

**CALIFORNIA DEPARTMENT OF TRANSPORTATION
DUTY STATEMENT**

CLASSIFICATION TITLE	DISTRICT/DIVISION/OFFICE	
Transportation Engineering Technician	DES-METS Office of Flexible Pavement Materials	
WORKING TITLE	POSITION NUMBER	EFFECTIVE DATE
Technician	559-320-3175-xxx	April 2013

As a valued member of the Caltrans team, you make it possible for the Department to improve the mobility across California by being innovative and flexible; reporting to work regularly and on time; working cooperatively with team members and others; and treating others fairly, honestly and with respect. Your efforts are important to each member of the team, as well as those we serve.

GENERAL STATEMENT

Under the direction and supervision of a Senior Transportation Engineer (the Branch Chief of the Pavement Testing Branch), the Transportation Engineering Technician (TET) is responsible for the testing and reporting of highway deflection tests statewide. The use of towed-trailer or truck-mounted deflection testing equipment per California Test 356, the use of pavement coring equipment, and the use of computers are required. The TET compiles raw data taken from the deflection testing fieldwork, inputs the data into various software applications (e.g., MS-PowerPoint or MS-Excel), and then updates electronic deflection testing files. The TET performs minor mechanical repairs, performs maintenance, cleans, troubleshoots, and calibrates the deflection testing or pavement coring equipment. The physical requirements include manual dexterity to use computers and hand tools, sitting, lifting, walking, bending, twisting, kneeling, standing, and driving for extended periods. The work environment includes both office and field conditions. The TET must have and maintain a valid California Driver's license. Overnight travel may be required up to 75% of the time per month.

TYPICAL DUTIES

Percentage Job Description

Essential (E)/Marginal (M)

- 55% (E) Drives and operates a towed-trailer or truck-mounted deflection testing unit throughout California, and performs deflection tests on highways, ramps, and connectors as part of the statewide highway deflection testing service to the Districts. Performs tests and compiles raw data taken from the deflection testing equipment following test method CT 356. Generates normalized deflection data and reports findings using computer application programs. Enters and retrieves deflection testing data to and from a computerized electronic filing system. Occasionally performs correlation studies. Assists with the calibration of the deflection testing units. Performs minor repairs, troubleshoots, cleans, and maintains deflection testing equipment.

- 20% (E) Drives and operates a pavement coring unit throughout California, and assists with deflection testing work, or performs special pavement coring on mainline highways, ramps, connectors, or bridges. Generates pavement coring data and reports findings using computer application programs. Performs minor repairs, troubleshoots, cleans, and maintains pavement coring equipment.
- 20% (E) Prepares accurate, standardized, computer generated deflection testing data files in a timely manner. Prepares and maintains accurate deflection testing electronic records, and files printouts of deflection testing data. Arranges for regular maintenance and/or major repairs of vehicles or equipment. Performs general housekeeping of the unit's storage facilities and office space. Maintains inventory of tools, equipment, and supplies.
- 5% (M) Performs miscellaneous office duties such as maintaining file systems, checking electronic records, and providing assistance in various deflection testing studies. Researches files for deflection tests on highways, ramps, connectors, and street intersections as requested by engineers and/or others.

SUPERVISION EXERCISED OVER OTHERS

This position does not supervise other employees. However, while performing deflection testing, the TET may act as a lead worker over other Caltrans staff in order to perform the deflection testing as efficiently as possible.

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS

- Must have a general knowledge of highway construction techniques and the materials associated with highway construction and maintenance.
- Must have a general knowledge of vehicle and equipment maintenance and care.
- Must have a good working knowledge of math and computer software applications.
- Must be capable of working effectively with a multi-disciplinary technical staff, and must be capable of communicating effectively, both orally and in writing, in the English language using tools such as e-mail, a telephone, or in-person conversations.
- Must be capable of completing training assignments, and subsequently training others.
- Must be capable of learning and following test methods for deflection testing.

- Must be capable of performing minor equipment repairs and maintenance, and capable of cleaning the equipment.
- Must be capable of using computer applications to collect and report test data (e.g., Lotus Notes for e-mail, and the Microsoft Office Suite of MS-Word, MS-Excel, MS-PowerPoint, and MS-Access).
- The work performed in this Branch requires the TET to analyze field situations within traffic lane closures, or while driving for extended periods of time on state highways. This work requires the TET to be safety-conscience, and to be responsible for themselves or co-workers, and the equipment. The work requires the TET to be aware of his/her surroundings at all times, to analyze the safety aspects of each field condition, and to take appropriate action.
- Must follow the appropriate Caltrans safety requirements and comply with the requirements of the Caltrans Safety Manual.
- Must also analyze the data upon collection, determine the validity and accuracy of the data, and ascertain whether to proceed with testing or repeat a previous test before leaving the location of the test.

