



MECHANICAL ENGINEER DEPARTMENTAL OPEN

Exam Code: 5TR71

Department:	Caltrans
Bulletin Release Date:	3/11/2016
Final Filing Date:	3/24/2016
Salary:	\$4,760.00 to \$8,915.00

INTRODUCTION

Caltrans is pleased to announce the posting of the Mechanical Engineer examination. Employment from this examination will be offered in **Sacramento County**.

EQUAL EMPLOYMENT OPPORTUNITY

Caltrans is an equal opportunity employer to all, regardless of age, ancestry, color, disability (mental and physical), exercising the right to family care and medical leave, gender, gender expression, gender identity, genetic information, marital status, medical condition, military or veteran status, national origin, political affiliation, race, religious creed, sex (includes pregnancy, childbirth, breastfeeding and related medical conditions), and sexual orientation.

DRUG FREE STATEMENT

It is an objective of the State of California to achieve a drug-free work place. All applicants will be expected to behave in accordance with this objective, as the use of illegal drugs is inconsistent with the law of the State, the rules governing civil service, and the special trust placed in public servants.

WHO SHOULD APPLY?

Candidates who meet the minimum qualifications as stated below may apply for this examination. Once you have taken the examination, you may not reapply for twelve (12) months. All applicants must meet the education and/or experience requirements as stated on this examination announcement.

FILING INSTRUCTIONS

Applications (STD 678) must be received or postmarked no later than the final filing date. FAXED OR E-MAILED APPLICATIONS WILL NOT BE ACCEPTED. THE EXAMINATION TITLE MUST BE INDICATED ON THE APPLICATION.

***FILE BY MAIL:**

Caltrans
Exam Services (MS 86)
P.O. Box 168036
Sacramento, CA 95816-8036

***FILE IN PERSON:**

Caltrans
Exam Services (MS 86)
1727 30th Street, 1st Floor
Sacramento, CA 95816

***Candidates are responsible for obtaining proof of mailing or submission of their application to Exam Services.**

SPECIAL TESTING ARRANGEMENTS

If you have a disability and wish to participate in one of our testing services, programs, or activities and require a specific accommodation, please mark the appropriate box for Question #2 on the Examination Application form STD678. You will be contacted to make specific arrangements. TDD users may contact the California Relay Service TDD line at 1-800-735-2929, Voice line at 1-800-735-2922.

POSITION STATEMENT

This is the entry, first working, and journey level of professional engineering work. Incumbents are assigned duties and responsibilities commensurate with their background, training, and experience. Under direction, incumbents perform a wide variety of field and office mechanical engineering assignments in connection with mechanical engineering design, inspection work, and other related work.

ELIGIBLE LIST INFORMATION

An eligible list will be established for Caltrans in Sacramento County. The list will be abolished 12 months after it is established unless the needs of the service and conditions of the list warrant a change in this period.

REQUIREMENTS FOR ADMITTANCE TO THE EXAMINATION

All applicants must meet the education and/or experience requirements for this examination by the final filing date. Your signature on the application indicates that you read, understand, and possess the minimum qualifications required, and that the information provided is true and complete to the best of your knowledge.

All applications must include: “to” and “from” dates (month/day/year), time base, civil service or private sector titles, the duties performed, and an original signature. Applications received without this information will be rejected.

NOTE: Qualifying experience may be combined on a proportionate basis if the requirements stated below include more than one pattern and are distinguished as “Either I,” “or II,” “or III,” etc. For example, candidates who possess qualifying experience amounting to 50% of the required time of Pattern I, and additional experience amounting to 50% of the required time of Pattern II, may be admitted to an examination as meeting 100% of the overall experience requirements.

MINIMUM QUALIFICATIONS

EITHER I

Graduation from a curriculum in mechanical engineering accredited by the Engineers’ Council for Professional Development, or equivalent qualifications. (Registration as a Senior in such a curriculum will admit applicants to the examination, but they must produce evidence of graduation before they will be considered eligible for appointment).

OR II

Possession of equivalent qualifications may be demonstrated by qualifying in a written examination covering basic mechanical engineering and by graduation from an engineering curriculum which includes the engineering courses normally included in a standard four-year course in mechanical, chemical, or industrial engineering. (Registration as a Senior in such a curriculum will admit applicants to the qualifying written examination, but they must produce evidence of graduation before they will be considered to meet the minimum qualifications).

Click on the link below to review the California State Personnel Board class specification which contain the requirements for admittance to the exam:

<http://calhr.ca.gov/state-hr-professionals/pages/3583.aspx>

EXAMINATION INFORMATION

This examination will consist of a Training & Experience Evaluation/ Supplemental Application Questionnaire weighted 100%. In order to obtain a position on the eligible list, a minimum score of 70% must be attained.

The Training & Experience Evaluation/ Supplemental Application Questionnaire is anticipated to occur in **April 2016**.

NOTE: If conditions warrant, this examination may utilize an evaluation of each candidate's experience and education compared to a standard developed from the class specification. For this reason, it is especially important that each candidate take special care in accurately and completely filling out his or her application. List all experience relevant to the "Minimum Qualifications" shown on this announcement. Supplementary information will be accepted, but read the "Minimum Qualifications" carefully to see what kind of information will be useful to the staff doing the evaluation.

