



## Engineering Specialist

*Class specifications are intended to present a descriptive list of the range of duties performed by employees in the class. Specifications are **not** intended to reflect all duties performed within the job.*

### **SUMMARY DESCRIPTION**

Under direction, of the City Engineer, performs a variety of the most difficult and complex technical and paraprofessional engineering in support of the Public Works Department's engineering services, activities, and functions including design, drafting, survey, inspection, building permit issuance, plan review, and other difficult and complex technical engineering work; prepares maps, plans, and drawings; provides information and assistance to contractors, developers, engineers, and the general public on the City's engineering services and activities; maintains a variety of files; and performs a variety of complex technical tasks relative to assigned area of responsibility.

### **IDENTIFYING CHARACTERISTICS**

The Engineering Specialist is the advanced working level, technical engineering position in the City's Public Works Administration and Engineering Division. The position has responsibility for a major functional programmatic section such as construction management, development services or capital projects. Incumbents work with considerable independence performing the most difficult, complex, and specialized technical engineering work in an assigned area of expertise. Employees utilize significant independent judgment and discretion in developing long and short-range priorities and establishing and monitoring goals.

### **REPRESENTATIVE DUTIES**

*The following duties are typical for this classification. Incumbents may not perform all of the listed duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.*

1. Plans, organizes, coordinates and oversees the work of assigned staff and consultants; sets priorities and follows up to ensure schedule compliance and goal attainment; recommends and implements goals, objectives, policies and procedures and work standards for the section.
2. Reviews a variety of engineering plans including plans for roadways, storm drains, sewer and water lines, site grading and excavation, parking lot and building site work for all subdivisions, parcel maps, commercial/residential on and offsite improvements to assure compliance with Planning Commission requirements as well as City and state codes, ordinances, standards, and specifications.
3. Reviews a variety of project reports and engineering calculations for completeness and accuracy.

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4. Reviews, processes, and issues a variety of permits including transportation, encroachment, grading, and on and offsite improvement permits.
5. Reviews all public and private construction for compliance with Planning Commission requirements, City and state standards, project reports, and sound engineering practices.
6. Reviews and comments on Public Works departmental requirements for site plan reviews, zone changes, conditional use permits, variances, tentative subdivision maps and tentative parcel maps.
7. Oversees the maintenance of the City's base maps for area, zoning, and general plans; reviews parcel maps for accuracy and compliance with mapping requirements.
8. Oversees the issuance and maintains the City's addressing system.
9. Reviews building site development plans for compliance with the City code, improvement agreements, and property CC&R's.
10. Serves as a survey party chief and operates various types of survey equipment to perform detailed measurement for boundary lines, rights-of-way, and topographic surveys.
11. Reviews and interprets property deeds, rights-of-way descriptions, and maps, field data, and tabulations.
12. Performs a variety of engineering mathematical calculations including calculations for areas, angles, traverses, road alignments, and profiles.
13. Serves as City representative for right-of-way acquisitions; prepares legal descriptions and agreements for right-of-way acquisitions, right-of-way entries, offer of street dedications, special districts, parking zones, and other special purposes.
14. Performs construction staking and field calculations for proposed grading and roadway alignments.
15. Oversees the preparation and maintenance of City utility service maps; calculates sewer and water fees and processes the application.
16. Analyzes utility systems and street systems for future master planning, capital improvement projects, long term maintenance and replacement; makes recommendations as necessary.
17. Provides technical support to a variety of engineering studies including traffic surveys, traffic flow studies, and accident investigations; researches, collects, interprets, and records data.
18. Designs and maintains City standards and specifications; prepares agreements, resolutions and staff reports for Public Works Department items scheduled for City Council's actions.
19. Oversees the updating of all engineering material and design manuals.
20. Oversees the maintenance of the filing/indexing system for engineering services and activities.
21. Responds to questions and provides information and assistance to contractors, developers, engineers, and the general public on the City's engineering services and activities; investigates and follows up on complaints from the public.

