

## ELECTRICAL ENGINEERING DESIGNER

### DEFINITION

Prepares complete electrical engineering drawings for school buildings and appurtenant structures with design responsibility for projects of limited difficulty.

### TYPICAL DUTIES

Uses prescribed or standard electrical engineering methods in preparing construction drawings for electrical installations, such as light and power circuits for buildings and grounds, signal and intercommunication systems, electric clocks, and similar equipment.

Prepares preliminary studies and sketches for electrical work in new buildings and for alterations, improvements, additions, and corrections to electrical systems in existing structures for approval by supervisory personnel.

Makes calculations for determination of electrical load and the sizes of wire, conduit, fuses, and circuit breakers.

Prepares cost estimates and rough drafts of specifications and change orders for review by supervisory personnel.

Coordinates work during the design stage of each project with designers in the Architectural Unit and other engineering units.

Reviews information on file and may visit project sites to obtain information on existing conditions and to study electrical engineering problems.

Confers with personnel in other branches and divisions, other public agencies, and utility companies concerning details of electrical engineering projects.

Checks shop drawings and material lists submitted by contractors for conformance with the contract plans and specifications.

Explains plans and specifications to construction inspectors and contractors.

Performs related duties as assigned.

### DISTINGUISHING CHARACTERISTICS AMONG RELATED CLASSES

An Electrical Engineering Designer drafts the electrical engineering phases of school building projects, assists in the design of larger projects, and designs smaller projects. Direction is received from a supervisor during design, and work is checked upon completion.

An Associate Electrical Engineer performs and supervises electrical engineering design work for structures and provides technical advice to engineering personnel.

An Engineering Aide performs routine tracing, drafting, and lettering; makes algebraic, geometric, and trigonometric computations; and assists technical personnel by performing subprofessional duties related to engineering work.

### SUPERVISION

General supervision is received from an Associate Electrical Engineer. Work direction may be exercised over Engineering Aides on specific projects.

## CLASS QUALIFICATIONS

### Knowledge of:

Terminology, symbols, and sources of electrical engineering drafting and design information pertaining to building construction  
Electrical engineering customs and practices in expressing ideas, designs and data in drawings  
National, State, and local codes pertaining to electrical engineering features of building construction  
Design principles, mathematics, and construction industry practice for the solution of electrical engineering problems

### Ability to:

Interpret architectural and engineering plans and specifications  
Work effectively with District personnel

### Special Physical Requirement:

Agility to climb ladders and scaffolds, walk on roofs, and move safely in partially completed buildings

## ENTRANCE QUALIFICATIONS

Graduation from a recognized college or university with a major in electrical engineering that included completion of at least one course in a recognized, major computer-aided design software system.

or

Possession of an Engineer-in-Training Certificate issued by the State Board of Registration for Civil and Professional Engineers and successful completion of at least one course in a recognized, major computer-aided design software system.

or

Two years of experience in electrical engineering drafting and design as applied to building construction that included the use of at least one recognized, major computer-aided design software system.

### Special:

A valid California Driver License.  
May require the use of an automobile.

This class description is not a complete statement of essential functions, responsibilities, or requirements. Requirements are representative of the minimum level of knowledge, skill, and/or abilities. Management retains the discretion to add or to change typical duties of a position at any time.