

## Electrician II

### *Essential Task Rating Results*

1.	Maintain and repair transmission lines for electrical systems (e.g., inverters, direct currents, solar), per facility/departamental needs to help eliminate power outages, utilizing personal protective equipment (PPE), meters, and certified high voltage equipment (e.g., hot sticks/gloves, boom trucks).
2.	Maintain electrical components (e.g., wiring, switches, lighting, transformers, generators, switchgears, motor control centers) to increase performance and life expectancy of equipment and ensure facilities/departments meet federal and state mandates, fire life and safety codes, and energy conservation, etc., utilizing various resources (e.g., National Electric Code (NEC), National Fire Protection Association (NFPA), operational procedures, personal experience, electrical tools).
3.	Maintain emergency systems (e.g., generators, batteries, Uninterrupted Power Supplies) to ensure proper electrical operational status and the safety and security of the facilities/departments, utilizing testing procedures, Preventive Maintenance Programs (PM), load testing, etc.
4.	Assemble lighting, motors, heaters, transformers, switchboards and other electrical equipment for the completion of projects in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
5.	Install electric lights, motors, heaters, generators, transformers, switchboards and other electrical apparatus with proper phase rotation, voltage, and amperage to maintain the safety and security of facilities/departments, utilizing the proper lock-out/tag-out procedures in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
6.	Install timers, switches, contactors, and relays for lighting and mechanical equipment system upgrades to ensure proper electrical functions in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).

7.	Install Dedicated and Branch circuits for electrical equipment such as control circuits, wires, cables, breakers, etc. to ensure proper electrical functions in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
8.	Install electrical circuits, conduits, wires, etc. for power, lighting and mechanical equipment to ensure proper electrical functions in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
8.	Connect wires to circuit breakers, transformers, and other components for the installation, maintenance, and/or repair of electrical systems in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
9.	Repair electric lights, motors, heaters, generators, transformers, switchboards and other electrical apparatus with proper phase rotation, voltage, and amperage to maintain the safety and security of facilities/departments in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
10.	Repair and replace breakers, contactors, starters, motors, wires and cables, etc. to ensure the proper function of electrical systems and components completion of projects using the appropriate hand and/or power tools and equipment in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
11.	Respond to work order and maintenance requests from various facilities/departments to ensure timely repair and maintenance of electrical systems and components in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).

12.	Troubleshoot facility/departmental electrical systems and components (e.g., inverters, direct current, solar), apparatus, and/or components to locate causes of breakdowns, restore power, and minimize interruption to programs and operations, utilizing proper lock-out/tag-out procedures, meters, various hand tools, National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
13.	Inspect electrical systems, apparatus, and components, using test equipment and hand tools to identify potential issues or maintenance needs in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
14.	Troubleshoot/diagnose electrical problems in Automatic Transfer Switch Controls, power distribution circuits, electrical equipment, lighting control and control circuits for maintenance and proper function in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
15.	Respond to emergency call backs (e.g., power outages, gate malfunctions, zone alarms) to ensure the safety and security of facilities/departments by utilizing and maintaining a land line phone or mobile cell phone, etc.
16.	Perform Preventive Maintenance Service (PMS) of electrical equipment, to help prevent and eliminate equipment failure, utilizing manufacturer recommendations, owner manuals, industry standards, etc., and service records.
17.	Perform preventive maintenance on emergency systems (e.g., generators, batteries, electrical distribution systems, Uninterrupted Power Supply) and electrical equipment (e.g. switch gear, transformers) for the safety of staff and others to ensure proper condition of each in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
18.	Maintain pole lights and/or high mast lighting systems to ensure proper functioning and maintain the safety and security of the facilities/departments utilizing test procedures, various meters, and hand tools.

