

IMPERIAL COUNTY

CLASS TITLE: SENIOR ENGINEER-PUBLIC WORKS (OPTION CLASS)

BASIC FUNCTION:

Under the direction of the Deputy Director of Public Works-Engineering, plan, organize and direct Design Engineering, Traffic Engineering or Development Engineering operations and activities including the office and field design preparation, review and analysis of engineering and construction plans and specifications; coordinate and direct communications, information, personnel projects and resources to meet designated County engineering needs and assure smooth and efficient activities; supervise and evaluate the performance of assigned personnel.

REPRESENTATIVE DUTIES:

ESSENTIAL DUTIES:

Plan, organize and direct Design Engineering, Traffic Engineering or Development Engineering operations and activities including the office and field design, preparation, review and analysis of engineering and construction plans and specifications for various structures such as roads, bridges and private development projects; assure assigned engineering functions comply with established guidelines, standards, laws, codes regulations, policies and procedures.

Coordinate and direct communications, information, personnel, projects and resources to meet designated County engineering needs and assure smooth and efficient activities; plan, schedule, develop and implement engineering projects in assigned area; establish and maintain related time lines and priorities; develop and implement related plans, strategies, goals and objectives.

Supervise and evaluate the performance of assigned personnel; interview and select employees and recommend transfers, reassignment, termination and disciplinary actions; coordinate subordinate work assignments and review work to assure accuracy, completeness and compliance with established standards, requirements and procedures.

Plan, direct and participate in the design and preparation of drawings, specifications and estimates involved in the construction and maintenance of a wide variety of engineering projects; supervise the preparation of maps, plans, charts and diagrams as required; review, analyze and approve planning, construction and engineering documents and materials for projects in assigned area.

Determine project scope and feasibility; monitor and evaluate progress of engineering projects; inspect completed projects for accuracy, completeness and compliance with established standards, requirements and specifications.

Review and evaluate plans and subdivision maps for conformance with established specifications and requirements and compliance with local regulations and generally acceptable engineering practices; recommend and review improvements.

Direct and participate in the inspection of structures and construction projects built by contractors to assure construction activities conform with established plans, specifications, requirements and County public works standards; perform on-site inspections of various Department and contractor projects to assure compliance with safety regulations, ordinances, specifications, plans and standards.

Provide consultation to County personnel, contractors, outside agencies and the public concerning plans, construction and engineering projects and related matters; respond to inquiries and provide detailed and technical information concerning related specifications, standards, requirements, issues, laws, codes, ordinances, regulations, policies and procedures.

Determine appropriate response to plans and specifications; recommend approval or denial of plans as appropriate; review and evaluate engineering plans, permits, maps, specifications, proposals and projects for compliance with standard engineering practices and established laws, codes, ordinances and regulations.

Determine grades and calculate rainfall intensities, amount of water runoff, and water velocity as required by the position; locate points of water concentration, establish line of water flow and determine types and sizes of drainage structures.

Oversee and participate in the preparation and maintenance of a variety of records, reports and files related to plans, projects, progress, specifications, expenditures, cost analysis, personnel and assigned activities.

Perform specialized technical studies and investigations; prepare and complete comprehensive reports; evaluate, resolve and provide recommendations concerning complex engineering issues, problems and discrepancies; direct and participate in a variety of review and development work for special projects and studies.

Direct the inspection of underground installations to assure proper grade, alignment, connection of sections and coverage of holes as assigned.

Provide technical information and assistance to the Deputy Director of Public Works-Engineering regarding assigned engineering functions and related projects, activities, needs and issues; provide input concerning departmental policies procedures and programs.

Communicate with County personnel, administrators, contractors, developers, staff, various outside agencies and the public to exchange information and coordinate activities; respond to questions and complaints from the public related to assigned engineering functions.

Operate a variety of office equipment including a computer and assigned software; drive a vehicle to conduct work; utilize specialized drafting, survey and inspection tools and equipment.

Maintain current knowledge of trends, innovations and practices, and local, State and federal laws, codes, ordinances, regulations and pending legislature related to engineering activities.

Coordinate the maintenance of and selection process for consultant contracts related to assigned engineering functions; prepare and present oral and written reports and recommendations as requested; coordinate and maintain developer requirements for the Department.

Prepare and administer County zoning ordinances to assure proper development of County areas as required.

Attend and participate in a variety of meetings, conferences and seminars as assigned.

OTHER DUTIES:

Perform related duties as assigned.

