



PRINCIPAL ELECTRICAL ENGINEER

FC: EF267
PB: 08

PC: 728
BU: 95

Revised: September 25, 2017

*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

Performs the most complex engineering tasks relative to assigned area of responsibility; ensures work quality and adherence to established policies and procedures; administers and participates in all design and construction project activities; may plan, supervise, assign and review the work of staff responsible for complex and large scale electrical engineering design and construction projects; and performs other related duties as assigned.

CLASS CHARACTERISTICS

This is the working supervisory level in the Electrical Engineer series. Positions at this level perform the most complex work assigned to the series and may be responsible for supervising, assigning and reviewing the work of subordinate or contracted engineering staff. Incumbents may also be responsible for overseeing the work of outside contractors or assisting higher level managerial staff in planning and evaluating the quantity and quality of work performed by subordinate staff.

REPORTS TO

Incumbents report to a supervisory or managerial position.

EXAMPLES OF DUTIES – *Duties may include, but are not limited to, the following:*

1. Assumes responsibility for planning, budgeting, overseeing, and implementing the most complex and large scale electrical engineering projects for the District; may serve as the resident engineer on assigned electrical engineering projects.
2. Plans, prioritizes, assigns, and may supervise and review the work of staff responsible for the design and construction of electrical systems and equipment including power, corrosion protection, lighting, air conditioning, ventilation and fire protection.

3. Establishes schedules and methods for providing electrical engineering project services; ensures adherence to specifications; identifies resource needs; monitors the progress of large scale electrical design projects; reviews needs with appropriate management staff; allocates resources accordingly.
4. Administers consultant contracts; reviews work to ensure compliance with specifications; recommends change orders; maintains records and processes expenditures.
5. Provides project management oversight to ensure compliance with project schedule and budget; oversees the work of outside contractors and contracted engineering staff.
6. Participates in the development of policies and procedures; monitors work activities to ensure compliance with established policies and procedures; makes recommendations for changes and improvements to existing standards and procedures.
7. Recommends and assists in the implementation of goals and objectives; implements approved policies and procedures.
8. Oversees, reviews, and approves the preparation of engineering designs, drawings, and specifications; coordinates work with other divisions and department; signs and stamps design drawings; monitors the activities of engineering design staff.
9. Coordinates work with other divisions, departments and outside agencies; administers control of required documentation for contracts; identifies technical engineering issues and ensures compliance with District and industry engineering standards.
10. Participates in the review of consultant proposals and designs and recommends awards; conducts or participates in the pre-bid conferences prior to construction contract awards.
11. Initiates and evaluates design and field engineering changes during construction; recommends approval of and submits contractor's progress payments; recommends retention levels as appropriate; participates in intermediate and final inspections.
12. Prepares or reviews a variety of reports and correspondence on assigned electrical engineering projects including Inspector's Daily Reports, monthly and final completion reports, contract negotiations and modifications; and fields and designs engineering changes.

13. Participates in the selection of District or contracted engineering staff; provides or coordinates staff training; works with employees to correct deficiencies; implements discipline procedures.
14. Participates in the preparation and administration of the electrical engineering construction program budget, submits budget recommendations, monitors expenditures.
15. Prepares analytical and statistical reports on assigned electrical engineering operations and activities.
16. Represents the District in public meetings and hearings on proposed projects.
17. Attends and participates in professional group meetings; stays abreast of new trends and innovations in the field of electrical engineering.
18. May conduct intermediate and final inspections on assigned projects.

QUALIFICATIONS

Knowledge of:

Operations, services and activities of a comprehensive electrical engineering program.

Principles and practices of electrical engineering design and construction.

Principles and practices of project scheduling and management.

Methods and techniques of field measuring and testing.

Methods and techniques of conducting construction site inspection and investigation.

Principles and practices of contract administration and management.

Principles and practices of engineering cost estimating.

Principles of supervision, training and performance evaluation.

Current office procedures, methods, and equipment including computers.

Specialized computer programs or systems utilized in electrical engineering design and construction including CADD.

Related building codes, regulations and provisions.

Related Federal, State and local laws, codes and regulations.

Skill in:

Supervising, organizing and reviewing the work of lower level staff.

Selecting, supervising, training and evaluating staff.

Analyzing complex engineering problems, evaluating alternatives and recommending solutions.

Interpreting and explaining District policies and procedures.

Directing and coordinating electrical engineering projects.

Negotiating consultant design and construction contracts.

Managing and administering consultant engineering contracts.
Interpreting and preparing revisions to engineering plans, drawings, and specifications.
Conducting and overseeing field inspections, investigations, measurements, and testing.
Preparing clear and concise reports.
Communicating clearly and concisely, both orally and in writing.
Establishing and maintaining effective working relationships with those contacted in the course of work.

MINIMUM QUALIFICATIONS

Education:

A Bachelor's degree in electrical engineering or a closely related field from an accredited college or university.

Experience:

Four (4) years of (full-time equivalent) verifiable professional electrical engineering project design and construction experience, which must have included at least one (1) year of administrative and supervisory experience.

License or Certificate:

Registration as a professional engineer.

Other Requirements:

Must possess a valid California driver's license and have a satisfactory driving record.
Must be physically able to conduct field inspections and testing as assigned.

Substitution:

Additional professional experience as outlined above may be substituted for the education on a year-for-year basis. A college degree is preferred.

WORKING CONDITIONS

Environmental Conditions:

Office environment; field environment; construction site environment; exposure to noise, dust, grease, smoke, fumes, gases, heat, cold, and inclement weather conditions when conducting field inspections and investigations.

Physical Conditions:

Requires maintaining physical condition necessary for walking, standing or sitting for prolonged periods of time.

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