

**POSITION DUTY STATEMENT**

PM-0924 (REV 01/2022)

CLASSIFICATION TITLE Transportation Engineer (Civil)	OFFICE/BRANCH/SECTION System Management / Active Transportation Data	
WORKING TITLE Active Transportation Data Network Design Engineer	POSITION NUMBER 913-350-3135-917	REVISION DATE 07/11/2024

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:**

Under the direction of the Branch Chief of the Office of System Metrics and Automation, a Senior Transportation Engineer (Supervisor), the incumbent, a Transportation Engineer (Civil), serves as the Active Transportation Data (ATD) Network Design Engineer in the ATD Branch.

The incumbent serves as a subject matter expert and facilitates technical training for Caltrans Headquarters (HQ) and Districts for planning, siting, installing, calibrating, operating, and maintaining of bicycle and pedestrian count stations statewide. The incumbent works with Caltrans staff at HQ and Districts and collaborates with external partners, consultants, and researchers to develop non-motorized traffic census program guidelines and operation procedures and provide coordination and oversight of District census operations. This work may occasionally require the incumbent to travel to Districts statewide for site visits.

**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. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **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 First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, 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 First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **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, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **Organizational Awareness:** Contributes to the organization by understanding and aligning actions with the organization's strategic plan, including the mission, vision, goals, core functions, and values. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **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 First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)

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- **Analytical Skills:** Approaches problems using a logical, systematic, and sequential approach. Weighs priorities and recognizes underlying issues. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)
- **Technical Expertise:** Depth of knowledge and skill in a technical area. (Safety First, Cultivate Excellence, Enhance and Connect the Multimodal Transportation Network, Strengthen Stewardship and Drive Efficiency, Lead Climate Action, Advance Equity and Livability in all Communities - Engagement, Equity, Innovation, Integrity, Pride)

**TYPICAL DUTIES:**

Percentage		Job Description
Essential (E)/Marginal (M) <sup>1</sup>		
35%	E	Oversees technical and logistical aspects for operating short term and continuous active transportation count stations. Develops non-motorized traffic census program guidelines and operation procedures, and provides coordination and oversight of District census operations. Monitors data, checks for accuracy, data loss, operations, maintenance, and communication issues. Plans and implements a validation count program to collect highly accurate short duration counts for validation of permanent count stations and validation of big data volume estimates. Ensures count station operations and reporting comply with Federal and State recommendations and mandates. Tracks count station health and uptime. Provides suggestions and data submittal requirements for the non-motorized data as they progress.
20%	E	Assists Section Managers and the Traffic Data Collection Supervisor with preparing product specifications, scopes of service, purchase requests, and bid requirements for the Office of System Metrics and Automation and reviews drafted documents for technical content, accuracy, and completeness. Works with the Materials Engineering and Testing Services (METS) on the approved Caltrans products list for active transportation traffic monitoring. Meets with manufacturers of bicycle and pedestrian equipment and evaluates equipment for possible inclusion into the program. Serves as a liaison for Headquarters and District planners, project managers, construction crews, District data collection offices, and partner agencies to build the program by including non-motorized count stations in construction bid packages and grant applications. Ensures equipment orders are accurate and complete. Serves as a liaison to the Office of Systems Development to integrate active transportation counters into existing and new standards and specifications.
20%	E	Manages and maintains workflows for the troubleshooting and repair of non-motorized count stations. Requests cost estimates and pre-construction site inspections for repairs and new site installations. Researches and suggests data collection technologies based upon location conditions for new sites for anticipated accuracy, usability, and to avoid technology insufficiencies and location issues. Monitors inspections, warranties, and data accuracy of the collection locations. Assists with reviewing short term and continuous deployments. Documents successful and failed data collection policies and procedures. Conducts research and proposes ATD projects for State and Federal funds. Supports development of the strategic plan for the Active Transportation Program.
20%	E	Stays apprised of the latest technology, policies, and procedures related to active transportation census. Collaborates with Headquarters and District Caltrans staff, external partners, consultants, and researchers to evaluate different types of ATD collection technology available in the market. Develops, updates, facilitates, and presents technical training at various venues statewide as a subject matter expert in the area of ATD. Determines statewide technical training needs and coordinates with instructors, other divisions, and agencies to provide the proper training and facilities. Develops, maintains, and updates a desk manual that helps train new employees and serves as a reference tool for team members. Prepares correspondence, reports, and technical articles for publication and/or presentation. Develops, maintains, and updates a desk manuals that helps train new employees and serves as a reference tool for team members.
5%	M	Completes a variety of special projects and assignments as needed by the Division Chief, Deputy Division Chief, Office Chief, and Branch Chief. Performs other work commensurate with the Transportation Engineer (Civil) classification.

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<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.

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### SUPERVISION OR GUIDANCE EXERCISED OVER OTHERS

None. May act in a lead capacity on special projects.

