

1843SM Senior Professional Engineer/Architect

DEFINITION:

Under general direction plans, organizes and implements development, construction and maintenance projects at County facilities; supervises professional and non-professional engineering and architectural staff and consultants in designing and implementing complex construction projects and performs other work as required.

CLASS CHARACTERISTICS:

This is the full supervisory level of the Professional Engineer/Architect series. Positions in this class are expected to supervise other engineering/architectural staff and /or provide direction to contract staff; independently perform complex or specialized assignments, provide project leadership to lower level staff, train staff and consult in the areas of specialty. Incumbents may independently initiate, prepare, review, and approve County designed plans as the responsible engineer/architect. Depending upon assignment, positions in this class require professional registration in one of the following disciplines: Architecture, Civil, Electrical, Mechanical or other related engineering field.

ESSENTIAL FUNCTIONS:

- Plans, organizes, supervises and reviews the design and preparation of plans, specifications and estimates in connection with the construction or maintenance of a wide variety of public works engineering projects involving airfields, landfills, buildings, roadways, bridges and drainage structures, sewer systems, water distribution, electrical systems, environmental monitoring and control systems, etc.; utilizes available computer technology for optimization of engineering designs.
- Prepares requests for proposal, scopes of work, and contract specifications for design and construction services; participates in the selection of consultants and design firms, and negotiates contracts and change orders. Directs the preparation of project designs, prepares independent cost estimates, project specifications and project schedules.
- Manages projects through planning, scheduling and monitoring critical milestones to ensure projects are completed on time and within budget. Reviews progress payment requests submitted by contractors and consultants for contract compliance, and to ensure billing reflects work completed; approves invoices for payment.
- Performs high-level professional engineering and/or design work in connection with cost analysis, progress reports and research or other specialized technical studies related to assignment specialty.
- Coordinates the inspection of public works projects under construction or repair. This includes controlling quantity and quality of materials, laying out work, interpreting plans and specifications, preparing progress reports and supervising the work of inspectors performing some of the foregoing tasks. Prepares and submits change orders and modifies the contract to cover changes in design.
- Performs project reviews and field construction inspections for the coordination and accomplishment of projects with other County agencies.
- For lessee/tenant projects, reviews, evaluates and reports on proposals, project plans and specifications for conformance with applicable regulatory requirements; represents and acts as liaison for Department with County departments and regulatory agencies.
- Interviews, selects, trains and evaluates professional and technical employees, recommends promotions, demotions and disciplinary action. Supervises and monitors work of contract architects and engineering consultants.

- Plans and organizes the preparation of material test reports and reviews and evaluates test results in relation to construction procedures.
- Reviews department specific public works facility designs for compliance with County, State and Federal standards.
- Maintains records of department facilities including plans and specifications, maintenance records, engineers' reports, soil and hydrology reports, pavement analyses reports; gathers data required for pre-design and design of airport facilities; prepares analyses and evaluations of facilities from records and site inspections.
- Supervises and/or performs analysis and evaluation of current development and existing condition of department facilities; prepares feasibility, and engineering studies on operational and public areas such as service areas, traffic controls and transportation systems, security and safety systems, infrastructure and equipment, and other projects related to development and/or improvement of department facilities and services; develops recommended solutions and plans.
- Conducts technical investigations required for the planning of a wide variety of engineering projects, prepares detailed reports and writes joint powers agreements to implement cooperative projects with other agencies.
- Prepares annual budget estimates related to capital and non-capital projects, professional services and other items related to requirements for maintaining and developing airport facilities.

MINIMUM QUALIFICATIONS:

License Required

Possession of a valid Certificate of Registration in one of the following disciplines, Civil, Electrical, Industrial, Mechanical, Geotechnical or related engineering field issued by California's Board of Registration for Professional Engineers and Land Surveyors

OR

Possession of a valid license from the California Architects Board.

AND

Possession of a valid California Class C or higher Driver License by date of appointment.

Assignments at John Wayne airport also require the ability to obtain an Airport Driving Endorsement within ten (10) days of appointment and possession of, or ability to obtain, a valid Airport Access Badge which requires successful completion of fingerprinting and FBI background check by date of appointment.

Experience

One year of responsible and varied experience, subsequent to Registration or Licensure, which applied the knowledges and abilities listed below.

Thorough Knowledge of

Depending on assignment, principles and practices of architecture, civil, electrical, industrial or mechanical engineering, or in a related engineering field, engineering mathematics, properties and uses of construction materials, and complex construction contracts.

Principles of supervision and training.

Project/construction management; cost control; and economics.

Ability to

Plan, organize, direct and evaluate the work of engineers, architects, technical staff, and contract professionals on a variety of complex engineering or architectural projects.

Oversee/manage/administer complex construction contracts.

Prepare or direct the preparation of a variety of complex plans and specifications and technical reports.

Perform or direct the preparation of difficult or complex technical engineering studies.

Establish and maintain effective working relations with managers, co-workers, subordinates, contractors, representatives of other County and government agencies and business entities, and members of the Board of Supervisors.

Carry out complex assignments with little supervision.

PHYSICAL CHARACTERISTICS & ENVIRONMENTAL CONDITIONS

Mobility to work in a typical office setting, and to use standard office equipment, including using hands, arms and shoulders repetitively to operate a keyboard and to write; body mobility, strength and stamina to perform moderate physical activities such as inspecting various construction projects and facilities, walking on uneven terrain and traversing hills and/or construction sites may be required; vision sufficient to read printed materials including blueprints and computer screens; hearing and speech sufficient to communicate clearly and effectively in person, to groups of people, over the phone and by radio. Ability to work outdoors in adverse weather conditions, and perform tasks under conditions of loud noises and fumes or foul odors. Ability to drive a motor vehicle in order to attend off-site meetings and visit work sites may be required for some assignments. Some assignments may require prolonged walking, standing, climbing, bending, stooping and kneeling.