



JUNIOR ENGINEER

FC: EF400
PB: 03

PC: 719
BU: 92
June 2002

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

DEFINITION

Under close supervision, performs a variety of basic professional engineering duties in the engineering division to which assigned. Assigned engineering fields may include civil, computer systems, mechanical, electrical or train control engineering. Performs related work as assigned.

CLASS CHARACTERISTICS

This is the entry level in the engineering classification series. Incumbents work under close supervision. As experience and proficiency are gained, incumbents are expected to exercise more independent judgment while performing more diverse and difficult assignments. Incumbents typically are expected to progress to the Engineer classification in 2-3 years. The Junior Engineer class is distinguished from the Engineer level in that the latter is the full journey level in the engineering series.

EXAMPLES OF DUTIES – *Duties include, but are not limited to, the following:*

1. Performs a variety of entry level professional engineering duties in the assigned division, including engineering specifications, computer systems applications, preliminary cost estimates, engineering drawings, calculations and analyses.
2. Conducts field inspections and investigations.
3. Assists in designing computer hardware and software modifications.
4. Assists in designing and specifying special testing and service equipment to troubleshoot and maintain transit vehicles.
5. Assists in preparing engineering designs, specification costs and quantity estimates for engineering construction projects.
6. Analyzes and resolves computer systems malfunctions.

Junior Engineer

Page 2

7. Assists in the establishment of schedules and methods for train control support positions.
8. Conducts special studies and prepares a variety of reports and correspondence.

QUALIFICATIONS

Knowledge of:

Basic principles and practices of the engineering discipline to which assigned.

Appropriate sources of engineering information.

Computer applications as applied to the solution of engineering problems.

Engineering materials, equipment and methods.

Ability to:

Apply basic engineering principles and practices to the solution of engineering problems.

Conduct engineering studies and evaluations and write clear and concise reports.

Analyze technical problems, including those involving computer hardware and software.

Learn engineering division procedures and applicable laws, codes and regulations.

Interpret and prepare drawings and specifications.

Learn to prepare construction and/or installation cost estimates.

Keep accurate records.

Establish and maintain effective working relationships with those contacted in the course of the work.

MINIMUM QUALIFICATIONS

Education:

A Bachelor's degree in engineering or a closely related field from an accredited college or university.

Other Requirements:

Must possess a valid California driver's license and have a satisfactory driving record.

Must possess sufficient mobility to perform field inspections and investigations.

Substitution:

Experience as outlined above may be substituted for the education on a year-for-year basis. A college degree is preferred.

WORKING CONDITIONS

Environmental Conditions:

Junior Engineer

Page 3

Office environment; field environment; exposure to computer screens.

Physical Conditions:

May require maintaining physical condition necessary for walking, standing or sitting for prolonged periods of time.

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