

CLASSIFICATION TITLE Materials and Research Engineering Associate (Specialist)	OFFICE/BRANCH/SECTION HQ/DRISI/Safety Innovation and Cooperative Research	
WORKING TITLE Lab Manager II	POSITION NUMBER 913-155-3381-004	REVISION DATE 09/22/2026

As a valued member of the Caltrans team, you make it possible to improve lives and communities through transportation.

GENERAL STATEMENT:

Under the general direction of the Senior Transportation Engineer (Chief, Roadside Safety Research Branch), the Materials and Research Engineering Associate performs a wide variety of duties critical to the evaluation, research, and development of new roadside safety hardware, including full scale testing. The incumbent is expected to exercise independence and originality in performing assigned tasks and receives only general instruction and guidance from the Branch Chief. Possession of a valid driver's license is required when operating a State owned or leased vehicle.

CORE COMPETENCIES:

As a Materials and Research Engineering Associate (Specialist), 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 - Innovation)
- **Dealing with Ambiguity (Risk):** Can comfortably handle risk and uncertainty, as well as make decisions to act without having the total picture. (Safety - Innovation, Stewardship)
- **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 - Collaboration, 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 - Collaboration, Innovation, Stewardship)
- **Interpersonal Savvy/Partnering:** Builds constructive and effective relationships, using diplomacy and tact. Is able to relate to a diverse set of individuals. (Safety - Collaboration, Innovation, Stewardship)
- **Customer Focus:** Considers, prioritizes, and takes action on the needs of both internal and external customers. (Safety - Innovation, Integrity)
- **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 - Innovation, Stewardship)
- **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 - Innovation, Stewardship)
- **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. (Safety - Innovation, Stewardship)

TYPICAL DUTIES:

Percentage Essential (E)/Marginal (M) ¹	Job Description
35% E	Engages in technical testing of roadside safety features for the State, including materials such as metals, soils, Portland cement concrete, and other construction materials. Conducts field investigations and prepares reports on construction materials, equipment calibrations, testing, and procedures. Checks designs and shop drawings for test article construction or other materials for compliance with specifications. Inspects, tests, and accepts or rejects various types of materials. Drafts work proposals and coordinates preparations for full-scale crash tests. Develops and manages service contracts for professional services needed to support in-house testing. Maintains and provides reports for project budgets, expenditures, progress, and final reports as required.

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35%	E	Maintains and improves test and work area facilities. Purchases new supplies, test equipment and other items needed to support the test facility and other branch functions / activities. Performs work necessary after testing to prepare test facilities and equipment for future work. Maintains equipment and related inventory and repair documents.
20%	E	Assists with the performance of crash test and collects and records data obtained during these tests. Drives test vehicles and tow vehicles. Operates rental construction equipment. Maintains calibrations and records of equipment. Creates and maintains parts of the Crash Testing Policy and Procedure Manual. In addition to in-house roadside safety research efforts, the incumbent may also be required to support other activities.
5%	E	Provides consultation and assists in special studies. Responds to inquiries from other Caltrans Districts and Divisions, including Legal and Equipment, regarding vehicle preparation, equipment calibration and other subjects as needed.
5%	M	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

When necessary to complete a task involving other staff, the incumbent may act as team leader.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

The aptitude to work on test vehicles, develop and maintain records in a very organized manner, develop or collect engineering data using sound judgment, and prepare technical reports and correspondence. The bility to represent the Department and present technical information and study findings to outside organizations in an explicit and professional manner. Graduation from high school, supplemented by college courses in the engineering field is highly desirable.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

The employee is directly responsible for projects, testing programs and related support activities that are assigned. The incumbent is also responsible for ensuring that these programs and activities are implemented correctly and in accordance with the approved workplan and existing rules and guidelines. The incumbent must keep the Senior Engineer fully informed of the progress of all assigned work. Errors in carrying out these responsibilities correctly may result in delays in testing and approving new roadside safety hardware designs, which in turn could increase risk to the public because the installation of improved roadside safety hardware will be postponed or cancelled.

PUBLIC AND INTERNAL CONTACTS

In the course of carrying out duties assigned, the incumbent maintains close communications with other personnel assigned to or assisting in the performance of these duties. The incumbent also routinely confer swith Caltrans employees in the Division of Research, Innovation and System Information, Equipment, Traffic Operations, Engineering Services, District staff, employees of other divisions, and as necessary, representatives of other governmental agencies, including the Federal Highway Administration.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

The employee may request to travel and work at various locations throughout California. During research activities at project sites, the employee may remain in a stationary position for extended periods and navigate slopes or uneven terrain. In the base office setting, the employee may also remain seated for long periods while using a keyboard and video display terminal. Throughout the course of work, the employee is expected to maintain cooperative working relationships within the environment, including with peers, subordinates, contractors, and contractor staff. When working in the vehicle preparation area or at the Caltrans Dynamic Testing Facility, the incumbent may spend long periods in a stationary position and move upward or downward as needed to work on test vehicles, operate hand and power tools, install test equipment and instrumentation, construct or install test articles, and carry out other required tasks. The incumbent also transports heavy objects at irregular intervals. The incumbent is expected to grasp new information quickly and become proficient in new technical and business procedures. They are encouraged to multitask, adapt to shifting priorities, and complete assignments or projects with short notice. The role involves developing insights into evolving situations and applying innovative solutions to improve operations. The incumbent considers potential risks and takes deliberate, informed actions when such risks offer a clear benefit or advantage.

WORK ENVIRONMENT

The incumbent is required to travel and work outdoors and may be exposed to dirt, noise, odors, dust, extreme weather conditions, uneven surfaces, and/or extreme heat or cold while doing field research and crash test support. The incumbent may work with and around a variety of materials, construction, and testing equipment. While at the base of operation, the incumbent

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works in a climate-controlled office under artificial lighting.

In the vehicle preparation area there may be exposure to a variety of automotive-related products and chemicals, including paint, grease, oil, coolant, gasoline, brake fluid and acids. The incumbent spends a significant amount of time working in an outdoor crash testing facility with exposure to dirt, dust, noise, uneven surfaces, heat and cold, wind, rain, fog, sun, insects, weeds and the automotive products and chemicals mentioned previously.

Telework options may be available for this position, which would allow the incumbent to perform their duties remotely. Resources will be provided by Caltrans to the incumbent to allow for teleworking. The incumbent is required to maintain safe and distraction free working conditions at the alternate work location and must abide by the Caltrans telework policy.

This position may be eligible for telework. The amount of telework is at the discretion of the Department and based on Caltrans' 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.)

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