

## **ASSISTANT ENGINEER**

### **DEFINITION**

Under general supervision, performs a variety of professional civil engineering work related to preparing plans, designs, and specifications for public works projects, to inspect construction by others within County Right of Way and administer related Encroachment Permits and coordinate with members of the public, to assist in Civil Engineering field surveys (boundary topographic, construction staking), to coordinate with outside agencies, to prepare a variety of reports and perform related work as required. Employees in this class receive training in the performance of complex tasks. This professional civil engineering work can be in the field and in the office.

### **DISTINGUISHING CHARACTERISTICS**

This is an experienced entry point classification for the performance of a variety of professional engineering assignments. This level is distinguished from the Associate Engineer by the limitation of complex work performed under the oversight of the licensed Associate Engineer. Incumbents at this level should perform work at a level expected of an Engineer-In-Training and are expected to have the Engineer-in-Training designation within one year of appointment. They may provide leading direction for other technical staff.

### **REPORTS TO**

Assistant Director of Public Works

### **CLASSIFICATION DIRECTLY SUPERVISED**

None

### **EXAMPLES OF DUTIES**

- Performs construction inspection within County Right-of Way and administers Encroachment Permits for same.
- Designs and prepares plans, specifications & estimates for a variety of Public Works projects including roads, bridges, solid waste facilities, drainage facilities etc. and evaluates preliminary and final plans and specifications for a variety of road, bridge, drainage, and related public works projects, requiring professional engineering expertise.

## **ASSISTANT ENGINEER – 2**

### **EXAMPLES OF DUTIES (Continued)**

- Performs a variety of technical drafting work.
- Performs a variety of project development and coordination assignments.
- Performs resident engineering work, including contract administration, inspection, and coordination.
- Ensures that contractors meet proper standards, specifications, cost control, and time requirements.
- Prepares cost estimates and approves changing orders and progress payments.
- Performs materials testing, foundation and hydrology studies.
- Receives and researches a variety of inquiries.
- Collects, organizes, summarizes, and analyzes technical engineering data.
- Prepare grant proposals.
- Assists with the review of environmental impact reports.
- Prepare preliminary reports for tentative subdivision map conditions.
- Performs field and office work in support of boundary, topographic and construction surveys.
- Use a computer to reduce survey data.
- Prepares earth volume and other calculations.
- Construction, contract administration and coordination with other agencies, i.e. CALTRANS, FHWA, FISH & GAME, ARMY CORPS OF ENGINEERS, etc.; develop data for the acquisition of right-of-way.
- Reviews laboratory analyses and materials reports for compliance.
- Performs traffic studies.
- Develop and propose solutions to engineering problems.
- Receives applications and reviews, approvals, and issues permits, providing a variety of technical engineering advice to the public and other agencies.
- May oversee water quality programs.
- May serve as a member of special committees and task forces.
- May provide some work direction for maintenance and support staff.
- Provides some training for support staff.
- Represents the County Public Works Agency in meetings with contractors, engineers, developers, property owners, attorneys, and representatives of other public agencies.

## **ASSISTANT ENGINEER – 3**

### **TYPICAL PHYSICAL REQUIREMENTS**

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, to inspect County development sites, including traversing uneven terrain, climbing ladders, stairs, and other temporary or construction access points, to operate a motor vehicle, and to visit various County and meeting sites; vision to read printed materials and a computer screen; and hearing and speech to communicate in person, before groups, and over the telephone. This is primarily a sedentary office classification although standing and walking between work areas and conducting inspections may be required. Finger dexterity is needed to access, enter, and retrieve data using a computer keyboard or calculator and to operate standard office equipment. Positions in this classification occasionally bend, stoop, kneel, reach, push, and pull drawers open and closed to retrieve and file information. Employees must possess the ability to lift, carry, push, and pull materials and objects weighing up to 30 pounds.

### **TYPICAL WORKING CONDITIONS**

Employees work primarily in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may occasionally work in the field and occasionally be exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, mechanical and/or electrical hazards, and hazardous physical substances, fumes and dust.