DESIGN ENGINEERING OPTION:

Plan, organize and direct Design Engineering operations and activities including in-house design, project management and related engineering functions.

Perform a variety of engineering, permitting and management support and administration duties related to the construction and maintenance of County solid waste sites; prepare and maintain related records and reports.

DEVELOPMENT ENGINEERING OPTION:

Plan, organize and direct operations and activities involved in the review and analysis of private development projects and related plans and specifications.

Oversee and participate in providing recommendations to the Director of Public Works concerning standards, conditions of approval, plan checks and monitoring for private development projects.

Direct and participate in plan checks to assure private development projects comply with established standards, codes, ordinances and requirements; coordinate plan checks and related projects and services with outside consultants.

TRAFFIC ENGINEERING OPTION:

Plan, organize and direct Traffic Engineering operations and activities and related construction supervision and inspection functions.

Direct and participate in the design, review and evaluation of traffic control plans to enhance the efficiency of County road and street systems; recommend modifications as appropriate.

Coordinate and collaborate with Road Operations in identifying and estimating the need for road and bridge projects; direct and participate in the design, development and implementation of related plans and specifications; assist with developing and preparing project budgets.

Serve as or supervise a resident engineer for highway construction projects; collaborate with the County Engineer's Office in assigning work, providing instruction and resolving complex engineering administrative problems; perform speed studies and other special projects related to traffic engineering.

KNOWLEDGE AND ABILITIES:

KNOWLEDGE OF:

- Management of assigned engineering operations and activities including the office and field design, preparation, review and analysis of engineering and construction plans and specifications.
- Principles, practices and procedures of civil engineering. Municipal public works including planning and development, design, construction and operation.
- Standard plans and specifications.
- Principles, practices and techniques involved in the preparation of specifications, estimates and recommendations related to public works projects.
- Strength, properties and uses of materials in engineering construction.
- Engineering mathematics including geometry, trigonometry and design principles.
- Drafting and mapping techniques instruments and equipment.
- Research methods and report preparation techniques.
- Applicable local, State and federal laws, codes, ordinances, regulations, policies and procedures.
- Policies and objectives of assigned programs and activities.
- Principles and practices of administration, supervision and training.
- Oral and written communication skills.
- Interpersonal skills using tact, patience and courtesy.
- Operation of standard office equipment including a computer and engineering software.
- Record-keeping techniques.

ABILITY TO:

- Plan, organize and direct Design Engineering, Traffic Engineering or Development Engineering operations and activities including the office and field design, preparation, review and analysis of engineering and construction plans and specifications.
- Coordinate and direct communications, information, personnel, projects and resources to meet designated County engineering needs and assure smooth and efficient activities.
- Supervise and evaluate the performance of assigned personnel.
- Plan, direct and participate in the design and preparation of drawings, specifications and estimates involved in the construction and maintenance of a wide variety of engineering projects.
- Inspect completed projects for accuracy, completeness and compliance with established standards, requirements and specifications.
- Perform difficult and complex engineering mathematical computations.

- Provide consultation concerning plans, engineering and construction projects, and related specifications standards and requirements.
- Interpret apply and explain laws codes ordinances, regulations, policies and procedures.
- Analyze situations accurately and adopt an effective course of action.
- Prepare and review cost estimates for County projects.
- Work independently with little direction.
- Operate standard office equipment including a computer and engineering software.
- Meet schedules and time lines.
- Plan and organize work.
- Communicate effectively both orally and in writing.
- Establish and maintain cooperative and effective working relationships with others.
- Oversee and participate in the preparation and maintenance of various records, reports and files.

EDUCATION AND EXPERIENCE:

Any combination equivalent to: bachelor's degree in civil engineering and four years of increasingly responsible professional engineering experience involving the design, preparation, review and analysis of engineering and construction plans, projects and specifications.

LICENSES AND OTHER REQUIREMENTS:

- License to practice civil engineering issued by the State of California.
- Valid California driver's license.

WORKING CONDITIONS:

ENVIRONMENT:

- Indoor and outdoor work environment.
- Driving a vehicle to conduct work.

PHYSICAL DEMANDS:

- Hearing and speaking to exchange information.
- Seeing to read a variety of materials.
- Dexterity of hands and fingers to operate a computer keyboard.
- Sitting or standing for extended periods of time.
- Walking during field visits and construction site inspections.
- Bending at the waist, kneeling or crouching.
- Climbing ladders to conduct inspections.

HAZARDS:

Exposure to construction site hazards.