KNOWLEDGE AND ABILITIES

Knowledge of:

1. Mechanical engineering principles, theory (i.e., materials, fluids, physics, chemistry), and practice to ensure the safety, reliability, and proper operation of the facility or system and to preserve and protect the investment
2. Basic mathematics for computing estimates of mechanical systems (i.e., HVAC, pneumatics, hydraulics, pumps, engines) and various transportation-related facilities to ensure proper design
3. Design of mechanical systems, buildings, and various transportation-related facilities to ensure reliability and proper operation of the Department facility or system and to preserve and protect the investment in the facility or system
4. Preparation of plans, layout, specification writing, and estimating for mechanical systems, buildings, and various transportation-related facilities requested by the customer
5. Mechanical engineering methods, materials, and equipment used in the design, construction, and maintenance of transportation facilities to ensure safety, reliability, and proper operation of the Department facility or system
6. Computer applications (i.e., Microsoft Word, Outlook, Excel, etc.) to prepare calculations, reports, and correspondence for the customer
7. Techniques for researching products and materials on the internet for necessary repairs of facility or mechanical systems

Ability to:

1. Make neat and accurate drawings and technical sketches using Computer-Aided Drafting and Design (CADD), to effectively develop plans of mechanical systems
2. Establish and maintain cohesive working relationships with other state employees, district personnel, and manufacturer representatives to ensure deadlines are met

3. Accurately analyze situations and take effective and appropriate actions to correct mechanical systems
4. Prepare correspondence to effectively communicate with colleagues and other individuals
5. Prioritize assignments to be completed on time and avoid budget constraints
6. Make effective oral and written reports to ensure compliance with project requirements
7. Perform engineering computations such as heat loss and gain, pressure drops, load calculations, and various measurements to determine sizes and quantities of mechanical systems and components
8. Effectively read and interpret plans, specifications, and/or construction documents to ensure compliance with the quality, quantity, and intent of project scope
9. Effectively use computer applications (i.e., Microsoft Word, Outlook, Excel etc.) to prepare calculations, reports, and correspondence for the customer

VETERANS' PREFERENCE

Veterans' Preference will be applied to those competitors who are successful in this examination and who qualify for, and have requested, Veterans' Preference through the California Department of Human Resources. Veterans who have achieved permanent civil service status are not eligible to receive Veterans' Preference.

CAREER CREDITS

Career Credits will not be added to the final score of this examination.

CONTACT INFORMATION

For more information regarding this exam, please contact the exam analyst at:
(916) 227-7731.

GENERAL INFORMATION

For an examination without a written feature, it is the candidate's responsibility to contact **the testing department** three weeks after the final filing date if he/she has not received his/her notice.

Applications are available at <https://jobs.ca.gov/pdf/std678.pdf>, California Department of Human Resources (CalHR) offices, local offices of the Employment Development Department, and the testing department on this job bulletin.

If you meet the requirements stated on this bulletin, you may take this examination, which is competitive. Possession of the entrance requirement does not assure a place on the eligible list. Your performance in the examination will be compared with the

performance of the others who take this test, and all candidates who pass will be ranked according to their scores.

The testing department reserves the right to revise the examination plan to better meet the needs of the service, if the circumstances under which this examination was planned change. Such revision will be in accordance with civil service laws and rules and all competitors will be notified.

Candidates needing special testing arrangements due to a disability must mark the appropriate box on the application and/or contact the testing department.

General Qualifications: Candidates must possess essential personal qualifications including integrity, initiative, dependability, good judgment, and the ability to work cooperatively with others; and a state of health consistent with the ability to perform the assigned duties of the class. A medical examination may be required. In open examinations, investigation may be made of employment records and personal history and fingerprinting may be required.

Eligible Lists: Eligible lists established by competitive examination, regardless of date, must be used in the following order: 1) sub-divisional promotional, 2) departmental promotional, 3) multi-departmental promotional, 4) service-wide promotional, 5) departmental open, 6) open. When there are two lists of the same kind, the older must be used first. Eligible lists will expire in one to four years unless otherwise stated on the bulletin.

Veterans' Preference: Pursuant to Assembly Bill 372, Veterans' Preference will be awarded as follows, starting January 1, 2014:

1. Any veteran, widow or widower of a veteran, or spouse of a 100 percent disabled veteran, who achieves a passing score in an open examination, shall be ranked in the top rank of the resulting eligibility list.
2. Any veteran who has been dishonorably discharged or released is not eligible for Veterans' Preference.
3. Veterans' Preference is not granted once a person achieves permanent civil service status (Permanent State civil service status means the status of an employee who is lawfully retained in his/her position after completion of the applicable probationary period. This includes permanent intermittent, part-time, and full-time appointments. In addition, individuals who at any time achieved permanent State civil service status and subsequently resigned or were dismissed from State civil service are not eligible to receive Veterans' Preference).

Veteran status is verified by the California Department of Human Resources (CalHR). Directions to apply for Veterans' Preference are on the Veterans' Preference Application (CalHR Form 1093) which is available at

<https://jobs.ca.gov/Public/Jobs/Veterans.aspx> or from the CalHR, 1515 "S" Street, North Building, Suite 400, Sacramento, CA 95811 and the Department of Veterans Affairs.

TTY is Telecommunications Device for the Deaf and is reachable only from phones equipped with a TTY Device.

For individuals with disabilities, this document may be available upon request in alternate formats. To obtain an alternate format, please call or write to Caltrans, Office of Examinations and Recruitment Services, P.O. Box 168036, MS 86, Sacramento, CA 95816. Voice (916) 227-7858 California Relay Service: Voice 1-800-735-2922 or TTY 1-800-734-2929.