

POSITION DUTY STATEMENT

DOT PM-0924 (REV 01/2025)

CLASSIFICATION TITLE Machinist & Equip Fabrctr	OFFICE/BRANCH/SECTION DES/METS/OCL/Structural Materials Testing Branch	
WORKING TITLE Machinist and Equipment Fabricator	POSITION NUMBER 559-320-6802-001	REVISION DATE 03/04/2025

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

GENERAL STATEMENT:

Under direction of the Supervisor of Machine Shop working within the Structural Materials Testing Branch (SMTB), the Machinist is responsible for the providing steel specimens, maintenance of equipment, design or manufacture of special equipment and other related work. The incumbent will perform skilled machinist work in constructing and repairing equipment and instrumentations. May use other shop skills such as sheet metal, welding, wood work, electrical, and plumbing in performing the work and do other work appropriate for the classification.

CORE COMPETENCIES:

As a Machinist & Equip Fabrctr, 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.

TYPICAL DUTIES:

Percentage		Job Description
Essential (E)/Marginal (M) ¹		
40%	E	Construct, install, maintain and repair various types of field and laboratory testing machines and equipment, including standard and special measuring, testing and experimental instruments and apparatus and various precision instructions. Prepare test specimens in accordance with ASTM A370 Specifications to assist the Structural Materials Testing Lab (lab), on the quality assurance testing of many structural materials to ensure compliance with construction projects plans and specifications.
20%	E	Responsible for the preparation of design drawings using Computer Aided Drafting (CAD) software and the programming and operation of Computer Numerical Controlled (CNC) machines and a water jet. Maintain this equipment and is responsible for their safety operation and training of personnel for proper operation.
20%	E	Fabricate test equipment; develop modifications to tools and instruments from partial drawings or instructions; perform general bench work, machine work, hand tool work, welding work, and sheet metal work; develop and modify machine specimens for stress and chemical analysis.
15%	E	Assist in arranging and prioritizing shop work requests. Assist in the upkeep of the Machine Shop and equipment to ensure safety. Compile estimates of material costs for new shop equipment and associated maintenance work; order material and equipment for the machine shop and the lab; maintain records of work in progress and prepare reports and correspondence.
5%	M	May occasionally travel to inspect equipment needing modification or repairs and perform field repairs when necessary. Visit other machine shops, vendors, training sites and manufacturers.

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 has no supervisory responsibilities.

KNOWLEDGE, ABILITIES, AND ANALYTICAL REQUIREMENTS

Must be able to enforce compliance with safety rules with all employees and visitors in the shop area.

Must have a thorough working knowledge of the capabilities, operation, maintenance and safety features of all conventional and CNC fabricating equipment used at the machine shop.

Must be capable of designing, fabricating, modifying, and repairing mechanical and structural parts of laboratory testing equipment and instruments in consultation with engineers.

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Must be thoroughly familiar with and able to interpret and create complete shop drawings and sketches for items to be fabricated or modified. Working knowledge of Computer Aid Drafting (CAD) is desirable.

Must be able to provide accurate estimates (within 20 percent) of time, person-hours, and materials costs for projects assigned to the Machine and Fabrication Shop, and have the ability to develop and control a production schedule for maximum efficiency under the priorities assigned to each project.

Must be able to operate a computer and have a working knowledge of Microsoft Word and Microsoft Excel.

Must possess sufficient oral and writing communication skills to write technical reports and be capable of discussing and resolving technical subjects in person, by telephone, or through correspondence

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Employee is responsible to see that machine shop employees' work is performed in a professional manner in accordance with existing specifications, plans, methods, procedures, rules, regulations, and other established guidelines. Improper machining of parts may hinder or cause damage to testing equipment. This will impact or cause delays on the performance of acceptance tests, the reporting of test reports, and possible delay Construction activities.

Inaccurate machine shop work can lead to the acceptance and incorporation of improper or inferior materials in Caltrans construction and maintenance projects, resulting in decreased service life and effectiveness, or possible structural failure of a highway bridge, traffic barrier, light pole, etc. This can result in the loss of substantial amounts of government funds and can have direct effect on the lives and safety of the traveling public.

PUBLIC AND INTERNAL CONTACTS

While carrying out his or her duties, the employee will maintain close communication with other personnel. He or she will routinely confer with other State representatives both within and outside Caltrans to transmit or obtain relevant information.

PHYSICAL, MENTAL, AND EMOTIONAL REQUIREMENTS

The employee will be required to stand for long periods of time using various shop equipment, reading and recording specifications, reviewing and calculating data. May be required to sustain the mental activity needed for conducting tests and calculating results. The employee will be required to use a computer at various times during the day. People problem solving, analysis and reasoning skills will be required to respond appropriately to situations, and to develop and maintain cooperative working relationships with staff and customers. The employee may occasionally be required to move equipment and test materials that require lifting up to 50 lbs.

WORK ENVIRONMENT

For most of each day, the employee will work in a machine shop and may be exposed to dirty surfaces and equipment, odors, hot liquids, flames and hot equipment. For some part of each day, the employee will work in a climate-controlled office. Both environments are under artificial lighting. The employee may occasionally be required to travel and work outdoors, and may be exposed to dirt, noise, uneven surfaces, and/or extreme heat or cold.

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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.)

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

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