

CITY OF LOMPOC

ELECTRICAL UTILITY ENGINEER

DEFINITION:

Under general direction, to perform difficult, professional electrical engineering office and field work related to the operation and maintenance of an electrical distribution system.

CLASS CHARACTERISTICS:

This professional engineering class is responsible for the design, review, and coordination for the planning, construction, and maintenance of the City's electrical distribution system.

LICENSE/CERTIFICATION REQUIRED:

Possession of a valid California Driver's License.

ESSENTIAL FUNCTIONS:

The following duties are typical of this classification. Incumbents may not perform all of the duties and/or may be required to perform additional or different duties from those set forth below to address business needs and changing business practices.

Designs overhead and underground electrical distribution systems; prepares engineering data, easements, joint-pole authorizations, and material lists for distribution system construction and maintenance work orders; prepares electrical substation and distribution system maps, plans, design drawings, and specifications; prepares labor and material cost estimates and work orders for replacing of existing lines, equipment, poles, and appurtenant hardware, and for new customers services; determines and recommends easements needed to supply electrical service to customers; confers with customers, agencies, staff, and other utilities; develops electrical distribution system computer models; performs electrical system studies and makes design, operation, and maintenance change recommendations; designs and implements a real-time computerized supervisory control and data acquisition (SCADA) systems for the electrical distribution system and substations; provides professional, technical support to other City departments, customers and outside agencies; writes equipment technical specifications; writes and reviews construction and material standards; reviews drawings; performs required calculations; reviews and enforces appropriate electrical codes; conducts field inspections and final review and approval of finished drawings; prepares, executes and administers contracts; performs project management and contract administration for major projects; supervises and inspects contractor work related to the electrical distribution system; resolves construction and contractor conflict issues; oversees the design, budget, scheduling, and construction of electric projects; participates in technical meetings and conferences; meets with suppliers and manufacturers of electrical equipment; evaluates, tests and approves electrical distribution system; prepares complex technical reports involving the construction, maintenance and operation of the electrical system; reviews contractor and customers claims; and performs other related duties as assigned.

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PHYSICAL AND MENTAL/PSYCHOLOGICAL DEMANDS: *The conditions herein are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

PHYSICAL: Strength: Light-exert force to 25 pounds occasionally, or 10 pounds frequently, or negligible force constantly; may involve significant standing, walking, pushing and/or pulling; frequent fingering, typing; occasional to frequent standing; occasional walking, sitting, bending, stooping, pushing, pulling, handling, gripping, grasping, twisting at the waist, reaching at, above and below shoulder level, extending neck upward, downward and side to side, climbing stairs; and on rare occasion, climbing ladders, crouching, kneeling. **Vision:** Visual acuity which could be corrected sufficiently to perform the essential functions of the position; average depth perception needed. **Hearing:** Effectively hear/comprehend oral instructions and communication.

MENTAL/PSYCHOLOGICAL: Work cooperatively and interact appropriately with those contacted in the course of work, including the general public; read complex material; utilize complex math skills; utilize complex writing skills; understand, remember and carry out complex job instructions; respond quickly to changing priorities; communicate effectively orally and in writing; perform effective multi-tasking; work under pressure; work within deadlines.

ENVIRONMENTAL CONDITIONS: Work is performed indoors; constantly uses a computer, facsimile, electronic copier, and printer; occasional use of an adding machine, calculator and other modern office equipment; occasionally drives City vehicles to attend meetings at various City facilities, meeting sites, and public and private events; occasionally works around machinery and is exposed to excessive noises; on rare occasion is exposed to slippery or uneven walking surfaces, dust, fumes, gases or odors; and work both alone and with others.

MINIMUM QUALIFICATIONS:

Knowledge of:

- Electrical engineering
- Design, operation, and maintenance of electrical distribution systems
- Electrical engineering theory and principles of electric power distribution
- Methods, procedures, tools, and equipment used in the construction, maintenance, and operation of underground and overhead electric power distribution lines and related facilities
- Computerized modeling and evaluation of electrical systems evaluation
- GIS systems
- SCADA systems
- Electrical codes and regulations
- Construction rules such as G095, G0128, GO 165
- Contract preparation and administration
- Project management

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- Computer office software
- Power pole loading software
- Math applicable to electrical engineering
- Appropriate safety procedures

Ability to:

- Communicate clearly and concisely, orally and in writing
- Read, interpret, and prepare schematics, drawings, plans, reports, cost estimates, work schedules, and specifications
- Enter GIS data and create drawings and maps
- Read, write and perform mathematical calculations at the level required for successful job performance
- Understand and carry out oral and written instructions
- Write reports and maintain records
- Establish and maintain cooperative working relationships with other employees, contractors, and the public
- Perform complex electrical engineering work
- Plan and design electrical distribution systems, street lighting, substations and related utility systems; respond effectively to emergency situations
- Perform computer analysis and evaluation of electrical systems
- Prepare, execute and administer contracts
- Resolve difficult contractual situations
- Manage and implement large projects
- Coordinate plans and work between various agencies involved in large projects
- Operate a vehicle observing legal and defensive driving practices

EDUCATION AND EXPERIENCE:

Bachelor's Degree in Electrical engineering from an accredited college or university **AND** electrical utility construction, maintenance, and operations experience. Experience using Graphical Information Systems; computer modeling of power systems; SCADA systems; design, operation, and maintenance of electrical distribution systems; project management and contract administration.