



# STRUCTURAL DESIGN TECHNICIAN I

**Exam Code: 8TR50**

**Department:** State of California

**Exam Type:** Servicewide, Open

**Final Filing Date:** Continuous

## CLASSIFICATION DETAILS

**STRUCTURAL DESIGN TECHNICIAN I – \$4,091.00 - \$5,120.00 per month**

[View the Structural Design Technician I classification specification](#)

## APPLICATION INSTRUCTIONS

Final Filing Date: Continuous

### **Who Should Apply:**

Applicants who meet the minimum qualifications as stated on this bulletin may apply for and take this examination.

Once you have taken this examination, you may not retake it for **12** months.

Candidates that are unsuccessful in the examination must wait **six (6)** months from the testing date before reapplying to take the examination.

### **How To Apply:**

The link to the Online exam is located farther down on this bulletin in the “Taking the Exam” section.

### **Special Testing Arrangements:**

Bulletin Date: 9/15/2022

If you require special testing arrangements due to a verified disability or medical condition, please contact:

Department of Transportation (Caltrans)  
Examinations Unit – MS86  
P.O. Box 168036  
Sacramento, CA 95816-8036  
Phone: (916) 227-7858  
Email: AskExams@DOT.CA.GOV

California Relay Service: 7-1-1 (TTY and voice)

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

## **MINIMUM QUALIFICATIONS**

All applicants must meet the education and/or experience requirements as stated on this exam bulletin to be accepted into the examination. Part-time or full-time jobs, regardless of whether paid or volunteer positions, and inside or outside California state service will count toward experience.

### **STRUCTURAL DESIGN TECHNICIAN I**

#### **Either I**

One year of experience in the California state service performing the duties of a Drafting Services Aid, Range B

#### **Or II**

Sixty semester or equivalent quarter units of college education, 30 units of which must have been in engineering, drafting, or other related areas (45 semester or equivalent quarter units of college education will admit an applicant to the competition, but he/she must produce evidence of completion of the total college requirement before he/she will be considered for appointment). \*\*

#### **Or III**

Two years of structural drafting experience in an engineering office equivalent in duties and level of responsibility to a Drafting Services Aid, Range B in the California state service. [College education in engineering or drafting may be substituted for the experience requirement on the basis of one year (30 semester units or equivalent quarter units) of education is equivalent to one year of experience.] \*\*

## POSITION DESCRIPTION

### STRUCTURAL DESIGN TECHNICIAN I

This is the entry and first journey level of the series. Under supervision, incumbents prepare simple drawings and assist in the preparation of complete design, construction, and as-built drawings for a variety of structures from design notes and sketches; make related engineering calculations and plot data from field notes; prepare quantity estimates; check shop plans; calculate horizontal and vertical alignment and related dimensions of structures for layout of average difficulty; use state-of-the-art technology, i.e., Computer-Aided Drafting/Design (CADD) and related programs, to determine layout and details of various types of structures; and assist in geometric design of average difficulty.

### EXAMINATION SCOPE

This examination consists of the following components:

**Online Examination** – Weighted 100% of the final score.

The examination will consist solely of an **Online Examination**. To obtain a position on the eligible list, a minimum score of 70% must be received. Applicants will receive their score upon completion of the Training and Experience Evaluation process.

In addition to evaluating applicants' relative knowledge, skills, and ability, as demonstrated by quality and breadth of education and/or experience, emphasis in each exam component will be measuring competitively, relative job demands, each applicant's:

#### **Knowledge of:**

- 1 Details, methods, and layouts used in the preparation of structural design and construction drawings for a variety of structures
2. Basic engineering mathematics
3. State-of-the-art-technology (i.e., (CADD) Computer Draft Aide and Design and related computer programs) used to determine bridge, bridge related structures, roadway layout, detail drawings, and create geometric design for various types of structures

#### **Ability to:**

1. Communicate at a level required for successful job performance
2. Follow written and oral directions
3. Draft neat, accurate, and legible plans of average difficulty
4. Interpret sketches, drawings, and plans of average difficulty

5. Use state-of-the-art- technology (i.e., Computer Draft Aide and Design (CADD), Microsoft, and related computer programs)
6. Make basic mathematical calculations related to quantities
7. Assist in performing geometric design of average difficulty
8. Make basic mathematical calculations related to quantities
9. Plot data from engineering field notes
10. Prepare graphs and charts

## ELIGIBLE LIST INFORMATION

A servicewide open eligible list for the Structural Design Technician I classification will be established for the State of California (all State of California departments, statewide).

