

MAINTENANCE ELECTRICIAN

DEFINITION

Under general supervision, performs a variety of skilled electrical and specialized work in the repair, alteration, construction, installation, and maintenance of electrical systems and equipment; and performs related work as required.

LICENSE REQUIRED

Possession of a valid and appropriate California driver's license.

CLASS CHARACTERISTICS

A major portion of the incumbent's time in this class is spent in performing skilled electrical work. Incumbents may, as the need arises, be assigned to carry out a wide range of general maintenance work outside the electrical trade. As assigned, positions are expected to perform tasks in other maintenance trades at an unskilled or skilled level as a helper or independently.

EXAMPLES OF DUTIES

Inspects, repairs, installs, tests, services, and maintains electrical systems including conduit and duct systems, light and power circuits, motor appliances, generators, control equipment, switches, switchboards, fans, bells, intercom and buzzer systems, clocks, and fire alarm systems. E

Installs interior and exterior wiring and conduit for equipment, computers, and appliances. E

Wires new and altered buildings. E

Replaces fuses, circuit breakers, and panels. E

Assembles, installs, and maintains lighting fixtures, ~~and~~ field lighting systems, and HID (high intensity discharge) lighting systems. E

Assists with evaluating existing circuitry expansions and upgrades. E

Determines cause of electrical failures and plans repairs; tests electrical equipment. E

Inspects electrical plans, equipment, and installations for conformity with safety standards, codes, and regulation. E

Updates "as-built" when wiring is installed or renovated. E

Reviews and recommends supplies and materials; plans and organizes assignments effectively. E

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EXAMPLES OF DUTIES (cont.)

Directs the work of assigned helpers. E

Plans and lays out assigned tasks. E

Keeps time and material cost records. E

Assists in other maintenance areas, as assigned, by performing unskilled, semi-skilled or skilled duties. E

Operates district vehicles. E

Performs related work as required.

MINIMUM QUALIFICATIONS

Knowledge of:

1. Principles and practices of electrical and electronic theory;
2. Proper methods, materials, tools, and equipment used in the electrical trade;
3. Design, construction, installation, and maintenance of electrical apparatus and equipment together with skill in performing electrical installation and repair work;
4. Applicable electrical codes and regulations;
5. Electrical formulas and single and multi-phase circuits;
6. Shop mathematics applicable to the electrical trade; and
7. Appropriate safety precautions and procedures.

Ability to:

1. Skillfully install, diagnose, repair, and maintain electrical systems and equipment;
2. Distinguish color and have visual depth perception;
3. Read blueprints, diagrams, and schematics; work from wiring diagrams, blueprints, plans, and specifications;
4. Read, understand, and interpret technical manuals; apply electrical theory and technology related to electrical repair and installation;
5. Maintain tools and equipment used and assigned in clean working order providing proper security;
6. Perform unskilled, semi-skilled or skilled duties on other maintenance areas;
7. Perform skilled electrical work;
8. Proficiently use tools and equipment used in the electrical trade;
9. Safely repair electrical machinery, working with live wiring and equipment including up to 480 volts;
10. Perform shop mathematics;
11. Plan and lay out electrical work including estimating time and material costs;

Ability to: (cont.)

12. Maintain accurate records;
13. Operate a vehicle observing legal and defensive driving practices;
14. Understand and carry out oral and written instructions;
15. Establish and maintain effective relationships with those contacted in the course of work;
and
16. Maintain work pace appropriate to given workload.

EDUCATION

Individuals possessing the knowledge, skills, and abilities listed above are considered to possess the necessary education.

EXPERIENCE

Recent skilled level work as an electrician.

WORKING CONDITIONS

Environment:

Indoor and outdoor work environment; subject to driving a vehicle to conduct work.

Physical Abilities:

Dexterity of hands and fingers to operate a variety of specialized equipment and tools; seeing to observe needed and completed repairs; climbing ladders and working from heights; reaching overhead and horizontally; walking over rough or uneven surfaces; lifting heavy objects weighing up to 100 pounds; bending at the waist; kneeling or crouching. Incumbents must work in confined spaces and awkward positions, and also climb ladders and scaffolds.

Hazards:

Working in confined and awkward positions; working in a cramped or restrictive work area; working at heights on ladders or scaffolding; and working with electrical power supply.

Revised: 7/1981