19.	Travel to different locations (e.g., remote, facilities, departments) for the installation, maintenance and repair of electrical systems and components to ensure safe and timely work operations.
20.	Maintain a clean electric shop free of clutter and debris to ensure a safe work environment and facilitate the safety and security of the facilities/departments, in accordance with Departmental Operation Manuals (DOM).
21.	Recycle electrical components (e.g., lamps, batteries, wires, e-waste) to minimize environmental waste in accordance with the Division of Occupational Safety and Health (CalOSHA) rules and regulations.
22.	Maintain tools, equipment and inventory in a safe, organized manner in order to maintain functionality and continuity of work in accordance with Departmental policies and procedures and the Division of Occupational Safety and Health (CalOSHA) requirements.
23.	Maintain an organized electric shop in order to ensure compliance with the Department's policy per Departmental Operation Manuals (DOM), utilizing tool check-out systems and daily inventory sheets to maintain tool accountability and the safety and security of the facility/department.
24.	Receive and verify supplies and complete all necessary paperwork to maintain needed equipment, tools and supplies per departmental procedures.
25.	Operate electrical equipment (e.g., meters, conduit benders, drill motors, cutters) to ensure proper completion of work, personal safety and security and compliance with various rules, regulations, codes, policies, and procedures, etc., utilizing manufacturer's operation manuals, industry trade standards, etc.
26.	Advise in the selection of electrical equipment to provide standardization throughout facilities/departments, verifying proper equipment is being ordered to ensure cost savings, utilizing As- Builts, Electrical Code, specifications, Underwriter Laboratories (UL) approved materials.
27.	Advise in the storage of electrical equipment and materials to ensure materials are stored correctly to preserve the integrity of the materials, utilizing proper storage methods (e.g., cargo boxes, warehouses, electric shops, shelving) and current inventory.

28.	Inspect electrical shop (e.g., keys, alarms, locking devices, tool cages, office supplies equipment) to ensure compliance with laws, rules, regulations, policies and procedures, providing a safe and secure working environment utilizing various resources (e.g., personal knowledge, Department Operational Manuals (DOM), Injury and Illness Prevention Plan (IIPP), operational procedures, and appropriate training).
29.	Coordinate and work with other tradespeople (e.g. painters, carpenters, plumbers, stationary engineers) to complete work projects in accordance with Departmental policy and safety regulations.
30.	Escort outside vendors within facilities/departments to provide contracted services to maintain safety and security and ensure compliance with stipulated rules, regulations, policies, procedures, etc.
31.	Communicate with others to convey information and ensure safety while conducting work assignments.
32.	Draw rough sketches of electrical installations and repairs to identify new changes/corrections to the current As-Builts plans, utilizing current plans and specifications, the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
33.	Plan layout and installations of electrical wiring, equipment, or fixtures, in accordance with job specifications, the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
34.	Purchase tools, materials, supplies and equipment to ensure proper operation of electrical shops utilizing procurement forms (e.g., purchase orders, written justifications, bids, drug- free certifications, recycle content, CAL CARDS) as required by operational procedures, State Administrative Manual, Departmental Operations Manuals (DOM), etc.
35.	Prepare estimates for a variety of electrical jobs (e.g., maintenance, installations, repairs) to include labor, materials, tools and equipment, etc., for cost analyses and planning and developing projects, utilizing various resources (e. g, internet, personal knowledge, blueprints, rough sketches, books, vendors, laws, codes, rules and regulations).

36.	Complete and maintain records and daily personnel reports (e.g., timesheets, daily work orders, time reports) to provide information for facilities/departments and ensure compliance with stipulated laws, rules, regulations, policies and procedures, etc., utilizing various resources [e.g., Departmental Operation Manuals (DOM), Injury and Illness Prevention Program (IIPP)].
37.	Maintain records, files and technical listings on equipment, tools or products (e.g., tool control, vehicle logs, material safety data sheets) to ensure inventory records and make recommendations on recurring maintenance, special repairs, equipment, tools and supplies in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
38.	Write emails and other written communication documents for management and personnel regarding work and the installation, maintenance, repair, and alteration of electrical systems and components.
39.	Complete reports to update the Injury and Illness Prevention Plans (IIPP) and records and maintain a safe and healthful work environment for the benefit of staff and others in accordance with departmental procedures.
40.	Lead/instruct unskilled assistants engaged in the maintenance and repair of electrical systems (e.g., electric lights, motors, heaters, generators, transformers, switchboards and other electrical apparatus) to provide information and direction, and ensure proper completion of work, to meet facility/departmental security and program needs, provide a safe working environment, and ensure compliance with various laws, rules, regulations, codes, policies, and procedures.
41.	Attend departmental training classes (e.g., sexual harassment, cultural awareness, workplace violence, inmate training) in order to maintain professional and ethical work standards in accordance with departmental policies and procedures.

