

POSITION DUTY STATEMENT

DOT PM-0924 (REV 08/2024)

CLASSIFICATION TITLE Transportation Surveyor	OFFICE/BRANCH/SECTION DES/Bridge Design/Office of Photogrammetry & PI	
WORKING TITLE Aerial Surveys Transportation Surveyor	POSITION NUMBER 559-240-3029-002	REVISION DATE 02/28/2024

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 supervision and general direction of a Branch Chief in the Office of Photogrammetry and Preliminary Investigations (OPPI) (a Senior Transportation Surveyor), the incumbent engages in the production of quality aerial mapping products and provides support for aerial mapping activities.

CORE COMPETENCIES:

As a Transportation Surveyor, 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. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Innovation)
- **Decision Making:** Makes critical and timely decisions. Takes charge. Supports appropriate risk. Makes challenging and appropriate decisions. (Safety First, Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement, 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 - Engagement, 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, Strengthen Stewardship and Drive Efficiency - Engagement, Integrity, Pride)
- **Interpersonal Savvy/Partnering:** Builds constructive and effective relationships, using diplomacy and tact. Is able to relate to a diverse set of individuals. (Cultivate Excellence - Equity, Integrity)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Safety First, Cultivate Excellence - Engagement, Innovation, 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. (Safety First, Cultivate Excellence - Engagement, Innovation, Integrity, Pride)
- **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. (Safety First, Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement, Innovation, Integrity, Pride)
- **Computer literacy and application:** Appropriate knowledge of computer applications and other tools necessary to successfully perform tasks. (Safety First, Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement, Innovation, Integrity, Pride)

TYPICAL DUTIES:

Percentage	Essential (E)/Marginal (M) ¹	Job Description
50%	E	Produce quality CAD and GIS mapping, orthophotography digital models, and digital surface data from aerial or terrestrial remote sensing survey data. Perform quality control and quality assurance of aerial and terrestrial remote sensing survey data and derived products. Coordinate with internal staff to ensure consistent quality of products. Comply with standards for accuracy and quality of products. Aerial and terrestrial remote sensing data includes imagery and LiDAR.

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15%	E	Support creation of, access to, and management of remote sensing survey data records by properly using designated digital and analog records systems to store and index remote sensing products. Assist branch chief with research, retrieval, and delivery of requested remote sensing data. This work can involve scanning aerial film on expensive equipment which requires great care or creation of digital index information. Using plotters or printers to produce hard copy records and maps is required. Georeferencing remote sensing data in GIS and creating metadata with appropriate attributes is required.
10%	E	Prepare or review plans for collection of aerial and terrestrial remote sensing survey data. Perform quality Global Navigation Satellite System or Inertial Measurement Unit data processing for position and orientation of remote sensing mapping platform data.
10%	E	Support aerial and terrestrial remote sensing survey systems and software by assisting branch chief with identifying, obtaining, and deploying required system and software updates, tracking software renewal dates, supporting IT staff by providing subject matter expertise on remote sensing systems and software.
5%	E	Support development and maintenance of remote sensing survey standards by assisting branch chief with maintenance of manuals and standards, and pursuit of aerial survey research.
5%	E	Support OPPI project management by assisting branch chief with project resource estimates, resource use tracking, and workload projections.
5%	M	Provide support for OPPI engagement with internal and external stakeholders.

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

None

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

The incumbent must have knowledge of mathematics and science applied to aerial surveying and mapping. The incumbent will have knowledge of aerial photogrammetric and LiDAR mapping; including, aerotriangulation procedures, specifications, contracts, mapping symbology, and CAD mapping procedures as outlined in the Caltrans Survey Manual, Chapter 13 and the Caltrans Guide to Photogrammetric Products and Services. The incumbent will follow the standards and quality requirements for all products produced. The incumbent will have knowledge of personal computer application software including word processing, spreadsheets, databases, CAD engineering workstations and software including digital photogrammetry, MicroStation, digital analytical aerotriangulation adjustment packages, Civil 3D, and Light Detection and Ranging (LiDAR) technologies. The incumbent will have knowledge of Caltrans plans, standards, policies and procedures for planning, design, right of way acquisition, and construction as they relate to surveys and mapping, principles of effective communication.

The incumbent will have knowledge of applicable Departmental Policy and Procedures as well as the California Coordinate System, Caltrans Code of Safe Surveying Practices, the Land Surveyors' Act, and the Departmental plans / standards as they relate to surveys and mapping.

The incumbent works independently and must have the ability to perform complex survey calculations along with the ability to apply and utilize the principles of the California Coordinate System. Stereovision is a requirement.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Because aerial mapping is critical to project development, errors in judgment or in calculations could jeopardize project deadlines and result in additional time and expense. Errors caused by inaccurate maps could result in time and dollar losses and in project delays and/or costly construction change orders and construction delays.

PUBLIC AND INTERNAL CONTACTS

Limited public and inter-office liaison are required of the incumbent in this position. Contacts are required with the incumbent's supervisor and other branch employees on project related and training matters.

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PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Must have sufficient stereovision to perceive three dimensional aerial survey data. Stereovision acuity related to use of precision stereoscopic photogrammetric measurements to accurately measure the shape and configuration of the terrain and the positions of fixed works is desirable; development of this skill will be encouraged.

Must be able to interact, develop and maintain cooperative working relationships with staff.

Must have the ability to multi-task, adapt to changes in priorities, and complete tasks and projects with short notice.

The incumbent may be required to sit for long periods of time using a keyboard, mouse devices, and 3-D video display monitor. The incumbent may also be required to move large or cumbersome plans and diagrams from one location to another. Occasional bending, stooping, and kneeling may be required.

Must value cultural diversity and other individual differences in the workforce.

WORK ENVIRONMENT

While at their base of operation, incumbent will work in a climate-controlled office under artificial lighting. As a statewide organization, DES adjusts to periods of fluctuating workload to successfully deliver projects. 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. May work around bulky/ heavy materials and equipment used in the vicinity of inspection areas. May also be exposed to the motoring public. DES employees may be given temporary assignments on DES projects throughout the State as workload demands.

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