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22. Coordinates assigned activities with contractors, developers, engineers, utilities, other government agencies, City departments, and the City Council as necessary; prepares agreements, resolutions and staff reports for Public Works Department items scheduled for City Council's action.
23. Uses Computer Aided Design and Drafting (CADD) to complete plans and details for development of contract document drawings and other graphic exhibits.
24. Performs related duties as required.

**QUALIFICATIONS**

*The following generally describes the knowledge and ability required to enter the job and/or be learned within a short period of time in order to successfully perform the assigned duties.*

**Knowledge of:**

1. Basic civil engineering principles, practices, and terminology, especially as applied to public works planning, design and construction.
2. Specialized knowledge of engineering principles and practices related to an assigned area of responsibility such as Construction Management, Development Services, or Capital Projects.
3. Preparation of designs, plans, and specifications for the development of roads, bridges, drainage, erosion control, and public works facilities.
4. Construction methods, materials, and equipment.
5. Survey techniques and calculations.
6. Drafting techniques, data gathering, and summary methods for engineering studies.
7. Traffic engineering data gathering methods.
8. Principles and practices of record keeping.
9. Principles and applications of engineering mathematics.
10. Principles and practices of data collection and analysis.
11. Modern office procedures, methods, and computer equipment including personal computer hardware and software applications.
12. Computer Aided Design and Drafting (CADD).
13. Project development and coordination.
14. Pertinent federal, state, and local laws, codes, and regulations.

**Ability to:**

1. Perform specialized technical engineering work and study related to an assigned unit's functions.

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2. Perform comprehensive engineering reviews of designs, plans, and specifications prepared by others.
3. Prepare comprehensive and concise engineering reports and other written materials for use by City Manager, City Council and others.
4. Analyze and evaluate engineering and statistical data and information, and develop sound recommendations.
5. Interpret and apply applicable federal, state, and local laws, codes, and regulations.
6. Recognize construction problems and develop solutions.
7. Oversee and perform drafting services to assure compliance with local and state codes, guidelines, and sound engineering practices.
8. Develop accurate records, sketches and notes.
9. Perform a variety of construction inspection and administration services.
10. Ensure compliance with plans and specifications.
11. Make accurate engineering calculations.
12. Operate office equipment including computers and supporting word processing, spreadsheet, and database applications.
13. Deal tactfully and effectively with the public, other City staff, other agencies, engineering firms, contractors, developers and others.
14. Communicate clearly and concisely, both orally and in writing.
15. Establish and maintain effective working relationships with those contacted in the course of work.

**Education and Experience Guidelines** - *Any combination of education and experience that would likely provide the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:*

**Education/Training:**

Equivalent to a Bachelor's degree from an accredited college or university with major course work in civil engineering or related field; increasingly responsible experience at the level of Engineering Technician may substitute for education on a year-for-year basis.

**Experience:**

Three years of increasingly responsible engineering work experience.

**License or Certificate:**

Possession of, or ability to obtain by date of appointment, an appropriate driver's license.

**PHYSICAL DEMANDS AND WORKING ENVIRONMENT**

*The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential job functions.*

**Environment:**

Work is performed primarily in a standard office environment with some travel to different sites; occasional exposure to outside weather conditions; work and/or walk on various types of surfaces including slippery or uneven surfaces and rough terrain.

**Physical:**

Primary functions require sufficient physical ability and mobility to work in an office setting and in a field environment; walk, stand, and sit for prolonged periods of time; occasionally stoop, bend, kneel, crouch, crawl, climb, reach, and twist; push, pull, lift, and/or carry moderate amounts of weights; operate assigned equipment and vehicles; and to verbally communicate to exchange information.

**Vision:**

See in the normal visual range with or without correction.

**Hearing:**

Hear in the normal audio range with or without correction.

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*Johnson & Associates*