



MARCH 2016
FLSA: NON-EXEMPT

ENGINEERING SPECIALIST

DEFINITION

Under general supervision, performs a variety of specialized paraprofessional engineering and transportation field research, report writing, file maintenance, public relations and office administrative duties for professional engineering staff and departmental management; receives and responds to complaints; performs studies and prepares reports; researches engineering topics; prepares basic engineering calculations; maintains engineering and transportation/traffic records; performs field observations and surveys; updates maps and drawings; and performs related work as required.

SUPERVISION RECEIVED AND EXERCISED

Receives general supervision from an assigned manager or supervisor. Exercises no direct supervision of staff.

CLASS CHARACTERISTICS

This is the full journey-level class in the paraprofessional engineering classification series. Incumbents are assigned to either the Public Works Department or Transportation Services Division where they provide technical assistance and support to professional staff and handle specialized project and program assignments. The work requires extensive public contact, the frequent use of tact, discretion and judgment, good knowledge of departmental activities and the ability to conduct independent projects. This class is distinguished from the next higher class of Assistant Engineer in that the Assistant is the first level in the professional engineering series with responsibilities spanning the full spectrum of the City's engineering function and the equivalent of an appropriate degree in an engineering curriculum.

EXAMPLES OF ESSENTIAL 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.

- Performs specialized paraprofessional technical engineering work which may involve plan and permit review, preparing and revising maps and standard details, performing progress pay estimates and change orders, and conducting basic engineering studies and research.
- Maintains websites and computer assisted engineering programs.
- Coordinates City-wide traffic management and pedestrian safety programs and maintains engineering files and maps.
- Responds to complaints, requests and concerns including answering questions directly and over the telephone following established guidelines, policies and procedures.
- Performs field, office and computer-aided studies; performs field work such as conducting observations, making traffic counts and analyzing traffic flow; reviews accidents and other

documentation and takes measurements, researches records and other data used to compile information for decision making.

- Prepares periodic and special reports based on findings from research, studies and surveys; makes recommendations based on findings; drafts ordinances and resolutions and submits for approval.
- Maintains engineering and traffic/transportation files, including plans, studies, inspections, surveys, maps and other data related to engineering and transportation projects; updates traffic maps and engineering drawings and other information recorded in GIS.
- Coordinates/conducts meetings with constituents to identify issues and develop suggestions for resolution to problems; gives presentations and participates in regular staff and advisory committee meetings.
- Processes encroachment permits involving plan review to ensure compliance with City policy, codes and regulations, fee calculation, communications with contractors, residents, inspectors and building division staff.
- Receives and responds to requests from developers, contractors, private engineers, title companies, real estate brokers and others for base maps, property line information, encroachment permits, benchmarks, copies of maps and confirming street information and other geographical data.
- Utilizes GIS software to create and modify plot plans, topographic and other maps, improvement plans, and illustrative graphics, such as charts, illustrations, and graphs for reports, drawings for design manuals, and other projects and drafts maps and standard drawings using AutoCad; may serve on the GIS committee.
- Maintains the GIS database, including inputting and correcting data, determining format, researching data conversions, establishing data specifications, updating sources and ensuring data integrity.
- Installs and troubleshoots problems with the GIS mapping system, including installing new applications, installing upgrades and assisting users to solve software problems.
- Maintains websites and computer-assisted engineering programs.
- Manages and coordinates City-wide traffic management and pedestrian safety programs.
- Performs other duties as assigned.

QUALIFICATIONS

Knowledge of:

- Civil engineering principles, practices, and methods applicable to office and field work involving the design, construction, and maintenance of public works projects.
- Engineering plan types, review practices, and permit filing and approval procedures.
- Principles and practices of technical civil engineering drafting and surveying support.
- Drafting and surveying equipment, computers, principles, problems, techniques, and practices.
- Applicable Federal, State, and local laws, codes, and regulations, including administrative and department policies and procedures.
- Technical engineering mathematics.
- Modern office practices, methods, and computer equipment and applications, including GIS concepts and applications.
- Technical report writing practices and procedures.
- Principles and procedures of record keeping.
- English usage, grammar, spelling, vocabulary, and punctuation.
- Techniques for providing a high level of customer service by effectively dealing with the public, vendors, contractors, and City staff.

Ability to:

- Prepare and review a variety of plans, specifications, maps, graphic materials, cost estimates, and technical engineering reports.
- Modify engineering drawings, topographic maps, improvement plans, and illustrative graphics using GIS software.
- Perform responsible technical engineering support work with accuracy, speed, and minimal supervision.
- Read and interpret engineering plans, technical drawings, specifications, and subdivision maps.
- Perform standard engineering design under professional engineering supervision.
- Make mathematical calculations and accurate engineering computations and drawings.
- Make and record accurate field engineering observations.
- Use engineering, drafting, and surveying instruments and equipment.
- Prepare clear and concise reports, correspondence, policies, procedures, and other written materials.
- Understand and follow oral and written instructions.
- Organize own work, set priorities, and meet critical time deadlines.
- Operate modern office equipment including computer equipment and specialized software applications programs.
- 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.
- Performs related duties as assigned.

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 completion of two years of college-level coursework in a field related to the work and three (3) years of engineering technical support or drafting experience.

Licenses and Certifications:

- Possession of, or ability to obtain, a valid California Driver's License by time of appointment.

PHYSICAL DEMANDS

Must possess mobility to work in a standard office setting and use standard office equipment, including a computer, to inspect City development sites, to operate a motor vehicle, and to visit various City 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 partially a sedentary office classification, although the job involves field inspection work requiring frequent walking at inspection sites to monitor performance, to perform field measurements and calculations, and to identify problems or hazards; standing and walking 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. Employees must possess the ability 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 and controlled temperature conditions; but may occasionally work in the field and 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.