

**MICHIGAN CIVIL SERVICE COMMISSION  
JOB SPECIFICATION**

**ELECTRICIAN MASTER LICENSED**

**JOB DESCRIPTION**

Employees in this job function as mastered licensed electricians, obtaining permits and performing electrical work as required by law for construction and maintenance projects on state properties such as office buildings, prisons, hospitals, and highways.

There are two classifications in this job.

**Position Code Title – Electrician Master Licensed-E**

**Electrician Master Licensed E10**

This is the experienced level. The employee obtains permits, performs electrical work as required by law, and performs the full range of technical aspects of electrical work. The employee uses considerable independent judgement in making decisions without the availability of supervision.

**Position Code Title – Electrician Master Licensed-A**

**Electrician Master Licensed 11**

This is the advanced level. The employee obtains permits and performs electrical work as required by law, and functions as a crew leader, overseeing the work of lower-level licensed Electricians, Trades Helpers or prisoners, and performs master-level electrician assignments.

**JOB DUTIES**

**NOTE:** The job duties listed are typical examples of the work performed by positions in this job classification. Not all duties assigned to every position are included, nor is it expected that all positions will be assigned every duty.

Serves as the licensed electrician on-site at the construction or remodeling project.

Obtains proper permits as required by law to carry out electrical work on construction or remodeling projects.

Regularly inspects and evaluates electrical and electronic equipment to ensure that it operates efficiently and safely, follows recommended maintenance schedule for cleaning and lubricating equipment, and maintains records on equipment status and maintenance.

Studies blueprints and schematics and determines methods, materials, and equipment needed to complete the assignment.

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Connects wires to plugs, switches, controls, light fixtures, traffic controls, appliances, motors, breaker panels, and switchboards.

Splices wires by stripping insulation from wire leads, twisting, clamping, and/or soldering leads together and applying insulating terminal caps using a variety of hand tools; makes underground waterproof splices.

Disassembles, repairs and reassembles or replaces defective electrical equipment such as plugs, switches, outlets, controls, ballasts, motors and appliances using hand tools, test equipment, and service manuals.

Tests installations to check and insure continuity of the circuit, and the compatibility and safety of all components using test equipment such as an ohmmeter, ampmeter, voltmeter, oscilloscope, or battery buzzer.

Measures, cuts, bends, threads, assembles, and installs electrical conduit, junction, switch, outlet boxes, and switch boards using hand tools and such special equipment as mechanical drills, cutters, benders, and threaders.

Cleans and lubricates equipment, and maintains records on equipment status and maintenance.

Installs and repairs telephones, light fixtures, electrical controls, motors, and appliances using hand tools and electric drills.

Inspects and evaluates electrical equipment to ensure that it operates efficiently and safely; determines whether equipment and new installations meet requirement of the National Electrical Code.

Pulls wire through conduit.

Determines materials needed for most frequently occurring repair work, prepares requisitions, and monitors inventory.

Cleans and maintains tools and performs routine maintenance on special equipment used in electrician's work.

May assist in training lower-level apprentice Electricians and others.

Performs related work as assigned.

### **Additional Job Duties**

#### **Electrician Master Licensed 11 (Crew Leader)**

Assigns work to lower-level licensed Electricians, apprentice Electricians, Trades Helpers, or prison inmates.

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Provides instruction and training in the proper methods and processes necessary to carry out electrician assignments.

Reviews job performance by observing and critiquing work techniques and completed assignments.

Develops plans and estimates for electrical projects; includes determining time, equipment, and human and material resources needed to complete the work.

Prepares written reports on ongoing projects and on the condition of machinery.

### **JOB QUALIFICATIONS**

#### **Knowledge, Skills, and Abilities**

**NOTE:** Considerable knowledge is required at the experienced level and thorough knowledge is required at the advanced level.

Knowledge of the principles of electricity and electronics.

Knowledge of the electrical codes which typically apply to the work assignment.

Knowledge of the standard methods, materials, tools, and equipment of the electrical trade.

Knowledge of electrical devices such as controls, switches, starters, transformers, motors, and panel boards.

Knowledge of the potential occupational hazards connected with electrical work and the safety standards and practices, which should be applied.

Skill in the use of the tools of the electrical trade.

Skill in the installation of electrical devices.

Skill in diagnosing the cause of electrical breakdowns.

Skill in repairing and adjusting electrical devices.

Ability to interpret and apply blueprints, schematics, maintenance manuals, and assembly instructions.

Ability to study and comprehend new technology.

Ability to make mathematical computations.

Ability to work from ladders, scaffolds, hydraulic towers, or in tunnels and crawl spaces.

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### Additional Knowledge, Skills, and Abilities

#### Electrician Master Licensed 11 (Crew Leader)

Ability to train and instruct others in the work.

### Working Conditions

Work may be performed from ladders or hydraulic lifts in high voltage areas.

Some jobs require an employee to work in a hostile environment, on high structures, and be exposed to inclement weather conditions.

Some jobs may be located in a correctional facility, and may require direct contact with prisoners.

### Physical Requirements

The job duties may require an employee to climb ladders, or to bend or stoop in confined spaces.

### Education

Educational level typically acquired through completion of high school.

### Experience

#### Electrician Master Licensed E10

No specific type or amount is required beyond that required for licensure.

#### Electrician Master Licensed 11

One year of electrical trade experience equivalent to an Electrician Master Licensed E10.

### Special Requirements, Licenses, and Certifications

Possession of a master electrician's license.

Some positions may require possession of the Commercial Driver's License (CDL) issued by the Secretary of State as required by Public Act 346 of 1988 to operate a designated state vehicle.

**NOTE:** Equivalent combinations of education and experience that provide the required knowledge, skills, and abilities will be evaluated on an individual basis.

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**JOB CODE, POSITION TITLES AND CODES, AND COMPENSATION INFORMATION**

**Job Code**

ELCTRMLIC

**Job Code Description**

Electrician Master Licensed

**Position Title**

Electrician Master Licensed-E

Electrician Master Licensed-A

**Position Code**

ELECLICE

ELECLICA

**Pay Schedule**

A31-017

A31-018

ECP Group 1  
Revised 6/1/06  
TeamLeaders