

ENGINEERING TECHNICIAN I/II

DEFINITION

To perform paraprofessional and technical field and office engineering work in the design, construction and maintenance of public works facilities in one or more of the functional areas of the engineering division.

DISTINGUISHING CHARACTERISTICS

<u>Engineering Technician</u> t This is the entry level class in the Engineering Technician series. Positions in this class normally perform responsible but less difficult types of paraprofessional engineering office and field work. Typically, the principles and techniques of civil engineering have been acquired primarily through past experience rather than formal training.

<u>Engineering Technician II</u>: This is the journey level class in the Engineering Technician series. Positions in this class are expected to perform responsible and highly technical engineering office and field work. All positions assigned to this class require the ability to work independently, exercising judgment and initiative.

SUPERVISION RECEIVED AND EXERCISED

Immediate supervision is provided by the Senior Civil Engineer or his/her designee. The Technician II may provide functional and technical supervision to lower level paraprofessional engineering personnel.

EXAMPLES OF DUTIES - The following are typical illustrations of duties encompassed by the job class, not an all inclusive or limiting list:

ESSENTIAL JOB FUNCTIONS

Perform office engineering work such as making and reviewing maps/drawings/estimates, tabulating field data, designing elementary engineering structures, and preparing specifications, contracts, and other documents,

Assist in the preparation of preliminary studies of engineering projects and assist in the preparation of plans for public improvements; prepare written reports on engineering-related projects.

To inspect work quality and materials used in a variety of public works construction projects to ensure compliance with approved plans and specifications; provide guidance for contractor activities by applying a practical knowledge of engineering requirements and construction practices.

Prepare, review, and maintain various reports, documents, and files, such as, but not limited to inspection logs, change order requests, quantities and material estimates, progress reports, real property documents, submittals, as-built drawings, final payment and makes recommendations for approval or disapproval when appropriate.

Perform various traffic studies and investigate issues related to traffic and traffic control.

Provide general information to the public, other City departments, development community and other government agencies.

Regular and consistent attendance.

Prepare forms and permits as needed; perform survey work; prepare legal descriptions and plot maps for right-of-way acquisition.

Shares in the responsibility for a sound safety program. Is required to comply with all applicable safety directives. Promptly reports unsafe conditions to the immediate supervisor.

Attends pre-construction conferences. Prepares estimates of quantities and materials on site for weekly progress reports. Prepares data for as-built (record drawings), recording changes, dimensions, elevations, and other pertinent data.

Investigates complaints of using agencies and obtains compliance by contractor during guarantee/warranty period on construction projects.

Work cooperatively with others.

Perform related duties as assigned.

QUALIFICATIONS

Engineering Technician I

Knowledge of:

Basic mathematics including algebra, geometry, and trigonometry.

Basic principles and practices of engineering office and field work, including drafting and surveying procedures and equipment.

Basic operation of computers, including word processing, databases and spreadsheets.

Operation and programs of a personal computer.

Safety principles, practices and procedures.

Skill to:

Provide information to the general public regarding engineering department services.

Understand and interpret engineering plans and specifications; perform accurate engineering computations.

Communicate clearly and concisely, orally and in writing.

Assist in the preparation of plans, specifications, cost estimates and engineering reports.

Establish and maintain cooperative working relationships with co-workers and those contacted in the course of work.

Ability to:

Develop cooperative public relations with other City departments, developers, businesses, and the general public.

Meet the physical requirements necessary to safely and effectively perform the assigned duties.

Education and Experience

Any combination of education and experience that provides the required knowledge and abilities is qualifying. A typical way to obtain the knowledge and abilities would be:

Education:

Equivalent to completion of the twelfth grade supplemented by courses in drafting, algebra, geometry and trigonometry.

Experience:

Three years of increasingly responsible paraprofessional engineering experience including at least two years at a level comparable to that of Engineering Aide II in the City of Woodland.

License or Certificate

Possession of a valid California driver's license.

QUALIFICATIONS

Engineering Technician II

In addition to the qualifications for Engineering Technician I:

Knowledge of:

Techniques for preparing designs, plans, specifications, estimates, reports, and recommendations related to Public Works.

Basic engineering methods and techniques used in the construction, maintenance and repair of public works projects.

Principles, practices, methods, materials, equipment used in construction safety.

Basic soil mechanics.

Techniques used in contract administration and inspection.

Skill to:

Perform a variety of mathematical/engineering computations.

Perform technical engineering work of a complex nature with a minimum of supervision in a variety of areas.

Prepare cost estimates and engineering reports.

Ability to:

Correctly apply laws, regulations, codes, and departmental policies governing the construction of assigned projects.

Learn and accurately interpret laws, regulations, map sites, building plans, and engineering policies.

Education:

Additional course work related to civil engineering is desirable.

Experience:

Two years of increasingly complex paraprofessional engineering experience at a level comparable to that of an Engineering Technician I in the City of Woodland.

Council Action: Approved 9/21/99

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