SENIOR CIVIL ENGINEER

DEFINITION

Under minimal supervision, to perform advanced journey-level field and office professional civil engineering work, including complete project management responsibility, in a wide variety of public works projects; to perform traffic engineering and transportation planning work; and to supervise the engineering positions within the Public Works Agency and work performed by independent contractors. Incumbents in this position use considerable discretion and independent judgment in prioritizing, planning, directing, and coordinating engineering division projects. This class performs a variety of departmental administrative functions and is responsible for reviewing and training assigned staff and providing advanced technical engineering assistance.

DISTINGUISHING CHARACTERISTICS

This classification is the advanced journey level of the professional engineering series. Employees in this class must be registered and exercise considerable independent judgment and application of a thorough knowledge of the principles and techniques of civil engineering to perform work of the highest complexity; they have a significant amount of responsibility for program administration and formulation of policies and procedures involving public works engineering projects.

REPORTS TO

Deputy County Engineer.

CLASSIFICATIONS DIRECTLY SUPERVISED

Subordinate engineers, engineering technicians and other support staff.

EXAMPLES OF DUTIES

Designs, prepares, and evaluates preliminary and final plans and specifications for a variety of road, bridge, drainage, and related public works projects, requiring professional engineering expertise; performs a variety of project development and coordination assignments; performs resident engineering work, including contract administration, inspection, and coordination; ensures that contractors meet proper standards, specifications, cost control, and time requirements; approves change orders and progress payments; performs foundation and hydrology studies; receives and researches a variety of inquiries; collects, organizes, summarizes, and analyzes a variety of technical engineering data; prepares grant proposals; assists with the review of environmental impact reports; prepares preliminary reports for tentative subdivision map conditions; performs field surveys; uses a computer to reduce survey data; prepares earth volume and other calculations; develops data for the acquisition of right-of-way; prepares cost estimates; reviews laboratory analyses and materials reports for compliance;

performs traffic studies; develops and proposes solutions to complex engineering problems; receives applications and reviews, approves, and issues permits, providing a variety of technical engineering advice to the public and other agencies; may oversee water quality programs; may serve as a member of the County Technical Advisory Committee; may provide some work direction for maintenance and support staff; provides training, project coordination, and lead direction for technical and engineering staff; represents the County Public Works Agency in meetings with contractors, engineers, developers, property owners, attorneys, and representatives of other public agencies.

TYPICAL PHYSICAL REQUIREMENTS

Sit for extended periods; frequently stand and walk; normal manual dexterity and eye-hand coordination; corrected hearing and vision to normal range; verbal communication; use of office equipment including computers, telephones, calculators, copiers, and FAX.

TYPICAL WORKING CONDITIONS

Work is usually performed in an office environment; occasionally works outside; some exposure to variations in temperature and humidity; continuous contact with staff and the public.

DESIRABLE QUALIFICATIONS

Knowledge of:

- Comprehensive knowledge of principles, practices, and methods of Civil Engineering as applied to the design, construction, and maintenance of roads and Public Works facilities.
- Pertinent State, Federal, and local laws, regulations, and ordinances related to public works engineering.
- Preparation of designs, plans, and specifications for the development of roads, bridges, drainage, erosion control, and public works facilities.
- Construction methods, materials, and equipment.
- Proper inspection methods and procedures.
- Research and statistical methods.
- Principles of project development and coordination.
- Use of computers and computer applications related to engineering work.

Ability to:

- Provide work direction and project coordination for technical and engineering support staff.
- Perform work assignments required of a professional, registered engineer.
- Prepare plans, designs, and specifications for public works facility development, construction, and maintenance projects.
- Perform comprehensive engineering reviews of designs, plans, and specifications prepared by others.

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- Perform a wide scope of paraprofessional engineering work.
- Develop and coordinate assigned projects.
- Prepare comprehensive engineering reports.
- Analyze and evaluate engineering and statistical data and information, developing sound recommendations.
- Develop accurate records, sketches, and notes.
- Perform construction and project administration, ensuring compliance with contracts, plans, and specifications.
- Make accurate engineering calculations.
- Operate a computer and use appropriate software in the performance of public works engineering responsibilities.
- Effectively represent the County Public Works Agency with the public and other government agencies.
- Establish and maintain cooperative working relationships.

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

Three (3) years of increasingly responsible professional and paraprofessional engineering experience in planning, development, construction and maintenance of Public Works facilities.

Educational training and background necessary to professional engineering registration in California.

Special Requirements: Possession of an appropriate California Driver's License issued by the California Department of Motor Vehicles.

Possession of current registration as a professional engineer in California.