

ILLINOIS DEPARTMENT OF CENTRAL MANAGEMENT SERVICES  
CLASS SPECIFICATION

ELECTRICAL ENGINEER

POSITION CODE: 13180  
Effective: 1-25-94

DISTINGUISHING FEATURES OF WORK:

Under general direction, performs professional electrical engineering work involving responsibilities for carrying out assignments of extensive scope and complexity in connection with the investigation, layout, design, construction, and installation, operation and maintenance of electrical systems and equipment in state-owned buildings and institutions; or supervises a small staff of engineers in connection with performing electrical engineering duties.

ILLUSTRATIVE EXAMPLES OF WORK:

1. Designs and develops electrical installations from inception to completed plans and specifications; checks plans and specifications of electrical work prepared by associate engineer; reviews electrical plans and specifications and may write electrical amendments; checks electrical shop drawings submitted by contractors; attends conferences with associate architects for preliminary plans and specifications developed.
2. Performs field inspection of electrical installation and revises electrical layout to conform to actual field conditions; ensures compliance with plans and specifications by contractors; makes final inspections of completed projects prior to final payment; approves applications for payment on connected electrical installations with building construction counterpart.
3. Supervises the activities of subordinate electrical engineers engaged in projects of varying degrees of complexity.
4. Writes specifications for electrical work which includes power and lighting, high voltage, underground and overhead distribution systems, transformers, substations, high voltage switchboards, passenger and freight elevators, fire alarms, interior and exterior illumination.
5. Performs other duties as required or assigned which are reasonably within the scope of duties enumerated above.

## ELECTRICAL ENGINEER (Continued)

### DESIRABLE REQUIREMENTS:

#### Education and Experience

Requires knowledge, skill and mental development equivalent to the completion of four years of college with a bachelor's degree in electrical engineering.

Requires possession of an Illinois Certificate as a Registered Professional Engineer.

Requires four years of professional electrical engineering experience.

#### Knowledges, Skills and Abilities

Requires thorough knowledge of electrical engineering theory, principles, and practices.

Requires extensive knowledge of practical engineering problems confronting contractor and manufacturer in meeting specifications.

Requires working knowledge of supervisory theory and practices.

Requires ability to plan, assign, coordinate and evaluate the electrical engineering design and specifications as performed by in-house professional and paraprofessional staff.

Requires ability to communicate electrical engineering theories and designs to nontechnical state agency representatives and to function as a liaison in resolution of needs as determined by affected parties.

Requires ability to evaluate design quality of electrical engineering schemes as developed by contracting private consultants and to recommend changes, modifications or redesigns.

Requires ability to write specifications for electrical engineering designs of complex power transmission and distribution systems.

Requires the ability to establish and maintain satisfactory working relationships with private electrical engineering consultant firms, electrical manufacturers and state agency officials.