooperatively work with others. The ability to deal effectively with pressure, maintain focus, and intensity, yet remain optimistic and persistent, even under adversity. The ability to change, be open to new information, and adapt behavior and work methods in response to new information, changing conditions, or unexpected obstacles. The ability to create and sustain an organizational culture that encourages others to provide quality of service essential to high performance; anticipate change and be proactive to address it; and have strong communications and listening skills to identify and communicate customer needs and expectations. The ability to behave fairly and ethically toward others and demonstrate a sense of responsibility and commitment to public service. Value cultural diversity and other individual differences in the workforce. The ability to multi-task, adapt to changes in priorities, complete tasks or projects with short notice, and meet strict deadlines at times. The ability to grasp the essence of new information and master new technical and business knowledge that will meet the directives of the Division. An understanding of new and long-range plans and be able to determine how best to position the Division to achieve a competitive advantage in transportation system information.

WORK ENVIRONMENT

Work hours will be set between 7:00 AM and 6:00 PM. While at their base of operation, the incumbent will work in a climatecontrolled office under artificial light. May be required to travel state and infrequent travel out of state. Permanent telework opportunities may be available in compliance with the Caltrans' Telework Statewide Program Policies and Procedures, subject to management approval. Caltrans will provide resources to the incumbents to allow for teleworking if management approves. This position may be eligible for telework. The amount of telework is at the discretion of the Department and is based on Caltrans's evolving telework policy. Caltrans supports telework, recognizing that in-person attendance may be required based on operational needs. Employees are expected to be able to report to their worksites with minimum notification if an urgent need arises. The selected candidates must commute to the headquartered location as needed to meet operational needs. Business travel may be required, and reimbursement considers an employee's designated headquartered location, and primary residence, and may be subject to CalHR regulations or applicable bargaining unit contract provisions. All commute expenses to the headquartered location will be the responsibility of the selected candidates.

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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.)

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

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