

POSITION DUTY STATEMENT

PM-0924 (REV 01/2022)

CLASSIFICATION TITLE Transportation Engineer (Civil)	OFFICE/BRANCH/SECTION 53/Design/CADD & Engineering GIS Support
WORKING TITLE CADD Development and Support	POSITION NUMBER 913-330-3135-006
	REVISION DATE 04/23/2024

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 general direction of the Roadway Design Software Branch Chief, in the Office of CADD and Engineering GIS Support, the incumbent will train and support the Department's Project Development staff in the effective use of the Department's Roadway Design Software (Civil 3D) and software related to Caltrans Building Information Modeling for Infrastructure (BIM4I) program. The incumbent will also support efforts in development, testing, and maintaining specific software customizations to ensure Project Development have the proper tools to deliver their project commitments.

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, Strengthen Stewardship and Drive Efficiency - Engagement)
- **Dealing with Ambiguity (Risk):** Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement)
- **Ethics and Integrity:** Demonstrated concern to be perceived as responsible, reliable, and trustworthy. Respects the confidentiality of information or concern shared by others. Honest and forthright. Conforms to accepted standards of conduct. (Cultivate Excellence - Engagement)
- **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. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - 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. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement)
- **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. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement)
- **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. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement)
- **Technical Expertise:** Depth of knowledge and skill in a technical area. (Cultivate Excellence, Strengthen Stewardship and Drive Efficiency - Engagement)

TYPICAL DUTIES:

Percentage	Job Description
Essential (E)/Marginal (M) ¹	
30% E	Test and develop new releases of Civil 3D to ensure proper operation prior to statewide release. Test new software related to BIM4I tools and workflows that are relative to project development. Act as a liaison between HQ CADD and the District users/functional groups in the modification and implementation of Caltrans BIM4I standards and 3D BIM4I project submittal standards.

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20%	E	Train project development staff in the effective use of Civil 3D and other software related to BIM4I tools and workflow. In a classroom or remote training environment the incumbent lectures, leads discussion, provides students the knowledge and skills necessary to perform their duties using Civil 3D and other software related to BIM4I tools and workflows.
20%	E	Provide technical support through oral and written communication for Civil 3D and other softwares related to BIM4I tools and workflow to department staff by answering questions either in person, over the telephone, e-mail, desktop sharing applications, and by participating in online discussion boards. Coordinate and assist with testing the interoperability between Civil 3D, TORUS, AutoTurn, GuideSign, GIS and other BIM4I software.
20%	E	Writes and updates technical training materials, including text documents and various multi-media files, for use in the classroom instruction and for self-instruction.
10%	M	Serve as liaison with engineering users and vendors to correct program bugs and develop software improvements. Lead or serve on Statewide committees, as a CADD Specialist/Expert, that involves developing BIM4I standards for deliverable preparation. Evaluate and participate in other design process reviews that directly or indirectly involve 3D BIM4I model submittal preparation. Experience or familiarity in application development using .NET languages like VB, C# or application development experience using C or C++.

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 position does not supervise other employees.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Knowledge of current Caltrans CADD system, Caltrans design software (Civil 3D), and the understanding of the process for the development of engineering plans, specifications and estimates for highway improvement projects.

- Knowledge of and/or experience with CADD software for use in roadway design.
- Exceptional oral and written communication skills are required for being able to describe technical subjects over the telephone, through email, online forums, and in a classroom/remote training environment.
- Ability to establish and maintain cooperative, working relationships with both internal and external clients contacted in the course of the work.
- Good writing skills are required for developing technical training materials.
- Knowledge of basic software troubleshooting techniques and the ability to use them.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Testing Civil 3D software to make sure it conforms to department design and drafting standards is critical in the development of Plans, Specifications, and Estimates. Errors in testing could lead to the release of software that doesn't follow Caltrans' standards. Consequences of bad judgement in training and developing training material will be decreased productivity of engineering units and additional cost to Caltrans to produce projects. Consequences of errors in providing support to Civil 3D users will lead to a lack of confidence in the support services offered by this office.

PUBLIC AND INTERNAL CONTACTS

This job will require interaction with other people. It is important that employees work with others in a cooperative manner. Employee must have patience in dealing with people over the phone and email. Employees may be required to stand for long periods of time while conducting training classes. Employee may be required to sit for long periods of time using a keyboard and video display terminal.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

Will work in a climate-controlled office under artificial light.

Will be required to travel in state, averaging approximately one trip per month.

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WORK ENVIRONMENT

Will work in a climate-controlled office under artificial light.

Will be required to travel in state to conduct training classes.

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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