


JOB DESCRIPTION	
City of Patterson  Human Resources	ENGINEERING TECHNICIAN I

JOB SUMMARY

*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.*

Under close to general supervision, learns and performs a variety of paraprofessional office, field and technical engineering work involving drafting, inspections and surveying in support of the City's current and advanced engineering functions that includes research and analysis for design, land development, and capital improvements; provides routine information and assistance to applicants, developers, consultants, the general public, and outside agencies and organizations regarding City codes, policies, standard and processes related to engineering, building and capital projects matters; and performs related duties as assigned.

The Engineering Technician I is the entry level in the paraprofessional Engineering Technician series. This classification is distinguished from the Engineering Technician II by the performance of less than the full range of duties that are performed by the higher level classification. Work is performed under close supervision while learning job tasks, progressing to general supervision as procedures and processes are learned and effectively performed.

SUPERVISION RECEIVED AND EXERCISED

Receives close to general supervision from higher level engineering staff.

Exercises no supervisory responsibilities.

ESSENTIAL DUTIES

Typical essential duties may include, but are not limited to, the following:

Designs and prepares routine to highly complex plans, specifications and cost estimates for streets, street lighting, water distribution, sanitary sewers, storm drains and other city utilities.

Maintains a variety of records and files; prepares reports, City improvement standards and construction specifications; prepares Requests for Qualifications and Requests for Proposals.

Conducts preliminary project feasibility studies; accurately calculates associated costs.

Reviews and verifies inspection and laboratory test findings.

Coordinates with other City departments and divisions as needed for performance of duties.

Prepares technical plans, profiles, cross sections, specifications and cost estimates; calculates and plots field survey data in the preparation of plans, profiles, and cross sections.

Uses engineering technology to compute and design vertical and horizontal alignments, curves, grades, street cross slopes, traverses, pipe slopes and capacities, pump and generator size, traffic and related computations.

Prepares and interprets legal descriptions; draws maps for right-of-way acquisitions; searches County records for property titles and restrictions; may act as custodian of subdivision maps and City property agreements.

Collects and reviews material submittals for compliance with contract provisions and sound engineering principles; prepares and obtains approval for change orders.

Performs construction staking, topographical work, leveling and other related surveying duties.

Gathers and reviews a variety of data; coordinates and prepares studies of regulatory activities related to groundwater, wastewater and storm-water.

Provides general information to developers, contractors, consultant and the public regarding City standards, and pertinent codes, laws and regulations; may lead meetings involving contractors and developers.

Reviews and checks the work of private engineers, architects and developers for correctness and compliance with local, State and Federal codes; provides technical, material and procedural support and information; responds to questions from construction personnel; ensures consultants and contractors are adhering to City standards, local, State and Federal laws, regulations and codes.

Advises other departments, developers and the public on policies, procedures and technical aspects of assigned projects.

Prepares memos for City Council agenda; calculates subdivision improvement bond amounts; prepares subdivision agreements.

Maintains a variety of records and files and prepares reports.

Prepares documentation related to obtaining and administering Federal and State grants.

Performs related duties as assigned.

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of: Terminology, methods, practices and techniques used in technical engineering work; software applications related to civil engineering functions; basic math, including trigonometry as applied to the computation of angles, areas, distances and traverses; methods, materials and techniques used in the construction of public works projects; engineering maps and records; methods and techniques of engineering drafting and estimating.

Ability to: Perform drafting accurately; work independently in the absence of supervision; understand and carry out oral and written directions; learn and operate automated drafting technology used in an Engineering environment; use and maintain drafting, surveying, and mechanical instruments and tools; solve problems and make computations using algebra, geometry and trigonometry; prepare cost estimates for Engineering projects; prepare engineering plans and drawings neatly and accurately using AutoCAD software; effectively use and operate networked personal computer, related software and peripheral equipment; effectively communicate with engineers, consultants, developers and the public; and establish and maintain cooperative and effective relationships with the public, contractors, consultants and city employees.

NECESSARY SPECIAL REQUIREMENTS

Must be 18 years of age or older.

Must successfully pass a pre-employment medical examination, including a drug screen, fingerprint, background check and reference check.

Must be able to provide proof of U.S. citizenship or legal right to work in the United States.

EXPERIENCE and CERTIFICATIONS

Any combination of education, training, and experience that would likely provide the required knowledge, skills, and abilities; normally this would include:

Education: Equivalent to high school graduation supplemented by courses in algebra, geometry, trigonometry, land surveying, engineering design, and/or traffic engineering. An Associate of Arts degree in civil engineering or related field is desirable.

Experience: One (1) year of responsible experience performing field and office technical engineering duties.

License or Certificate: Possession of a valid Class C California Drivers License.

MENTAL AND PHYSICAL REQUIREMENTS

Mental Requirements: The mental demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job: While performing the duties of this job, the employee is regularly required to review documents related to department operations and interpret and explain department policies and procedures.

Physical Requirements: The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job: While performing the duties of this job, the employee is regularly required to sit at a desk and/or stand for long periods of time; intermittently twist and bend to reach office equipment; use simple grasping and fine manipulation; and write or use a keyboard to communicate through written means; Hand-eye coordination is necessary to operate drafting instruments, computers and various pieces of office equipment. Specific vision abilities required by this job include close vision, color vision, and the ability to adjust focus. Must occasionally lift and/or move up to 50 pounds.

Environmental Conditions: Work is performed mostly in office settings. Some outdoor work is required in the inspection of various land use developments, construction sites or public works facilities.

FLSA Status: Non-Exempt

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