



**APPROVED BY: THE CHIEF
ADMINISTRATIVE OFFICER**

EFFECTIVE: March 2005

**ASSOCIATE CIVIL ENGINEER
ASSOCIATE ENGINEER (CIVIL)¹**

¹Any incumbent who has not achieved registration as a Professional Civil Engineer in California will use this generic title, in accordance with the State of California Business and Profession Code.

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.

DEFINITION

To lead, direct, oversee and participate in the work of professional civil engineering staff to provide for the preparation of civil engineering studies, reports, designs, and construction plans and specifications for the planning, operation, maintenance, and construction of the District's flood control, water quality, and water production, storage, treatment and distribution facilities and systems; to ensure work quality and adherence to professional codes, standards and District specifications; and to perform a variety of professional services relative to assigned area of responsibility.

DISTINGUISHING CHARACTERISTICS

This is the journey level class within the professional Civil Engineer series. Incumbents in this class receive direction and exercise independent judgement in performing the full range of complex or difficult work. Employees at this level typically perform as project/program lead and may perform first supervisory level functions. Additionally, incumbents provide review of work for application of sound professional judgement and may exercise full technical and functional supervision for assigned projects and programs or serve as a resource for technical expertise. Typical duties and responsibilities require a broad knowledge of precedents in the specialty area

and a good knowledge of principles and practices of related specialties. Assignments include planning, scheduling, conducting or coordinating detailed phases of the engineering work in part of a major project or in a total project of moderate scope.

SUPERVISION RECEIVED AND EXERCISED

Receives direction from higher level supervisory or management staff.

May exercise technical and functional supervision or direct supervision over professional and technical staff.

ESSENTIAL FUNCTION STATEMENTS

Essential responsibilities and duties may include, but are not limited to, the following:

1. Lead, oversee and participate in the work of professional civil engineering staff responsible for the planning, design, development, construction, operation and maintenance of the District's capital improvement projects including flood control, water quality and water supply, storage, treatment and distribution facilities and systems; ensure work quality and adherence to professional codes, standards and District specifications.
2. Coordinate, oversee, prepare and review civil engineering studies, reports, designs, drawings, specifications and related documentation; perform engineering design calculations and construction cost estimates; ensure all project and program designs, documents, and drawings and specifications comply with District and professional engineering principles, standards and practices.
3. Lead, oversee and participate in the planning and design of assigned civil engineering projects; prepare feasibility studies and cost estimates; develop and evaluate alternative operational scenarios; identify and clarify alignment and right-of-way issues; define scope of work and develop conceptual plans; identify goals, standards, procedures and quality assurance standards for assigned projects; identify critical project issues; review and comment on consultant and environmental impact reports.
4. For positions which possess registration as a professional civil engineer, review engineering studies, reports, designs and contract documents for compliance with professional civil engineering standards and principles; provide engineering certification on reports and contract documents by stamping personal certification license number to assume project engineering responsibility.
5. Coordinate and participate in various engineering studies and related projects with District staff, outside agencies and consultants ensuring that deadlines, standards and specifications

are met appropriately; ensure compatibility of various engineering components for overall project; prepare project schedules, resource needs estimates and cost projection estimates.

6. Participate in the preparation of project management plans, project plans, annual work plans, summary reports, project team mission statements, and project objectives, scope, sub-tasks, schedules, budget and resources; prepare project schedules; identify tasks and resources required; monitor project progress and prepare status reports; perform project close out and maintain project files.
7. Provide technical support for civil engineering construction projects; provide technical support during project construction including submittal review, requests for information from contractors and interpretation of project drawings, specifications and contract documents; assist in the inspection of contractor installations when necessary.
8. Provide technical support in administering, negotiating and resolving construction project change orders and claims; review change orders and construction claims and supporting drawings, specifications and related technical documentation; ensure work performed is in accordance with project plans, specifications and professional civil engineering standards and codes; make recommendations for change orders and claims resolution.
9. Participate in the negotiation and administration of consultant and professional services contracts; participate in the consultant selection process; participate in the development and negotiation of utility relocation, joint use or similar, agreements with other agencies/entities as assigned.
10. Assist in selecting, training, motivating and evaluating professional and technical personnel; provide or coordinate staff training.
11. Prepare and review a variety of engineering and administrative reports including agenda packets, permit applications, and correspondence.
12. Represent the District in meetings or presentations to the general public, customers, consultants, vendors, contractors, zone advisory committees and other Federal, State and local agencies as assigned; prepare materials for public meetings and hearings; interact with the public and answer questions on technical, environmental, economic and social issues of an assigned project.
13. Monitor water quality and environmental regulatory activities and anticipate and make recommendations regarding the impact of changing regulations on District operations.
14. Provide process support to treatment plant operators.
15. Oversee and participate in the planning and implementation of water quality regulatory compliance programs.

