

CITY OF IRWINDALE

ENGINEERING TECHNICIAN

*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 general supervision, performs a variety of technical field and office engineering work in support of the Public Works Department's engineering services, activities, and functions; performs engineering studies and prepares progress reports; provides information and assistance to contractors, developers, engineers, and the general public on the City's engineering services and activities; drafts detailed, complete, and accurate drawings from rough or detailed sketches or notes for engineering purposes using CADD and other computer software; assists in resolving engineering issues in connection with standards and designs associated with maintaining and constructing City streets, sewers, drainage facilities, and structures; and performs a variety of technical tasks related to public works projects and programs, storm water activities, and mining operations.

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. Performs a variety of paraprofessional field and office engineering work in support of the Public Works Department's engineering services, activities, and functions.
2. Designs and prepares engineering plans, maps, specifications, and cost estimates in connection with the construction and maintenance of a variety of engineering capital projects; prepares illustrative graphics such as exhibits, charts, illustrations, graphs, diagrams, tables, and location maps.
3. Provides phone and/or counter support; answers questions and provides technical 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.
4. Reviews a variety of engineering plans to assure compliance with City codes, ordinances, standards, and specifications.
5. Performs title searches, researches right-of-way and easements based on legal descriptions.
6. Performs field/construction inspections and surveys; conducts final inspections of construction projects to ensure conformance with plans and specifications.
7. Prepares reports and provides recommendations related to civil engineering projects including sewer, storm drain, drainage, capital improvement projects and other specialized projects.
8. Provides technical support on City-wide environmental programs and best practices methods, such as Hazardous Materials, Storm Water Management Plan, Watershed Management Plan, and National Pollution Discharge Elimination System Permits.
9. Performs surveying assistance for preliminary and construction field surveys related to area of assignment.
10. Conducts field work related to mining and reclamation monitoring.
11. Performs engineering calculations to determine areas, volumes, perimeters and other irregular configurations.

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12. Uses computer equipment including CADD, spreadsheets, data base, and word processing software to generate engineering reports.
13. Maintains engineering files, records, and maps.
14. Processes and issues encroachment permits and coordinates inspection of related improvements.
15. 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:

- Operations, services, and activities of a municipal engineering program.
- Basic civil engineering practices and principles applicable to area of assignment.
- Methods and techniques of researching, compiling, interpreting, and presenting statistics and data.
- Mathematical principles as applied to engineering work.
- Methods and techniques of conducting site inspections.
- Engineering maps and records.
- Methods and techniques of developing maps.
- Construction methods, procedures, standards, and materials.
- Principles and practices of record keeping.
- Modern office procedures, methods, and computer equipment including personal computer hardware and software applications.
- Uses, capabilities, and operational characteristics of specialized engineering information technology hardware and software.
- Computer aided drafting principles and techniques.
- Pertinent federal, state, and local laws, codes, and regulations.

Ability to:

- Perform a variety of paraprofessional office and field engineering work.
- Assist with the preparation of engineering designs, plans, and specifications.
- Prepare a variety of drawings, sketches, maps, graphs, and related technical documents.
- Prepare maps and layouts from notes and sketches.
- Read and interpret maps and blueprints.
- Deal tactfully and courteously with the public, contractors, and representatives of other agencies in providing information about Public Works Department policies, projects, and procedures.
- Perform a variety of data gathering and compilation for engineering studies.
- Make accurate engineering computations and drawings.
- Scan maps and photographs.
- Operate a variety of engineering equipment in a safe and effective manner.
- Maintain accurate engineering files and records.
- Prepare clear and concise technical reports.
- Perform field inspections.
- Work independently in the absence of supervision.
- Understand and follow oral and written instructions.
- Communicate clearly and concisely, both orally and in writing.
- 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:*

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Education/Training:

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

Experience:

Two years of entry-level engineering experience.

License or Certificate:

Possession of an appropriate, valid driver's license.

Possession of a valid Certificate of Registration as an Engineer-In-Training from the State of California is desirable.

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 these essential job functions.

Environment: Standard office setting with some travel to conduct site investigations; occasional exposure to outside weather conditions.

Physical: Primary functions require sufficient physical ability 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.

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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Ralph Andersen & Associates