

Job Description Senior Engineer

Job No. OP007

Salary Range: 56

Position Summary:

Under direction of the Engineering Manager, the Senior Engineer is responsible to perform difficult and complex technical engineering work in the design and construction of Agency structures and facilities; review consultant design plans, drawings, and specifications; perform detailed project design and drafting, software management, and inspection for Agency projects; and perform related duties as assigned.

Duties/Responsibilities:

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

- Prepares complete design plans and specifications for small to medium size Agency projects.
- Prepares engineering and hydraulic calculations to support design.
- Performs CAD drafting.
- Reviews and comments on consultant design plans and specifications for larger Agency projects for conformance with Agency guidelines and standards.
- Prepares cost estimates and bid packages for capital improvement and construction projects and responds to inquiries.
- Reviews and comments on technical design reports and planning documents.
- Monitors construction progress, reviews progress payments and prepares change orders.
- Manages project specific CEQA requirements.
- Performs project management duties including schedule and budget tracking, invoice processing, coordination with consultants, and progress reporting.
- Assists with preparation of requests for proposals and evaluations of proposals submitted by consultants.
- Assists with the preparation and administration of the budget and capital improvement plan.
- Prepare and review technical designs, maps, drawings, visual aids, and graphic presentation materials related to Agency facilities and projects.
- Uses a variety of technical engineering software including computer aided design/drafting (CADD), produce and maintain maps via geographic information systems (GIS).
- Assists in management of IT infrastructure and basic IT troubleshooting.
- Assists with maintenance of water accounting software.
- Attends engineering meetings and conferences.
- Uses engineering design concepts and drafting techniques.
- Performs calculations and plots profiles and topography for assigned projects.
- Plots easements for Agency rights of way.
- Transforms field and survey data into design elements.
- Identifies design problems and proposes resolutions.

- Assist in preparation of environmental CEQA documents for regulatory compliance and other various engineering reports.
- Reviews environmental reports.
- Prepares reports and correspondence to consultants, surveyors, contractors, other utilities, and agencies.
- Performs related duties as assigned.

Qualifications:

Any combination of education and experience that would likely provide the necessary knowledge and abilities is qualifying.

A typical way to obtain the knowledge and abilities would be:

Education:

Equivalent to a bachelor's degree from an accredited college with major course work in civil or mechanical engineering.

Experience:

A minimum of two years of experience in design, construction and operation of domestic/agricultural water systems.

Licensure/Certification:

Possession of a valid California driver's license is required.

Possession of a valid certificate of registration as a Civil Engineer issued by the California State Board of Registration for Professional Engineers is desirable.

Knowledge of:

- Civil engineering principles, practices, methods, and techniques.
- Hydraulics, hydrology, chemistry and thermodynamics.
- Construction practices, trades and materials.
- Project management and coordination.
- Contract administration practices and principles.
- Methods, materials, and techniques used in design and construction for planning, design, cost estimation, construction, installation, and inspection of wastewater collection, distribution, and treatment facilities.
- Federal, State, and local laws and regulations related to CEQA, water system design, construction, and plant operations.
- Engineering mathematics, economics, and statistical analysis.
- Safety standards and practices.
- Technical report writing.
- AutoCAD software and drafting media.

- Esri ArcGIS
- Survey principles and practices.
- Principles, methods, instruments, and techniques used in engineering drafting.

Ability to:

- Establish and maintain cooperative working relationships with employees, other managers, the public, developers, other agencies, consultants and contractors.
- Interpret, implement and enforce Agency water and other state and local regulations.
- Prepare clear and concise engineering plans, technical reports, correspondence, presentations, and other administrative documents.
- Perform applicable engineering calculations accurately and rapidly.
- Manage projects through design and construction.
- Check plans and drawings for conformance with Agency specifications and standards.
- Provide clear verbal communications and make formal group/public presentations.
- Analyze engineering and operations problems, evaluate alternatives and provide options and recommendations that demonstrates technical, administrative and political considerations.
- Use a variety of software applications related to the occupation, including AutoCAD and Geographic Information System (GIS).
- Perform complex and precise drafting and mapping work.

Physical Requirements:

On a daily basis this position is required to walk, sit for extended periods, talk, hear, see both close and far and distinguish basic colors, and operate moving equipment.

The employee is regularly required to use hands to finger, handle, feel or operate objects, tools or controls; perform repetitive movements with hands, wrists or feet; and reach with hands and arms.

On a frequent basis, this position is required to stoop, kneel, crouch, reach with hands and arms, stand for long periods, and use fingers to grasp, or type. Work may be performed on slippery or uneven surfaces, or on ladders or scaffolding.

This position is required to lift and carry 50 to 100 pounds, and to push or pull 30 pounds on an occasional basis.