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### KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Requires knowledge of: Basic principles of physics, chemistry, and mathematics as applied to civil engineering; engineering surveying; hydrology and hydraulics; stress analysis; mechanics; strength of materials; properties and uses of engineering construction materials; methods and equipment of engineering construction; engineering economics.

Requires the ability to: Do simple mapping and drafting and make neat and accurate computations and engineering notes; select and/or use computer-based processes to compile engineering data; develop or assist in the development or maintenance of transportation-related state-of-the-art computer programs and procedures; prepare reports; review or assist in reviewing project proposals, plans, and specifications prepared by others; perform transportation operational, traffic operations, planning, and/or maintenance engineering tasks; prepare and present information to the public about all types of transportation engineering matters; test for and prepares assessment reports of transportation surveys, investigations and analysis statements, environmental, and/or air and water quality reports; and assist a registered engineer in performing professional engineering work. As a technical subject matter expert, may lead other engineering and technical personnel.

Requires the ability to collaborate with multi-disciplinary, technical staff; communicate effectively (both orally and in writing) with multiple audiences; establish and maintain cooperative relationships with individuals and organizations contacted in the course of work; participate in public contact and represent Caltrans; serve in a consulting capacity to other divisions and districts; and respond appropriately to difficult situations.

Must be able to apply sound judgment in problem solving; work productively in a busy and often changing environment; perform multiple tasks simultaneously; maintain a project schedule; accurately and timely follow-up on issues; and effectively interact with many levels of people in a cooperative manner. Must be decisive, take appropriate actions, and complete tasks or projects with a short notice. Requires proficiency with Microsoft (MS) Office programs (including MS Word, MS Excel, MS PowerPoint, MS Outlook, MS Teams), Adobe Acrobat, Cisco WebEx, and using the Internet.

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### RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

This position is responsible for making independent action and taking initiative to carry out assigned duties. The incumbent's decisions and actions have a direct impact on the Traffic Operations Program and the Department. Inability to carry out this position's responsibilities could result in: adversely affecting public safety and/or result in tort liability for Caltrans; increased expenses resulting from lost Transportation System productivity; litigation that could delay and/or add substantial cost to essential projects or activities; inability to quantify performance in meeting the Department's strategic goals and safety and mobility commitments; loss of credibility and public confidence in Caltrans as a responsible public agency.

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### PUBLIC AND INTERNAL CONTACTS

The incumbent must maintain the highest level of professionalism and integrity, exhibit tact and diplomacy, and effectively communicate with all internal/external contacts.

Internal contacts include various Caltrans districts and divisions (including Design, Construction, Maintenance, External Affairs, and Engineering Services). External contacts include the Legislature, Governor's Office, CHP, FHWA, construction industry representatives, local agencies, other states, national experts, academia, the private sector, and the general public.

The incumbent must communicate effectively orally and in writing, by telephone, via email, and by web conferencing. The incumbent is also required to facilitate, participate in, and host meetings.

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### PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

The incumbent must: quickly adapt behavior and work methods in response to new information/priorities and unexpected obstacles; multi-task; effectively interact with many levels of people in a cooperative manner; be decisive; take appropriate actions; and complete tasks or projects with a short notice. Must be able to maintain focus and intensity, yet remain optimistic and persistent, even under adversity. The incumbent shall act in a fair and ethical manner toward others; value cultural diversity and other individual differences in the workforce; and demonstrate a sense of responsibility and commitment to public services.

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The incumbent must be able to develop new insights into situations and apply innovative solutions to make organizational improvements; grasp the essence of new information and master new technical and business knowledge, particularly in the area of outreach; and facilitate and maintain a work environment that encourages creative thinking and innovation.

Must have the ability to work with a computer and have manual dexterity. Required to sit for long periods of time using a computer, monitors, phone, and other office equipment. The incumbent must be able to occasionally lift up to 25 pounds without assistance. Bending, stooping, and pulling may be required within the normal course of performing some of the responsibilities associated with this position. May be required to speak in front of large groups.

**WORK ENVIRONMENT**

This position's headquartered location is Sacramento, CA. While at the base of operation, the incumbent works in a climate-controlled office under natural and artificial lighting. Due to periodic issues with heating and air conditioning, building temperatures may fluctuate. Multi-floor buildings are equipped with elevators and stairs.

The incumbent may be required to travel periodically to other office buildings (federal and state offices, district offices, local agencies, etc.) and indoor/outdoor field locations. While at field locations, the incumbent may be exposed to uneven surfaces, noise, and varying climate conditions. The incumbent may be required to travel within the state and may be required to travel out-of-state for business operations. Possession of a valid driver's license is required to operate a State owned, leased, and/or personal vehicle. The environment is fast-paced, demanding, and busy; and requires considerable flexibility in managing time, priorities and assignments. Vacations may be restricted during peak times.

This position may be eligible for telework. The amount of telework is at the discretion of the Department and 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 candidate will be required to 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, 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 candidate.

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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