CONSEQUENCE OF ERROR/RESPONSIBILITY FOR DECISIONS

The TET position is responsible for the collection and the accuracy of reporting highway deflection testing data. Failure to properly measure, record, and report deflection testing data in a timely manner may result in the inaccurate reporting of highway conditions. These data form the basis for roadway rehabilitation designs and/or improvements. Irresponsible actions and reporting by the TET may result in an inadequate rehabilitation design and increase roadway maintenance expenses.

PUBLIC AND INTERNAL CONTACTS

The TET position has some contact with the multi-disciplinary staff within Caltrans and occasionally with contractors and local agencies. The scheduling coordinator is generally the primary office contact with the deflection testing requestors, and the TET is the deflection-testing representative in the field. No official contact with the public is expected; however, the TET spends a considerable amount of time amongst the public while conducting fieldwork on state highways. Occasional contact with out of state agencies during calibration and/or correlation work is expected. Professional conduct is required at all times.

WORK ENVIRONMENT

While in the office generating deflection testing data files, the TET will be working in a climate-controlled office under artificial lighting. The TET will be required to sit and work with a computer for extended periods. The TET will be assigned time-dated tasks within his/her work assignments, and have his/her work reviewed for quality by the supervisor or an M&REA.

The TET will be required to travel using state vehicles and work outdoors. The TET may be exposed to dirt, noise, uneven surfaces, highway traffic, construction activities, and/or extreme heat or cold. Towed-trailer or truck-mounted deflection testing from within a testing vehicle under natural outdoor conditions will be required on mainline routes, ramps and connectors while working within traffic control situations. Pavement coring work within a traffic lane closure under natural outdoor conditions will be required on highway and bridge surfaces while working close to traffic. The TET will be required to wear personal protective equipment while in the field.

The TET may be required to drive a deflection-testing unit to Texas or Colorado (out of state travel) and assist in the calibration work on the deflection-testing unit. The TET may be required to spend up to 2 weeks away from home during the out of state calibration trip.

PHYSICAL, MENTAL AND EMOTIONAL REQUIREMENTS

The TET is required to sit and work with a computer for extended periods of time using a keyboard, mouse, and monitor to generate deflection testing data files while in the office or in the field. The TET is required to use a facsimile machine, photo copying machine, and a telephone. Simple grasping and manual dexterity is required to manipulate small objects. The TET is required to repetitively use his/her hands for keyboard usage, mouse usage, or small tool grasping and usage. The TET is required to repetitively use hand controls, foot controls, and be capable of twisting his/her neck while driving state vehicles. The TET needs hand/eye coordination with manual dexterity to quickly type information on a computer keyboard and view a computer monitor while operating a deflection-testing unit. Sitting, walking, kneeling, crouching, climbing in and out of vehicles, bending, twisting, and standing for extended periods of time are required to perform deflection testing functions. When the TET encounters uneven terrain while working on pavement surfaces, he/she must maintain physical agility while working in the proximity of the motoring public. The TET is required to lift and carry tools, supplies, or materials up to 35 pounds, and is occasionally required to lift and carry tools, supplies, or materials up to 50 pounds.

The TET will be required to sustain the mental activity needed for driving extended periods of time, working in the field, writing data files, checking data, problem solving, data analysis, and reasoning. The TET will be required to maintain mental awareness while working in the proximity of the motoring public and performing deflection tests. The TET will be required to perceive the

needs and problems of setting up field equipment and make appropriate decisions with respect to the applicable test method.

The TET will be required to develop and maintain cooperative working relationships with co-workers, his/her scheduling coordinator, his/her supervisor, and others. The TET will be required to meet and deal tactfully with other Caltrans staff and/or others, as needed, in the performance of his/her job functions. The TET will be required to respond appropriately to difficult situations and take the appropriate actions when necessary. The TET will be required to travel statewide up to 75% of the time, as a driver, operator, or passenger in state vehicles, or as a passenger on a commercial airline using professional conduct at all times.

I have read and understand the duties listed above and can perform them with/without reasonable accommodation. If you believe you may require reasonable accommodation, please discuss this with the hiring supervisor.

Employee Name (Print)

Employee Sign

DATE

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

Supervisor Name (Print)

Supervisor Sign

DATE