DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
MATERIALS ENGINEERING AND TESTING SERVICES AND
GEOTECHNICAL SERVICES
POSITION DUTY STATEMENT

CLASSIFICATION TITLE	**DIVISION/OFFICE**	
Transportation Engineering Technician	DES/METS-GS Office of Structural Materials	
WORKING TITLE	**POSITION NUMBER**	**EFFECTIVE DATE**
TET	559-318-3175-014	May 2013

As a valued member of the Caltrans team, you make it possible for the Department to provide a safe, sustainable, integrated, and efficient transportation system to enhance California's economy and livability. Caltrans is a performance driven, transparent, and accountable organization that values its people, resources and partners, and meets new challenges through leadership, innovation and teamwork.

GENERAL STATEMENT

Under the direction of the Senior Engineer, the Transportation Engineering Technician (TET) will perform typical quality assurance testing on a variety of materials associated with the construction of roadways and structures. At the Office of Structural Materials (OSM) testing laboratories, the primary function of the TET is to ensure materials and products used in California Department of Transportation (Caltrans) construction projects comply with contract requirements. Specific job assignments may come from the Concrete, Aggregate, Cement, Structural Materials or Corrosion laboratory MREA Specialist. For some testing, the TET may be required to be certified in California Test (CT) Methods, American Associate of State Highway and Transportation Officials (AASHTO) and American Concrete Institute (ACI) test methods to meet requirements of the Materials Reference Laboratories (AMRL) Accreditation Program. Typical duties include but are not limited to:

TYPICAL DUTIES

Percentage Essential (E)/Marginal (M)	Job Description
50% (E)	Performs varied technical, physical and chemical tests on construction materials such as concrete, soils, water and metals for conformance with contract plans and specifications. This work includes receiving and logging in materials, data collection and reduction, making mathematical calculations, recordkeeping, test specimen preparation, and the set-up, operation of the test equipment, and distribution of samples to other units.
25% (E)	Prepares test specimens, test facilities, test fixtures, and equipment for specialized tests and studies. Assembles, analyzes, and verifies pertinent data and makes recommendations related thereto.

10% (E)	Assists with technical writing related to the evaluation of materials including the preparation of correspondence related to structural materials testing. Prepares, reviews, or recommends changes to specifications and test methods.
10% (M)	Participates in miscellaneous activities including participation in training programs, lab accreditation work, lab tours, meetings, conferences, technical readings, assists supervisor with his/her duties as requested, and performs other technical and engineering duties as required.
5% (M)	Performs testing and calibration of equipment in the field and laboratory. Maintains tools and equipment as necessary to keep the flow of work in the laboratory and field uninterrupted.

SUPERVISION EXERCISED OVER OTHERS

Position has no supervisory responsibilities, but must work as a member of a team to produce test results, reports and other information in a timely manner to the customers of the Department.

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS

The incumbent must have general knowledge of the physical characteristics and properties of various engineering construction materials. Must be able to follow procedures listed in test methods, have the ability to test materials, maintain records, develop and analyze engineering data using sound judgment, and prepare technical reports and correspondence. Employee must be able to utilize mathematics to make calculations using percentages or ratios and plot data to evaluate test results. Must be able to perform evaluations and make conclusions pertaining to the development of materials specifications. Employee must have the ability to interpret specifications, analyze and check all necessary test reports on materials incorporated in the work for conformity to applicable specifications.

Employee must have the ability to communicate clearly and efficiently with his/her supervisor, Caltrans Headquarters, district personnel and the public. Employee must also have command of basic computer applications such as Lotus Notes, Microsoft, Excel, FileMaker Pro, Microsoft Word and Caltrans custom-made applications.

Employee must have the ability to establish and maintain good and professional working relationships with other Department units, industry and the contractor on Department projects. Employee must be familiar and able to follow the Department policies and procedures.

CONSEQUENCE OF ERROR/RESONSIBILITY FOR DECISIONS

Employee is responsible to see that testing is performed in an exacting and professional manner in accordance with existing specifications, plans, methods, procedures, rules, regulations, and other established guidelines. Employee is responsible for the thoroughness and accuracy in the results of all tests performed under his/her control.

Inaccurate and incomplete testing can lead to the acceptance and incorporation of improper or inferior materials used in Caltrans construction and maintenance projects, resulting in decreased service life and effectiveness of highways, 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.

In addition, the employee is responsible for personal and team safety as outlined in the laboratory safety manual and the safe practices and standards of the tests being conducted and the equipment involved. Failure to act in accordance with these standards could result in personal injury, injury to others or destruction of state property.

PUBLIC AND INTERNAL CONTACTS

In the course of carrying out his/her duties, the employee must exhibit maturity, sound judgment and tact and will maintain close communication with other Branches, Caltrans offices, Divisions and other partners to transmit or obtain relevant information to carry out assigned responsibilities.

As a representative of the Department and the State of California, the incumbent is expected to maintain fair, impartial and effective relationship with clients, and conduct himself or herself in a professional and courteous manner at all times.

PHYSICAL, MENTAL AND EMOTIONAL EQUIREMENTS

The employee must be in good physical condition, capable of standing, climbing, stooping and performing physical tasks, which includes lifting up to 65 pounds and moving relatively heavy loads up to 100 pounds. Employee must be able to enter confined spaces (such as culverts) and able to work at elevated heights above ground using appropriate fall protection equipment. Employee may be required to sustain the mental activity needed for conducting tests and calculating results. Problem solving, analysis and reasoning may be required to respond appropriately to situations and to develop and maintain cooperative working relationships.

Employee will be required to develop and maintain cooperative working relationship and respond appropriately to difficult situations. The incumbent behaves in a fair and ethical manner toward others and demonstrates a sense of responsibility and commitment to public service. The incumbent values cultural diversity and other individual differences in the workforce. The incumbent considers and responds appropriately to the needs, feelings, and capabilities of different people in different situations.

WORK ENVIRONMENT

For the majority of each day, the employee will work in a testing laboratory and will be exposed to chemicals and dust generated by the normal operation and maintenance of standard office machines, computers and specialized laboratory equipment (e.g., concrete saws, crusher, pulverizes), which includes dirty surfaces and equipment, odors, hot liquids, flames and hot equipment. Employee may be required to be tested and fitted to wear a respirator while working in the laboratory. For some part of each day, the employee will work in a climate-controlled office

next to the testing laboratory. 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.

The incumbent may be required to travel to other state facilities and/or project sites. In the field, the incumbent may experience all climatic conditions including sun, wind, rain, snow, ice, or other conditions such as dust, dirt, construction equipment, traffic, animals, insects, or loud noises. While working in the field, the employee may be required to enter small culverts, climb high bridges, work in lane closures, or stand or bend at the knees for periods of time while operating portable core drilling equipment. Employee may occasionally be required to drive a motor vehicle. Employee must have a valid California driver's license.

Working hours will be set sometime between 6:00 a.m. and 6:00 p.m. Vacations may be restricted during peak times.

Employee will be required to develop and maintain cooperative working relationship and respond appropriately to difficult situations. The incumbent behaves in a fair and ethical manner toward others and demonstrates a sense of responsibility and commitment to public service. The incumbent values cultural diversity and other individual differences in the workforce. The incumbent considers and responds appropriately to the needs, feelings, and capabilities of different people in different situations.

I have read, understand and can perform the duties listed above. If you believe you may require reasonable accommodation, please discuss this with the hiring supervisor.

_____ _____

Employee's Name (please print) Employee's Signature Date

I have discussed the duties with and provided a copy of this duty statement to the employee named above.

_____ _____

Supervisor's Name (please print) Supervisor's Signature Date