



## **STRUCTURAL DESIGN TECHNICIAN III**

### **Departmental Promotional**

**Exam Code: 7TR22**

**Department: Caltrans**

**Bulletin Release Date: June 12, 2017**

**Final Filing Date: June 26, 2017**

**Salary: \$4,501.00 to \$5,632.00**

### **INTRODUCTION**

Caltrans is pleased to announce the posting of the **Structural Design Technician III** examination. Employment from this examination may be offered in Caltrans District 3 (Marysville), 4 (Oakland), District 7 (Los Angeles), District 10 (Stockton) and Sacramento County.

Candidates may only establish eligibility in the locations listed above. Testing locations may not be located in all areas. Candidates may be asked to travel to the nearest testing facility at their own expense.

### **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?

This is a Departmental Promotional examination for Caltrans. Applicants must:

- 1) Be permanent civil service appointment with Caltrans as of the final filing date in order to participate in the examination; or
- 2) Have been employed with Caltrans within the last three years, without a break in State civil service; or
- 3) Be current or former employee of the Legislature for two or more years as defined in Government Code §18990; or
- 4) Be current or former non-elected exempt employee of the Executive Branch for two or more consecutive years as defined in Government Code §18992; or
- 5) Be a person retired from the United States military, honorably discharged from active military duty with a service-connected disability, or honorably discharged from active duty as defined in Government Code §18991. Persons applying who qualify as a Veteran under Government Code Section 18991 must submit a copy of their DD214 with their Examination Application (STD. 678).

Candidates who meet the minimum qualifications as stated on this announcement may apply for this examination.

## FILING INSTRUCTIONS

Applications (STD 678) must be received or postmarked no later than the final filing date. Dates printed on Mobile Bar Codes, such as the Quick Response (QR) Codes available at the USPS, are not considered Postmark dates for the purpose of determining timely filing of an application. Faxed or E-mailed applications will NOT be accepted. THE EXAMINATION TITLE MUST BE INDICATED ON THE APPLICATION.

### **MAILING ADDRESS:**

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

### **SUBMIT IN PERSON:**

**Caltrans  
Examination Services (MS 86)  
1727 30<sup>th</sup> Street, 1<sup>st</sup> Floor  
Sacramento, CA 95816**

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

## **SPECIAL TESTING ARRANGMENTS**

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.

## **POSITION STATEMENT**

This is the advanced journey level in the series. Under general direction, incumbents prepare complete sets of contract drawings for the most difficult and complex steel, concrete, masonry, and timber structures; make preliminary and final layouts of various types of structures; plot preliminary site data and prepare as-built plans of structures; calculate and check quantities for preliminary and final estimates of structure costs; check completed drawings for accuracy, completeness of details, and constructability; prepare drafting details and standards from design charts and aids; check drafting and details prepared by others; make engineering calculations for dimensioning and laying out the most complex structures; do structural drafting work of a highly specialized and complex nature requiring superior skill, initiative, and accuracy; use state-of-the-art technology, i.e., CADD and related highly complex computer programs to determine layout, details, and geometric design of the most difficult kind for various types of structures; secure information in the field for the preparation of drawings to modify existing structures; prepare and act in a lead capacity in the preparation of plans and quantity estimates for a wide variety of structures including bridges, buildings, tunnels, walls, drainage systems, and barriers; act in a lead capacity and train a group of drafting aides and technicians; assist in preparing specifications for bridges; prepare specifications for buildings; and prepare cost estimates for bridges and buildings.

## **ELIGIBLE LIST INFORMATION**

A Departmental Promotional statewide eligible list will be established for Caltrans. The list will be abolished 24 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.

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

<http://calhr.ca.gov/state-hr-professionals/pages/3038.aspx>

## MINIMUM QUALIFICATIONS

### Either I

Three years of experience in the California state service performing the duties of a Structural Design Technician II.

### Or II

Five years of engineering drafting experience, three years of which must have been in independent structural engineering drafting assignments equivalent in duties and level of responsibility to a Structural Design Technician II in the California state service.

## EXAMINATION INFORMATION

**It is anticipated that the examination will be given in July/August 2017.**

This examination will consist of a Modified Qualification Appraisal Panel (ModQAP). Accepted candidates will participate in the **examination using a computer to type their responses**. The examination will consist of **patterned questions with set responses**, *not* multiple choice questions.

**This examination will be weighted 100%. In order to obtain a position on the eligible list, a minimum score of 70% must be attained.**

**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. Details, methods, and layouts used in the preparation of structural design and construction drawings for a variety of structures
2. Engineering mathematics
3. Quantity estimates
4. State-of-the-art technology, i.e., CADD and related computer programs used to determine layout, detail drawings, and create geometric design for various types of structures
5. Layout and details of steel, concrete, masonry, and timber structures
6. The preparation and checking of structural design plans, construction drawings, quantity estimates, and as-built drawings
7. Make engineering calculations
8. Codes and specifications governing structural design and construction
9. Drawing methods
10. Methods of directing and scheduling the work of others
11. Leadperson responsibilities
12. Specifications for bridges and buildings
13. Structure costs

### Ability to:

1. Communicate at a level required for successful job performance
2. Follow written and oral directions
3. Do mechanical and free-hand lettering
4. Draft the most difficult neat, accurate legible plans
5. Interpret sketches, drawings, and plans encountered in the work
6. Prepare and check quantity estimates
7. Use state-of-the art technology, i.e., CADD and related computer programs
8. Assist in performing geometric design of average difficulty
9. Make basic engineering calculations
10. Plot data from field notes
11. Prepare graphs and charts
12. Work independently
13. Complete difficult structural drafting assignments
14. Do difficult layout work, calculations, and structural detail drafting
15. Act in a leadperson capacity on less difficult projects
16. Use highly complex computer programs Computer Aided Design Drafting (CADD) to determine layout, detail drawings, and create geometric design of the most difficult kind for various types of structures
17. Act in a leadperson capacity to train drafting aid and technicians
18. Assist in the preparation of specifications for bridges
19. Prepare cost estimates for bridges and buildings
20. Analyze situations accurately and adopt an effective course of action

## VETERANS' PREFERENCE

Veterans' Preference will not be granted in the examination, as it does not meet the requirements to qualify for Veterans' Preference.

## CAREER CREDITS

Career Credits will not be granted in this examination.

## CONTACT INFORMATION

For more information regarding this examination, please contact the examination analyst at (916) 227- 6854.

## GENERAL INFORMATION

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

**If a candidate's notice** of examination fails to reach him/her 3 days prior to their scheduled appointment due to a verified postal error, he/she will be rescheduled upon written request.

**Examination Locations:** When a written test is part of the examination, it will be given in such places in California as the number of candidates and conditions warrant. However, locations of interviews or performance evaluations may be limited or extended as conditions warrant.

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

**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.

**Caltrans** 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.

**Promotional Examinations Only:** Competition is limited to employees who have a permanent civil service appointment and military veterans that meet all the minimum qualifications. Under certain circumstances, other employees may be allowed to compete under provisions of Rules 234, 235, and 235.2. State Personnel Board Rules 233, 234, 235, 235.2, and 237 contain provisions regarding civil service status and eligibility for promotional examinations.

**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.*