16. Analyze projects proposed by other agencies, determine their impact on the District; develop recommendations.
17. Perform related duties and responsibilities as required.

QUALIFICATIONS

Knowledge of:

Operations, services and activities of a comprehensive civil engineering capital improvement program with emphasis on flood control and water supply, storage, treatment and distribution systems and facilities.

Advanced principles and practices of civil engineering design and construction.

Principles and practices of geotechnical and environmental engineering.

Civil engineering theory and design concepts for flood control/hydraulic structures, buildings, bridges, pipelines, dams and water treatment plants.

Principles of hydrology, hydraulics, structural design, and water treatment fundamentals related to flood control, water quality and water supply as assigned.

Water chemistry, treatment processes and plant operations including bench and pilot scale analytical methods for water treatment processes.

Geotechnical applications in the design of levees, earthfill dams, soil stability analysis, ground water quality monitoring and contamination investigation and cleanup.

Geomorphological and biotechnical applications in the design of channels and slope protection works.

Construction methods, materials, specifications and codes.

Principles and practices of project scheduling, management, and budgeting.

Principles and practices of engineering cost estimating.

Methods and techniques of conducting site investigations and inspections.

Methods and techniques of evaluating and negotiating construction change orders and claims.

Terminology, methods, practices and techniques used in civil engineering report preparation.

Advanced engineering mathematics, economics and statistical analysis.

Methods and techniques of preparing civil engineering drawings, specifications and construction plans.

Professional civil engineering principles, codes and standards.

Principles and practices of contract administration and management.

Principles of lead supervision and training.

Pertinent Federal, State and local standards, codes, laws and regulations.

Ability to:

Lead, coordinate and oversee civil engineering studies; planning, design and construction projects; and programs.
Plan, direct, assign and review the work of assigned staff.
Apply engineering principles and computer programs to the solution of engineering problems.
Conduct various engineering studies to recommend engineering solutions.
Prepare and interpret drawings, graphs, plans and specifications.
Interpret and prepare revisions to engineering plans, drawings and specifications.
When serving in registered capacity, review and certify engineering plans, drawings, specifications and contract documents.
Provide process support to treatment plant operations.
Conduct bench scale and pilot scale treatment process analysis.
Assess capabilities and physical plant improvements necessary for ensuring continued compliance with changing water quality regulations.
Prepare a variety of technical and administrative reports and documents.
Provide training and technical support to assigned staff.
Set project priorities and exercise sound independent judgment within established procedural guidelines.
Participate in the administration and preparation of assigned contracts.
Communicate clearly and concisely, both orally and in writing.
Establish and maintain effective working relationships with those contacted in the course of work.

Experience and Training Guidelines

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

Experience

Two years of professional civil engineering experience at a level equivalent to that of the Assistant Engineer II (Civil) classification.

Training

Equivalent to a Bachelors degree from an accredited college or university with major course work in civil engineering or a related field;

OR

Possession of a valid California Engineer-in-Training (EIT) certificate with two years of associated paraprofessional engineering experience.

License or Certificate

Registered positions within this classification must possess registration as a Professional Civil Engineer in the State of California. Some positions in this classification will need to acquire a valid forty (40) hour HAZWOPER certificate and related annual 8-hour refresher certificates.

Possession of, or ability to obtain, an appropriate, valid California driver's license may be required with determinations made on a case by case basis at the time of job posting.

WORKING CONDITIONS

Environmental Conditions

Indoor environment; some positions require frequent field visits; travel from site to site; work closely with others and alone; exposure to computer screens; irregular work hours; some positions may involve exposure to inclement weather, dust, dirt, noise, chemicals, biological and chemical contaminants, and other conditions associated with construction sites, water treatment plants, and remote reservoir watershed areas.

Physical Conditions

Essential and other important functions may require maintaining physical condition necessary for sitting, walking and standing for extended periods of time; occasional moderate lifting and carrying.