STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

POSITION DUTY STATEMENT

PM-0924 (REV 9/2013)

CLASSIFICATION TITLE	OFFICE/BRANCH/SECTION	
MATERIALS & RESEARCH ENGINEERING ASSOCIATE	Construction - Southern Regional Lab	
WORKING TITLE	POSITION NUMBER	EFFECTIVE DATE
MREA	908-500-3381-	current/proposed

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 as scheduled; 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 general direction of the Senior Transportation Engineer, Supervisor, and lead of a Transportation Engineer Civil (TE Civil), the MREA will perform calibrations, difficult and complex materials testing and analysis on soils, aggregates, asphalt and concrete samples for the Southern Regional Laboratory (SRL).

TYPICAL DUTIES:

Percentage	Essential (E)/Marginal (M)[1]	Job Description
50%	E	Perform technical and physical testing of soils, aggregates, asphalt concrete, Portland cement concrete and base materials. These tests includes all California Test Methods and other test methods (UCB, ASTM, AASHTO, etc.) necessary to perform mix design for asphalt concrete pavement, Portland cement concrete pavement, base materials, and geotechnical analysis of soil. Prepare and ship samples to HQ as needed. Make field investigations and reports upon construction materials and methods; checks designs and the fabrication of construction or other materials for compliance with specifications; makes soil and foundation investigations in the field and related laboratory test and investigations; inspects, tests, and accepts or rejects all types of materials, evaluates physical environmental impact assessments and mitigations, perform research work. Performs testing and review for Project Study Scoping Report (PSSR) and Project Study Report (PSR) for compliance with Caltrans structural designs. Performs preliminary reports for PSSR & PSR.
25%	E	Calibrate testing equipment used at the materials laboratory in accordance with either the equipment manufacturer's calibration procedures or the procedures dictated by the test method. Makes sure that proper arrangements are made for others to calibrate equipment that cannot be calibrated in-house.
15%	E	Maintains records of all equipment calibrations in accordance with the Quality Assurance Program. Monitors inventory of laboratory testing equipment in compliance with Quality Assurance Program Guidelines and California Test Method requirements. Prepare reports, charts and graphics about materials analyzed in the laboratory.
10%	M	Assist with training technicians working in the lab. Occasionally attend meetings and conferences. Perform other duties appropriate for a Materials and Research Engineering Associate.

[1]ESSENTIAL 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

None, incumbent may work in a lead capacity with co-workers.

KNOWLEDGE, ABILITIES AND ANALYTICAL REQUIREMENTS

Must have knowledge of California Test Methods, materials , tools, and equipment used in inspecting and testing a wide variety of construction and other materials; physical environmental impact assessment evaluations and mitigation processes, physical properties and uses of engineering construction materials, fabrication of construction materials.

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information, call (916) 654-6410, TTY 711, or write to Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

Employee must be able to utilize mathematics to make calculations using percentages or ratios and plot data to evaluate test results. Employee must have the ability to interpret plans and specifications, analyze and check all necessary test reports on materials incorporated in the work for conformity to applicable specifications.

Must have the ability to communicate effectively both orally and in writing, and must recognize the importance of working as a team; test the quality and suitability of engineering construction and other materials; do research work on engineering construction and other materials; evaluate physical and environmental impact assessments and take effective action; prepare reports and dictate correspondence. Must have the ability to establish effective communication channels 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.

RESPONSIBILITY FOR DECISIONS AND CONSEQUENCES OF ERROR

Must be able to effectively follow directions and testing procedures, and record and file data properly. Failure to adhere to this may result in inaccurate test results that could reduce the service life of the constructed facility or result in costly claims to the State.

PUBLIC AND INTERNAL CONTACTS

Maintain close communications with supervisor and other inspection offices. Has daily and frequent contact with fellow branch office, district and HQ TransLab personnel regarding test results and inspection reports.

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 REQUIREMENTS

Physical activities vary and may be for a lengthy period of time. Employee may be required to sit (1) using a keyboard and video display terminal, and (2) entering and auditing data. While working in the laboratory, employee may be required to stand for extended periods of time to perform materials testing in and around test equipment. Requires manual dexterity to operate testing equipment and handle materials. Employee may be required to be tested and fitted to wear a respirator while working in the laboratory. Employee may occasionally be required to move equipment and test materials that require lifting up to 60 - 80 lbs.

Employee may be required to travel to Districts to train laboratory personnel on specific test methods. When working in Districts, employee may be required to stand for long periods of time; pull, push, bend, stoop and squat to examine testing equipment; maintain mental awareness and physical agility when working in the proximity of laboratory machinery. Employee may be required to drive a motor vehicle.

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

WORK ENVIRONMENT

Employee will work in a climate-controlled environment under artificial lighting. Most of the employee's workday will be in the laboratory, where there is exposure to extreme heat, chemicals, odors, dust and noise from laboratory testing 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.

Working hours will be set sometime between 6:00 a.m. and 6:00 p.m. Sometimes, employee may be required to work nights, weekends and split shifts. Vacations may be restricted during peak times. Employee may be required to travel to

other satellite offices for training and/or meetings.

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