



Assistant Engineer/Associate Civil Engineer

Definition

To perform professional engineering work in the planning, design, construction and operation of public works projects. Positions are assigned to either the Engineering or Transportation Division of the Public Works Department.

Class Characteristics

Assistant Engineer – This class is distinguished from the higher class of Associate Engineer by the performance of assignments of a less complex nature. Employees work under general direction performing moderately difficult professional engineering field and office work.

Associate Civil Engineer – This class is distinguished from the Assistant Engineer by the performance of advanced engineering assignments and the employee's acquisition of a professional Engineering license. Employees at this level work under minimal supervision. Advancement from the Assistant level to the Associate level is upon registration as a professional engineer in California and approval of the department head.

Supervision Received and Exercised

Assistant Engineer – Receives general supervision from supervisory or management personnel.

Associate Civil Engineer – Receives direction from supervisory or management personnel. Exercises supervision over technical staff.

Typical Job Functions

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.

Assistant Engineer

Participate and/or oversee the preparation of plans and specifications for the construction of facilities and related public works projects.

Develop revised design and construction standards for public works facilities, structures, and appurtenances.

Research and develop project design requirements, including design review. Perform complex calculations and prepare estimates of time and material costs, and ensure compliance with City regulations and requirements.

Review and process necessary permits, right-of-way agreements and other instruments related to use of City property or right-of-way that are the City's responsibility.

Review, analyze, and/or participate in the preparation of environmental documents, and confer with appropriate City planning staff.

Assign routine investigation, design and drafting tasks to technical support section. Review completed work, and assist in the solution of difficult problems.

Administer various consulting contracts, including preparation of requests for qualifications/proposals. Perform project management activities. Administer contracts for construction projects. Perform field inspection of various engineering projects and perform field survey work as necessary.

Prepare special designs, plans, studies, and reports specific to area of assignment, including alternative, feasibility, and economic studies. Compile engineering project data and cost estimates. Prepare Requests for Qualifications and Proposals (RFQ's and RFP's) to hire consultants and outside contractors to perform services for City projects. Prepare staff reports. Coordinate planning, design, and construction activities with other departments. Prepare correspondence, and establish and maintain appropriate record and files.

Coordinate activities of area of assignment with other divisions and sections and with outside agencies, including representing the City in a variety of public forums. Provide technical support as appropriate to other divisions and sections within the City.

Train and lead subordinate staff as assigned.

Assist in preparation of the Capital Improvement Plan and budget.

May approve designs, drawings, and reports.

Research publications and information sources relative to area of assignment. Maintain up-to-date knowledge of current technical, policy, and legislative issues affecting areas of assignment.

Build and maintain positive working relationships with co-workers, other City employees and the public using principles of good customer service.

Perform related duties as assigned.

Associate Civil Engineer

In addition to the qualifications and duties for Assistant Civil Engineer:

Assess traffic emergency and safety needs and interests.

Develop plans, specifications and instructions for the installation, operation and maintenance of traffic signals, signing, lighting, pavement marking and design standards.

Prepare annual and long-range street and arterial development programs, need studies, cost estimates, accident statistics analysis, and traffic planning studies.

Qualifications

Assistant Engineer

Knowledge of:

Principles and practices of civil engineering as applied to public works or related construction projects.

Principles and practices of environmental impact assessment and related regulatory processes.

Methods, materials, and techniques used in the construction of public works facilities.

Basic surveying, drafting, computer-aided design techniques and technology.

Current developments and trends regarding civil engineering.

Applicable laws and regulatory codes relative to areas of assigned responsibility.

Report preparation and writing.

Computer software applications including word-processing, spreadsheets, graphics, databases, and project scheduling and management.

English usage, spelling, punctuation and grammar.

Modern office procedures, methods, and computer equipment.

Ability to:

Perform professional engineering work.

On a continuous basis, know and understand all aspects of the job. Intermittently analyze work papers, reports and special projects. Identify and interpret technical and numerical information. Observe and problem solve operation and technical policy and procedures, and explain regulations and procedures to contractors, developers, the general public, representatives of other public agencies, and other City staff.

On a continuous basis, sit at a desk for long periods of time. Intermittently bend, squat, climb, kneel and twist while performing field work. Intermittently reach equipment surrounding desk. Perform simple grasping and fine manipulation. Use telephone, and write of or use a key board to communicate through written means, and lift or carry weight of 30 pounds or less.

Prepare engineering computations.

Prepare and check engineering plans and specifications, and prepare and check engineering reports and studies.

Interpret and explain City regulations and engineering policies and procedures.

Use and care for engineering and surveying instruments and computer equipment. Use a calculator, and photocopy machine.

Work with various cultural and ethnic groups in a tactful and effective manner.

Obtain information through interview and deal firmly and courteously with the public.

Communicate clearly and concisely, both orally and in writing.

Prepare clear, complete, accurate, timely and concise written correspondence and reports.

Establish and maintain effective working relationships with those contacted in the course of work.

Education and Experience

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

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

Two years of responsible professional civil engineering experience.

Associate Civil Engineer

In addition to the qualifications for Assistant Engineer:

Knowledge of:

Applicable City rules and regulations pertaining to area of assignment.

Budgeting techniques and project management.

Ability to:

Perform complex engineering work requiring a high level of independent judgment.

Train, assign, review, and evaluate subordinate personnel as assigned.

Prepare complex engineering computations and check, design, and oversee the preparation of various engineering plans and studies.

Have the knowledge of computer programs for civil engineering such as Computer Aided Design (CAD), Scheduling and Excel Programs.

Prepare accurate estimates of costs, schedules, personnel resources, and perform other similar activities related to project management. Perform project management responsibilities.

Gather, analyze, and interpret a variety of complex, technical data.

Prepare concise, understandable, and cogent reports, studies, and other written materials and documents, including requests for qualifications/proposals.

Education and Experience

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

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

Three years of responsible civil engineering experience performing duties similar to an Assistant Engineer with the City of Cupertino.

Licenses and Certifications

Possession of a Certificate of Registration as a Civil Engineer in the State of California.

Possession of, or ability to obtain, a California driver's license.

FLSA: Non-exempt

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