Employees may interact with members of the public or with staff under emotionally stressful conditions while interpreting and enforcing departmental policies and procedures.

### **QUALIFICATIONS**

#### **Knowledge of:**

- Principles, practices and methods of Civil Engineering as applied to the design, construction and maintenance of roads, airports, solid waste, water quality, and other Public Works facilities.
- Pertinent State, Federal and local laws, regulations, and ordinances related to public works engineering.
- Preparation of designs, plans, and specifications for the development of roads, bridges, drainage, erosion control, and public works facilities.

## **ASSISTANT ENGINEER – 4**

### **Knowledge of (continued):**

- Construction methods, materials, and equipment.
- Proper inspection methods and procedures.
- Computerized drafting methods and systems.
- Principles of project development and coordination.
- Use of computers and computer applications related to engineering work.
- Principles of advanced mathematics and their application to engineering work.
- Practices of researching engineering and design issues, evaluating alternatives, making sound recommendations, and preparing and presenting effective staff reports.
- Safety principles and practices pertaining to engineering work.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and County staff.

### **Ability to:**

- Apply engineering principles and techniques to evaluate and solve simple to difficult civil engineering problems.
- Prepare, understand, and interpret engineering construction plans, specifications, and other contract documents.
- Conduct comprehensive engineering studies and prepare reports with recommendations.
- Assist in, develop, and administer contracts for professional services and construction in a public agency setting.
- Design engineering projects.
- Read and understand technical drawings and specifications.
- Perform mathematical and engineering computations with precision.
- Make sound, independent decisions within established policy and procedural guidelines.
- Organize and prioritize a variety of projects and multiple tasks in an effective and timely manner; organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment including computer and drafting equipment and specialized software applications programs.

- Use English effectively to communicate in person, by telephone, and in writing.

#### **ASSISTANT ENGINEER – 5**

##### **Ability to (continued):**

- Make engineering design computations and check, design, and prepare engineering plans and studies.
- Prepare accurate engineering calculations, quantities of work items and associated cost estimates.
- Deal tactfully and effectively with the public, County staff, other agencies, engineering firms, contractors, developers, manufacturers and others.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.
- Coordinate and direct construction contractors while inspecting work within County Right of Way to obtain approved work standards.
- Knowledge of safe traffic control measures within road construction work zone.
- Utilize Auto-Cad and other software for preparation of plans, specifications and
- Work with public agencies, other agencies, community groups.
- Prepare plans, designs, and specifications for public works facility development, construction, and maintenance projects.
- Perform comprehensive engineering reviews of designs, plans, and specifications prepared by others.
- Develop and coordinate assigned projects.
- Analyze and evaluate engineering and statistical data and information, developing sound recommendations.
- Develop accurate records, sketches, and notes.
- Perform drafting work.
- Perform construction and project administration, ensuring compliance with contracts, plans, and specifications.
- Operate a computer and use appropriate software in the performance of public works engineering responsibilities.
- Effectively representing the County Public Works Department with the public and other government agencies.
- Establish and maintain cooperative working relationships.

## **ASSISTANT ENGINEER – 6**

### **EDUCATION AND EXPERIENCE**

*Any combination of training and experience that would provide the required knowledge, skills, and abilities is qualifying. A typical way to obtain the required qualifications is:*

Equivalent to graduation from an accredited four-year college or university with major coursework in civil engineering or a related engineering field.

AND

Two (2) years of increasingly responsible, full time, Civil Engineering experience in planning development, construction and maintenance of public works facilities.

### **Licenses and Certifications:**

Possession of an Engineer in Training (EIT) certificate at time of hire is highly desired, and required within one year of hire. Obtaining an EIT certificate within one year of hire is a requirement of this position, and employees who fail to do so are subject to demotion or termination.

### **Special Requirements:**

Possession of a current and valid California Driver's License issued by the California Department of Motor Vehicles.

All County of Plumas employees are designated Disaster Service Workers through State law (California Government Code Section 3100-3109). Employment with Plumas County requires the affirmation by loyalty oath to this effect. Employees are required to complete all Disaster Service Work related training as assigned, and to return to work as ordered in the event of an emergency.