

**ASSISTANT CIVIL ENGINEER**

**DEFINITION**

To perform basic and complex professional and technical office and field engineering work in support of Public Works projects, including land development review; public facility engineering; construction and maintenance of streets, storm drains, sewer systems and public utilities; municipal airport; City buildings; equipment and fleet maintenance. This job class exercises responsibility for performing entry level through journey level civil engineering duties of varying complexity including engineering calculations, research, studies, reports, field surveys, drafting, design and inspections.

**SUPERVISION RECEIVED AND EXERCISED**

Receives general direction from the Public Works Director/City Engineer.

**EXAMPLES OF ESSENTIAL FUNCTIONS** - Essential functions may include, but are not limited to the following:

Performs complex professional and technical office and field engineering work in support of Public Works projects.

Assists in drafting, surveying, construction engineering and construction administration for Public Works projects.

Performs field surveying, interprets data and performs office drafting work utilizing standard engineering and office equipment.

Conducts technical research and prepares engineering studies, estimates, specifications, reports and correspondence documents.

Prepares plan specifications, designs and ordinances for the construction and improvement of City Public Works projects.

Prepares, reviews and maintains maps, construction drawings, legal descriptions, and various other engineering documents and records.

Reviews construction documents, agreements and permits, and inspects Public Works projects, including improvements completed by private developers, for compliance with approved plans, specifications, regulations, and standards of quality and safety.

Prepare, review and process permit applications for Public Works projects.

Receives, investigates and responds to public inquiries, requests for assistance and complaints regarding engineering projects; provides technical assistance to the public, contractors, developers, property owners and other City staff.

Completes special projects as assigned.

Operates a vehicle and a variety of office and specialized equipment, including a computer, copier, telephone, calculator, drafting tools, surveying equipment, fax machine and two-way radio.

Performs general clerical work as assigned, including but not limited to assisting customers, researching files, copying and filing documents, entering computer data, sending and receiving faxes, answering the telephone, etc.

## **MINIMUM QUALIFICATIONS**

### **Knowledge of:**

Pertinent federal, state and local laws, regulations, standards, codes and ordinances.

Principles and practices of civil engineering and surveying as applied to municipal public works projects.

Modern methods and techniques used in the design, construction and maintenance of public works improvements.

Basic mathematics, algebra, geometry, trigonometry, calculus, statistics, economics physics, chemistry, biology, environmental science, geology, soils/geotechnical engineering, mechanics of materials, structural analysis/design, hydrology, hydraulics, traffic/transportation engineering, surveying and drafting.

Proper use of manual and computer-aided drafting methods and equipment including the use of AutoCAD software.

Research/analysis methods and sources of information related to public works engineering.

Modern office practices and technology, including the use of computers for word and data processing, computer-aided design, and spreadsheet applications.

Methods of letter writing and report preparation.

English usage, spelling, grammar and punctuation.

Safe work practices.

**Ability to:**

Read, learn, understand, interpret and apply department policies and procedures, and pertinent federal, state and local laws, codes, ordinances, rules, regulations and standards pertaining to department operations.

Compile information from site checks, field notes and photos from which to prepare engineering documents.

Prepare accurate engineering drawings, plans, maps and other documents using manual and computer-aided methods.

Read, interpret and understand complex plans, specifications and blueprints.

Conduct necessary engineering research/analysis and prepare technical reports.

Apply technical knowledge and follow proper inspection techniques to examine workmanship and materials, and detect deviations from plans, specifications, regulations and standard engineering practices.

Establish and maintain accurate and complete files and records.

Understand and follow oral and written instructions independently.

Perform required mathematical and engineering computations with accuracy.

Communicate clearly and concisely, both orally and in writing.

Safely operate basic office equipment and engineering tools.

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

Represent the City effectively in meetings with others.

Interpret departmental projects and programs to the public.

**Experience:**

One year or more of experience in technical civil engineering work is highly desirable.

**Education:**

A Bachelor's degree from an accredited college or university with major course work in civil engineering or closely related field.

### **Additional Requirements:**

Possession of an Engineer In-Training Certificate as issued by the State of California.

Possession of a valid California Class "C" driver's license.

### **TYPICAL WORKING CONDITIONS**

Work is performed in an office and field environment. Incumbent drives on surface streets and may be exposed to traffic and construction hazards, electrical currents, air contaminants, adverse weather conditions, temperature and noise extremes, wetness, humidity, heights, fumes, dusts, odors, toxic or caustic chemicals and vibrations.

### **TYPICAL PHYSICAL REQUIREMENTS**

Requires the mobility to work primarily in an office environment; some outdoor work is required in the inspection of various land use developments, construction sites and public works facilities. Requires the ability to sit at desks for long periods of time and intermittently walk, stand climb, balance, stoop, kneel, crouch, crawl and reach while performing office duties and/or field work; lift and/or move up to 25 pounds occasionally; use hands to finger, handle, feel or operate objects, tools and controls. Must be able to maintain effective audio-visual discrimination and perception needed for making observations, communicating with others, reading and writing, and operating office equipment. Must be able to use a telephone to communicate verbally and a keyboard to communicate through written means, to review information and enter/retrieve data, to see and read characters on a computer screen.

**This class specification lists the major duties and requirements of the job and is not all-inclusive. Incumbents may be expected to perform job-related duties other than those contained in this document.**