



## **City of Phoenix ELECTRICIAN**

**JOB CODE 74120**

Effective Date: 06/95

### **DISTINGUISHING FEATURES OF THE CLASS:**

The fundamental reason this classification exists is to perform skilled level electrical work in the installation, alteration, maintenance, and repair of electrical systems, equipment, and fixtures in accordance with standard practices of the electrical trade. An Electrician may be assigned to shop or field installation tasks and, as a major assignment, may serve as an Electrician at an airport or a water or wastewater treatment plant. Assignments are received by sketches or blueprints. Work is performed independently or under the general supervision of a Lead Electrician, Electrical Maintenance Foreman or other supervisor with inspection upon completion for quality of work.

### **ESSENTIAL FUNCTIONS:**

- Installs, alters, maintains, and repairs electrical wiring systems and equipment, both high and low voltage (i.e., wall electrical outlets, traffic signal systems, air distribution systems, pumps, transformers, motors, streetlights, and appliances);
- Maintains and repairs equipment used in 24-hour operations;
- Installs traffic signal control systems and devices;
- Installs and maintains motors of several hundred horsepower, coils, transformers, and control equipment of up to 12,000 volts;
- Documents information on preventive maintenance file on electrical equipment and machinery and monitors a preventive maintenance program;
- Installs and maintains water pump and booster stations consisting of various horsepower, from functional to several hundred horsepower;
- Installs and maintains transformers, substations, and related control equipment (motors, generators, pumps);
- Installs, maintains, and repairs series and multiple lighting systems on streets and at the airport, ball park diamonds, wastewater and water treatment facilities, and Civic Plaza Convention Center;
- Draws circuits on a one line diagram for controls;
- Designs functional electric circuitry for electrical systems;
- Operates earth moving equipment, aerial equipment, and pneumatic equipment in the installation and repair of electrical equipment;
- Performs as a crew leader and ensures timely job progress by assigning work of available personnel on the job site and scheduling equipment use;



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- Provides on-the-job training for junior or subordinate crew members in skills of the electrical trade, City policy, and requirements of specific job tasks;
- Responds to citizen and customer inquiries or complaints;
- Acts as a "standby" electrician for responding to emergency calls after normal working hours.
- Maintains regular and reliable attendance.
- Demonstrates superior seamless customer service, integrity, and commitment to innovation, efficiency, and fiscally responsible activity.

### **Required Knowledge, Skills and Abilities:**

#### Knowledge of:

- Electrical construction and maintenance, including installation of all sizes of electrical conduit, cables, wires, switches, automatic starting equipment, and pole line construction.
- Occupational hazards and necessary safety precautions.
- National Electric Code and relevant City codes.

#### Skills in:

- The care and use of hand tools and equipment necessary to perform various electrical repair tasks such as hickies, volt meters, wiggins, meggars, and VOM's.
- Locating and adjusting defects in electrical systems and equipment.
- The operation of earth moving equipment, aerial equipment, and pneumatic equipment.

#### Ability to:

- Distinguish between the full range of colors in the color spectrum to work with electrical wires and/or traffic signal lights.
- Use graphic instructions such as blueprints, schematic drawings, layouts, or other visual aids.
- Estimate labor or material costs/amounts from blueprints or work plans.
- Make mathematical computations.
- Exercise independent thought and action within the scope of specific assignments.
- Comprehend and make inferences from written materials.
- Measure distances with a tape measure or other measuring device.
- Make precise arm-hand positioning movements (i.e., operates an electric hand drill).



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- Lift arms above shoulder level to work in ceiling areas, on light fixtures, or on traffic signals.
- Work in small, cramped areas such as ceiling crawl spaces, equipment enclosures, closets, etc.
- Climb ladders or steps to reach work areas.
- Work at heights greater than ten feet.
- Remain in a standing position for extended periods of time.
- Work in a variety of weather conditions with exposure to the outdoor elements.
- Move heavy objects (50 pounds or more) long distances (more than 20 feet).
- Travel across rough, uneven, or rocky surfaces.
- Express ideas on technical problems clearly and concisely orally and in writing in the English language.
- Work cooperatively with other City employees, building occupants, and the public.
- Communicate orally in the English language with customers, clients, or the public in face-to-face one-on-one settings, or using a telephone.
- Observe, monitor, or compare data to determine compliance with prescribed operating or safety standards.
- Make decisions and coordinate work based on information given by the customer.
- Work safely without presenting a direct threat to self or others.

### **Additional Requirements:**

- Some positions will require the performance of other essential and marginal functions depending upon work location, assignment or shift.
- Some positions require working irregular hours, shifts, weekends, and holidays.
- Some positions require the use of personal or City vehicles on City business. Individuals must be physically capable of operating the vehicles safely, possess a valid driver's license and have an acceptable driving record. In addition, individuals may be required to pass an Arizona Department of Transportation physical exam and possess the appropriate commercial driver's license (C.D.L.). Pre-employment drug testing is required for C.D.L. positions. Employees in C.D.L. positions will be subject to unannounced alcohol and drug testing as a condition of continued employment. Use of a personal vehicle for City business will be prohibited if the employee does not have personal insurance coverage.

### **ACCEPTABLE EXPERIENCE AND TRAINING:**

Completion of a recognized four year electrical apprenticeship program, or equivalent training, or three years of experience as a skilled electrician. Other combinations of experience and education that meet the minimum requirements may be substituted.



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