



## CONSTRUCTION ENGINEER

JC: EF205

PB: 6

FLSA: Exempt

BU: 92 (NR)

Created: September 2000

Updated: June 2019

*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 supervision, performs a variety of professional engineering design and construction duties in the design, oversight, and administration of various engineering projects; evaluates and reviews design and field engineering changes during construction; ensures work quality and adherence to specifications; and performs related duties as assigned.

### **CLASS CHARACTERISTICS**

This is the full journey level class within the Civil Engineering series. Classifications at this level receive only occasional instruction or assistance as new or unusual situations arise and are fully aware of the operating procedures and policies of the work unit. This classification is distinguished from the Senior Construction Engineer in that the latter possesses a specialized, technical or functional expertise within the area of assignment or may exercise lead supervision over assigned lower level staff.

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

1. Performs a variety of professional engineering design or construction duties in the design, oversight, and administration of engineering projects; verifies quantities of materials and adherence to specifications; evaluates and/or initiates construction project changes.
2. Prepares engineering designs, specifications, costs and quantity estimates for engineering construction projects; prepares and/or reviews the adequacy and accuracy of computations.
3. Assists in the establishment of schedules and methods for providing engineering project oversight services; responsible for the verification of quantities of materials and adherence to specifications; may recommend resources to be allocated.
4. Monitors work activities to ensure compliance with established policies and procedures; evaluates proposed changes to approved plans and specifications.
5. Recommends approval of and submits contractor's progress payment applications; performs audits of contractor and suppliers to ensure adherence to established policies and procedures.

## **Construction Engineer**

Page 2

6. Prepares a variety of reports and correspondence on project matters including Inspector's Daily Reports, monthly and final completion reports, contract modifications negotiations, field and design engineering changes, and correspondence with the contractor on fulfillment of requirements.
7. Discusses and coordinates engineering design or construction project activities with design engineering staff and other affected engineering personnel.
8. Maintains awareness of progress on assigned engineering design or construction projects to ensure compliance with designated time and cost schedules.
9. Provides assistance to inspectors in the interpretation of plans and resolution of problems during construction.
10. Reviews construction design plans to evaluate potential construction problems; monitors construction project expenditures.
11. Utilizes a variety of engineering programs and applications including CADD.
12. Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of engineering design and constructions.
13. Conducts field inspections; ensures compliance with specifications.

## **QUALIFICATIONS**

### **Knowledge of:**

- Principles and practices of engineering in assigned discipline area
- Operations, services and activities of an engineering design and construction program
- Principles and practices of engineering cost estimating
- Methods and techniques of field measuring and testing
- Engineering construction contract administration principles and practices
- Materials and equipment methods utilized in construction engineering
- Terminology, methods, practices, and techniques used in engineering report preparation
- Advanced mathematical principles
- Knowledge of scheduling, cost control, word processing and spreadsheet programs and applications
- Current office procedures, methods, and equipment including computers
- Specialized computer programs or systems utilized in construction engineering design including CADD
- Related building codes, regulations and provisions
- Related Federal, State and local laws, codes and regulations

### **Skill/Ability in:**

- Applying principles and practices of engineering design and construction in assigned projects
- Preparing construction cost estimates
- Interpreting and explaining District policies and procedures
- Preparing clear and concise reports

## **Construction Engineer**

Page 3

- Interpreting and preparing revisions to engineering plans, drawings, and specifications
- Conducting field inspections, measurements, and testing
- Communicating clearly and concisely, both orally and in writing
- Establishing and maintaining effective working relationships with those contacted in the course of work

### **MINIMUM QUALIFICATIONS**

#### **Education:**

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

#### **Experience:**

Two (2) years of (full-time equivalent) verifiable experience in engineering design, construction project or related experience.

#### **Other Requirements:**

Must be willing to work weekends and odd hours from time to time as necessary.

#### **Substitution:**

Additional professional 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:**

Office environment; exposure to computer screens; field environment; construction site\_environment; exposure to various industrial hazards and unpleasant conditions.

#### **Physical Conditions:**

Maintaining physical condition to conduct field inspection and monitoring work in various construction sites; Must be willing to work underground and in the field which may include but not limited to accessing the BART operating right-of-way, climbing on and off rail equipment and ladders, walking on uneven surfaces and visiting construction sites.

**BART EEO-1 Job Group:** 3000 – Engineers  
**Census Code:** 1530 – Miscellaneous Engineers  
**Safety Sensitive:** No