The names of successful competitors will be merged onto the eligible list in order of final score regardless of exam date. Eligibility expires **24 months** after it is established. Applicants must then retake the examination to reestablish eligibility.

Veterans' Preference will be granted for this examination. In accordance with Government Codes 18973.1 and 18973.5, whenever any veteran, or widow or widower of a veteran achieves a passing score on an open examination, he or she shall be ranked in the top rank of the resulting eligible list. Veterans' status is verified by the California Department of Human Resources (CalHR). Information on this program is on the [Veterans' Preference for Examinations Form \(CalHR 1093\)](#).

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

## EXAMINATION INFORMATION

Examinations will be accepted on a continuous basis and will be processed quarterly. The quarterly cut-off dates are February 28, May 31, August 31, November 30. Testing is considered continuous, as new test dates can be set at any time as the departmental needs warrant.

Applicants will be notified of their results within 2 - 3 weeks after the quarterly cut-off date.

## PREPARING FOR THE EXAMINATION

Here is a list of suggested resources to have available prior to taking the exam.

**Employment History:** Employment dates, job titles, organization names and addresses, names of supervisors or persons who can verify your job responsibilities, and phone numbers of persons listed above.

**Education:** School names and addresses, degrees earned, dates attended, courses taken (verifiable on a transcript), persons or office who can verify education, and phone numbers of persons or offices listed above.

**Training:** Class titles, certifications received, names of persons who can verify your training, and phone numbers of persons listed above.

## **TAKING THE EXAMINATION**

### **FILING INSTRUCTIONS**

**Candidates are required to submit [Online Examination](#)**

Examinations must be received or postmarked no later than the cut-off 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 examination. Faxed or E-mailed examinations will NOT be accepted.

#### **File by Mail**

Department of Transportation (Caltrans)  
Examination Unit - MS 86  
P.O. Box 168036  
Sacramento, CA 95816-8036

#### **File in Person**

Department of Transportation (Caltrans)  
Examination Unit - MS 86  
1727 30TH Street, 1st Floor Lobby  
Sacramento, CA 95816-8036

**\*Any information submitted in your examination effort WILL NOT BE FORWARDED or be included in the determination of your qualifications for a position.**

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

## **TESTING DEPARTMENTS**

State of California (all State of California departments)

## **CONTACT INFORMATION**

Department of Transportation (Caltrans)  
Examinations Unit  
P.O. Box 168036

Sacramento, CA 95816-8036  
Phone: (916) 227-7858  
Email: AskExams@DOT.CA.GOV

California Relay Service: 7-1-1 (TTY and voice)

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

## **EQUAL OPPORTUNITY EMPLOYER**

The State of California is an equal opportunity employer to all, regardless of age, ancestry, color, disability (mental and physical), exercising the right of 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 State work place. Any applicant for State employment will be expected to behave in accordance with this objective, because 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.

## **GENERAL INFORMATION**

If you meet the requirements stated on this examination bulletin, you may take this examination, which is competitive. Possession of the entrance requirements does not assure a place on the eligible list. Your performance in the examination described in this bulletin will be rated against a predetermined job-related rating, and all applicants who pass will be ranked according to their score.

The California Department of Human Resources (CalHR) 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 applicants will be notified.

General Qualifications: Applicants must possess essential personal qualifications including integrity, initiative, dependability, good judgement, 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) servicewide 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.

High School Equivalence: Equivalence to completion of the 12<sup>th</sup> grade may be demonstrated in any one of the following ways: 1) passing the General Education Development (GED) Test; 2) completion of 12 semester units of college-level work; 3) certification from the State Department of Education, a local school board, or high school authorities that the competitor is considered to have education equivalent to graduation from high school; or 4) for clerical and accounting classes, substitution of business college work in place of high school on a year-for-year basis.