42.	Attend and/or participate in technical training (e.g., defensive driving, codes and procedures, Division of Occupational Health and Safety (OSHA), safety, National Fire Protection Association, recertification) to ensure required training pursuant to the Departmental Operation Manual (DOM) and industry standards to increase knowledge and maintain currency on procedures and policies.
43.	Complete safety briefings in compliance with the National Fire Protection Association (70E) and Occupational Safety Health Administration standards and regulations to ensure safe working practices.
44.	Plan and direct the work of electricians and others engaged in the operation, installation, maintenance, alteration and repair of the electrical systems and components (e.g., wiring, switches, lighting, transformers, generators, switchgears, motor control centers) to ensure proper completion of work and facility/departmental, security, and program needs utilizing the work order system and various resources (e.g., Standard Automated Preventive Maintenance Systems [SAPMS], Injury and Illness Prevention Program [IIPP], California Code of Regulations, Code of Federal Regulations, California Fire Code, National Electric Code, facility/departmental operational procedures, personal experience, electrical tools, testers).
45.	Delegate assignments and work orders to electricians and others engaged in the operation, installation, maintenance, alteration and repair of electrical systems and components (e.g., wiring, switches, lighting, transformers, generators, switchgear, motor control centers) to ensure proper completion of work assignments.
46.	Inspect the work of electricians engaged in the operation, installation, maintenance, alteration and repair of electrical systems and components (e.g., wiring, switches, lighting, transformers, generators, switchgear, motor control centers) to ensure proper completion of work and meet facility/department, security, and program needs utilizing the work order system and various resources (e.g., Standard Automated Preventive Maintenance Systems [SAPMS], Injury and Illness Prevention Program [IIPP], California Code of Regulations, Code of Federal Regulations, California Fire Code, NEC, operational procedures, personal experience, electrical tools, testers).

47.	Inspect electrical systems, equipment and components to identify hazards, defects, or the need for adjustment or repair, and ensure compliance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
48.	Coordinate the installation, maintenance, and repair of electrical systems and components (e.g., wiring, switches, lighting, transformers, generators, switchgear, motor control centers) to ensure timely completion of work assignments in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code), operational procedures, personal experience, electrical tools, testers, etc.
49.	Make decisions regarding the action to be taken in response to safety and electrical issues (e.g., power outages) in accordance with the National Electric Code (NEC), National Fire Protection Association (NFPA), and applicable building codes (e.g., California Building Standards Code, National Building Code, Uniform Building Code).
50.	Determine and establish priorities and service levels for electricians to ensure sufficient coverage and meet both long-term objectives and the short-term demands of facilities/departments.
51.	Provide estimates for approved budgeting to management to secure funding for the installation, maintenance and repair of electrical systems and components using various tools (e.g., purchase orders, written justifications, bids, drug- free certifications, recycle content) as required by the operational procedures, State Administrative Manual, Departmental Operations Manuals, etc.
52.	Advise management in the selection of electrical materials, tools, and equipment for projects and in the preventive maintenance and repair of facilities/departments (e.g., buildings, structures, fixtures) to ensure compliance with various laws, rules, regulations, codes, policies, procedures, etc., utilizing various resources (e.g., catalogs, fliers, internet, vendors, National Electric Code, departmental design criteria guidelines, project drawings and specifications, personal experience).

53.	Coordinate with departmental trades people, chain of command, and other facilities/departments program staff, contractors and vendors regarding projects, utility shutdowns, preventive maintenance, and repairs of facilities/departments (e.g., buildings, structures, fixtures) to ensure the work is completed effectively and efficiently.
54.	Ensure and maintain the safety and security of work areas and materials in the performance of daily activities to prevent injuries and damage to property, etc., utilizing interpersonal skills and heightened awareness of the surroundings.
55.	Act in a lead capacity in the absence of the supervisor to ensure continued operations of the shop, utilizing personal knowledge and personal experience, Departmental Operations Manuals, operational procedures, and departmental policies.
56.	Research electrical equipment or component parts to be used in the installation, maintenance, and repair of electrical systems as required by the operational procedures, State Administrative Manual, Departmental Operations Manuals, etc.
57.	Advise in the requisition of tools, materials, supplies and equipment to ensure proper operation of electrical shops utilizing procurement forms (e.g., purchase orders, written justifications, bids, drug- free certifications, recycle content) as required by operational procedures, State Administrative Manual, Departmental Operations Manuals, etc.
58.	Complete and review work orders to ensure the requested services are completed and necessary systems and components are installed, repaired or maintained to ensure proper operation of facilities/departments.
59.	Resolve verbal conflicts (e.g., disagreements/disputes) using interpersonal, mediation and facilitation to achieve and maintain a cohesive, productive work environment in accordance with departmental policies and procedures.