

ASSOCIATE CIVIL ENGINEER

Approved: July 2016

FLSA: Exempt

Unit: SEIU



Definition

Under direction, performs various complex professional field and office engineering work related to the management, planning, design, construction, and inspection of the City's Capital Improvement Program (CIP), land development, utilities, public works infrastructure, and daily departmental operations. Provides project management and administration; confers with developers, contractors, and representatives of other agencies regarding facility and infrastructure development. Administers professional services and construction contracts. Administers Federal and State grant funds associated with construction projects; provides professional staff assistance to supervisors and management, other departments, and the public in areas of expertise. Performs a variety of studies. Prepares and presents staff reports and performs related work as required.

Supervision received and exercised

Receives direction from assigned supervisory and management staff. Provides technical and functional direction to lower-level staff, contractors, and other temporary staff.

Class characteristics

This is the full journey-level class in the professional engineering classification series. Incumbents are expected to perform the full range of professional and technical engineering work in all of the following areas: the City's CIP, land development, utilities, public works infrastructure, and daily departmental operations, in addition to administering large and/or complex projects. Positions at this level receive only occasional instruction or assistance as new or unusual situations arise, and perform the most difficult and challenging design, inspection, and computation duties. Incumbents are fully aware of the operating procedures and policies of the work unit, and make decisions related to design and inspection. This class is distinguished from the Senior Civil Engineer in that the latter is the full supervisory-level class in the series responsible for managing the activities of an assigned section of the Engineering Division, including organizing, assigning, supervising, and reviewing the work of assigned staff involved in engineering projects and operations.

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.

- Plans, designs, and/or inspects large and/or complex civil engineering public works construction projects, including defining the scope of the project; securing adequate funding from Federal and State grant programs and other funding sources; coordinating with permitting and public utility agencies; performing historical document research and review; surveying and engineering analysis of alternatives; preparing plans, specifications, and cost estimates; performing research, map, and field studies and surveys; drafting site plans with specialized computer software.
- Apply engineering principles and practices to specific problems; coordinating construction schedules with other projects and agencies; preparing and reviewing cost estimates; and inspecting construction of projects to ensure compliance with regulations, requirements, and specifications; and performs related planning and design work.
- Reviews construction plans prepared by consulting engineers and private contractors to verify compliance with City sidewalk, public utility, and improvement requirements; checks plans for conformance with regulations regarding line, grade, size, elevation, and location of structures; reviews engineering calculations of other engineers or engineering technicians; participates in pre-design, construction, and utility coordination meetings and issues construction permits.
- Perform construction management for CIP projects and oversee all construction related activities, including public relations, managing budget, providing management with updates and status reports, approving or coordinating design changes, and resolving conflicts.
- Provides construction administration, plans, technical input, and inspection of public works construction projects, including coordinating work with other divisions and City departments, reviewing and inspecting work to ensure conformance with plans and specifications, tracking and maintaining all project accounting, coordinating schedules, and providing public notices of projects.
- Responds to citizen, business, and community inquiries and complaints to address access, issues, and other concerns; provides information to the public through in-person/front counter, telephone, and email communications regarding grading, encroachment permits, right-of-way and property line information, utility information, slope stability and groundwater issues, improvement plan check, and payment processes.

- Prepares various reports and presentations, including staff reports, technical reports, and requests for proposals; attends and/or presents to City Council and/or City Commissions as needed for projects; may serve as staff liaison to Commission bodies.
- Attends meetings, conferences, workshops, and training sessions and reviews publications and audio-visual materials to become and remain current on principles, practices, and new developments in assigned work areas.
- Communicates and coordinates regularly with appropriate others to maximize the effectiveness and efficiency of interdepartmental operations and activities.
- Provide direction and training to other engineering and technical staff and consultants.
- Performs other duties as assigned.

Qualifications

Knowledge of

- Civil engineering principles, techniques, policies, and procedures as applied to the planning, design, and construction of buildings, streets, parks, utilities, and other public works infrastructure.
- Methods, materials, and techniques used in the construction of public works projects.
- Principles, practices, procedures, and standards related to City public works, engineering infrastructure development and maintenance, and surveying.
- Principles and practices of capital improvement program budgeting, cost estimation, funding, project management, and contract administration.
- General design, layout, and construction practices for public improvements such as streets, utilities, grading, building expansions, and landscaping.
- Subdivision engineering, plan review, mapping, regulations, and construction practices.
- Bidding requirements for public works projects.
- Engineering plan types, review practices, and permit filing and approval procedures.
- Applicable Federal, State, and local laws, regulatory codes, ordinances, and procedures relevant to assigned area of responsibility.
- Modern office practices and methods including computers and software programs relevant to the work performed.
- Modern developments, current literature, and sources of information regarding engineering.
- 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.
- Methods and techniques of effective technical report preparation and presentation.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for effectively representing the City in contacts with governmental agencies, community groups, various business, professional, educational, and regulatory organizations, and with property owners, developers, contractors, and the public.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and City staff.

Ability to

- Conduct civil engineering research projects, analyze complex problems, evaluate alternatives, make sound recommendations, and prepare effective technical staff reports.
- Prepare, understand, and interpret engineering construction plans, specifications, and other contract documents.
- Develop, administer, and review contracts for professional services and construction in a public agency setting.
- Interpret, apply, explain, and ensure compliance with Federal, State, and local policies, procedures, laws, and regulations, technical written material, and City engineering policies and procedures.
- Design engineering projects.
- Read and understand technical drawings and specifications.
- Perform mathematical and engineering computations with precision.
- Recognize discrepancies from as-built to contract specifications and recommend reconciliation.
- Make engineering design computations and check, design, and prepare engineering plans and studies.
- Direct the work of contract consultants and sub-professional personnel.
- Prepare and present clear, concise, and logical written and oral reports, correspondence, policies, procedures, legal descriptions, and other written materials.
- Establish and maintain a variety of filing, record-keeping, and tracking systems.
- 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.
- Effectively represent the department and the City in meetings with governmental agencies, community groups, and various business, professional, and regulatory organizations and individuals.
- Operate modern office equipment including computer equipment and software programs relevant to the work performed.
- Use English effectively to communicate in person, over the telephone, and in writing.
- 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 graduation from an accredited four-year college or university with major coursework in civil engineering or a related engineering field.
- Four (4) years of professional engineering design, plan review, and project administration experience, preferably in a public agency setting.

Licenses and certifications

- Possession of, or ability to obtain, a valid California driver's license by time of appointment.
- Possession of a Registered Professional Civil Engineer or Land Surveyor license issued by the State of California.

Physical demands

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, and may occasionally be required to inspect 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 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 moving 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 may need to lift, carry, push, and pull materials and objects weighing up to 25 pounds.

Environmental elements

Employees work in an office environment with moderate noise levels, controlled temperature conditions, and no direct exposure to hazardous physical substances. Employees may 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 and fumes. Employees may interact with upset staff and/or public and private representatives in interpreting and enforcing departmental policies and procedures.