



June 2023
FLSA: EXEMPT

ASSISTANT ENGINEER

DEFINITION

Under general supervision, performs various professional engineering work in design, construction, inspection, and coordination of a variety of public works and transportation projects; provides technical support to management in assigned engineering program area; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from assigned supervisory or management personnel. Exercises no direct supervision over staff.

CLASS CHARACTERISTICS

This classification is the entry-level in the professional engineering series. Initially under close supervision, incumbents with basic professional engineering experience learn concepts, and policies of the City's civil engineering programs and a wide variety of practices and procedures. As experience is gained, assignments become more varied and are performed with greater independence. Positions at this level exercise less independent judgment and initiative in matters related to work procedures and methods. Work is supervised while in progress and fits an established structure or pattern. Exceptions or changes in procedures are explained in detail as they arise. This class is distinguished from Associate Engineer in that the latter is responsible for performing the more difficult assignments, projects, analyses, and programs assigned to classes within the series, requiring the use of considerable discretion and independent judgment in performing assigned work and full and thorough knowledge of the concepts, practices, procedures, and policies of the City's civil engineering programs.

EXAMPLES OF TYPICAL JOB FUNCTIONS (Illustrative Only)

Management reserves the right to add, modify, change, or rescind the work assignments of different positions and to make reasonable accommodations so that qualified employees can perform the essential functions of the job.

- Prepares plans and specifications for the design, construction, and maintenance/operation of a variety of public works facilities and projects, including streets, traffic signals, parks and recreation facilities, storm, sanitary sewer and water systems, lagoon and levee systems, public buildings, and other infrastructure; ensures conformance to federal, state, and local legal requirements and professional engineering design practices.
- Prepares and/or participates in the preparation and review of preliminary and final engineering plans, cost estimates, cost analysis studies, specifications, and schedules for public works projects; prepares forecasts and develops and monitors division and capital improvement project budgets.
- Researches project design requirements and performs related calculations; prepares time and material cost estimates, especially as related to existing or anticipated project budgets; assists in the preparation of department annual budget estimates.
- Reviews subdivision and improvement plans, parcel maps, road and grading plans, and related maps and specifications for accuracy and conformance to established engineering practices and mandated regulations.

- Meets with contractors, engineers, developers, architects, a variety of outside agencies, and the general public in acquiring information and coordinating engineering matters; provides information regarding City capital project requirements.
- Provides information to the public and resolves questions and complaints regarding the interpretation and application of relevant codes, rules, and regulations relating to traffic and construction.
- Observes and complies with City and mandated health and safety rules, regulations, and protocols.
- Performs other related duties as assigned.

QUALIFICATIONS

Knowledge of:

- Applicable federal, state, and local laws, codes, and ordinances relevant to area(s) of responsibility.
- Principles and practices of civil engineering as applied to public works methods, materials, and techniques used in the construction of complex public works projects including water, storm water, street, and traffic systems design.
- Design principles, strength of materials, stress analysis and principles of mechanical, electrical, and structural engineering and surveying as they apply to the design of public works structures.
- Practices of researching engineering and design issues, evaluating alternatives, making sound recommendations, and preparing and presenting effective staff reports.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and City staff.
- The structure and content of the English language, including the meaning and spelling of words, rules of composition, and grammar.
- Modern equipment and communication tools used for business functions and program, project, and task coordination.
- Computers and software programs (e.g., Microsoft software packages) to conduct, compile, and/or generate documentation.

Ability to:

- Perform a variety of professional engineering duties in support of the City's capital improvement projects.
- Prepare complex engineering computations and check, design, and oversee the preparation of various engineering plans and reports.
- Utilize advanced engineering techniques to determine grade, drainage, and potential traffic requirements.
- Prepare accurate estimates of costs, schedules, personnel resources, and perform other similar activities related to project management.
- Gather, analyze, and interpret a variety of complex technical data.
- Read and interpret maps, plans, sketches, schematics, diagrams, and blueprints.
- Establish and maintain a variety of filing, record keeping, and tracking systems; make and keep accurate construction project files and logs, including funding sources and budgeting.
- Conduct complex research projects, evaluate alternatives, make sound recommendations, and prepare effective technical staff reports.
- Understand, interpret, and apply all pertinent laws, codes, regulations, policies and procedures, and standards relevant to work performed.
- Effectively represent the department and the City in meetings with individuals; governmental agencies; community groups; various business, professional, and regulatory organizations.
- Learn and understand the organization and operation of the City and of outside agencies as necessary to assume assigned responsibilities.
- Organize work, set priorities, meet critical deadlines, and follow-up on assignments.

- Effectively use computer systems, software applications, and modern business equipment to perform a variety of work tasks.
- Communicate clearly and concisely, both orally and in writing, using appropriate English grammar and syntax.
- Use tact, initiative, prudence, and independent judgment within general policy, procedural, and legal guidelines.
- Establish, maintain, and foster positive and effective working relationships with those contacted in the course of work.

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 would be:

Equivalent to a bachelor's degree in engineering or a directly related field, and one (1) year of professional experience in civil engineering work including project design, plan checking, and project management.

Licenses and Certifications:

- Possession of, or the ability to obtain, a valid Class C California driver's license upon appointment.

PHYSICAL DEMANDS

When working within an office environment, must possess mobility to work in a standard office setting and use standard office equipment, including a computer; vision to read printed materials and a computer screen; and hearing and speech to communicate in person and over the telephone; ability to stand and walk between work areas 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.

When working in the field environment, must possess mobility to work in changing site conditions; possess the strength, stamina, and mobility to perform light to medium physical work; to sit, stand, and walk on level, uneven, or slippery surfaces; to reach, twist, turn, kneel, and bend, to climb and descend ladders; and to operate a motor vehicle and visit various sites; vision to inspect site conditions and work in progress. The job involves fieldwork requiring frequent walking in operational areas to identify problems or hazards, with exposure to hazardous materials in some site locations. Employees must possess the ability to lift, carry, push, and pull materials and objects averaging a weight of 40 pounds.

ENVIRONMENTAL CONDITIONS

Employees work primarily in an office environment with moderate noise levels and controlled temperature conditions, and periodically work in a field environment where they are exposed to loud noise levels, cold and hot temperatures, inclement weather conditions, road hazards, vibration, confining workspace, chemicals, mechanical and/or electrical hazards, and hazardous physical substances and fumes. Employees may interact with upset staff and/or public and private representatives and contractors in interpreting and enforcing departmental policies and procedures.