

**MONTGOMERY COUNTY GOVERNMENT
ROCKVILLE, MARYLAND
CLASS SPECIFICATION**

**Code No. 005073
Grade 18**

ELECTRICIAN I*

DEFINITION OF CLASS:

This is journey level work involving the installation, modification, repair, troubleshooting, loading and testing of new and existing electrical lines, circuits, systems, fixtures, controls and equipment. Contacts generally are with shop employees within and outside the electrical trade, but on occasion may include contractors or agency personnel responsible for facility maintenance for the purpose of providing and receiving instructions and information. An incumbent offers limited direct service or assistance to the public.

An employee in this class is responsible for performing skilled and hazardous electrical work and instructing apprentice employees in the knowledge and skills of the electrical trade. Work assignments typically emanate from work orders and are conducted in a self directed manner. The employee is expected to independently plan and lay out the work to be done, including the selection of proper tools, parts, equipment and materials. While guidelines are normally available, the employee must utilize initiative and resourcefulness to address atypical situations which require the adaptation of different methods and/or procedures. Completed work is typically reviewed for adequacy and technical soundness. The complexity of the work involves analysis of work to be done and selection of the safest and most cost-effective method of construction or repair based upon training and prior experience. Work effort contributes to the safe and effective operation of electrical systems in County facilities and the safety and comfort of facility users. The work involves exposure to high voltage systems and energized circuits, as well as working from heights and confined spaces, which require the use of insulated protective gear, ladders, scaffolding, platforms and mobile aerial equipment. The work activities require moderate physical effort entailing standing, stooping, bending, kneeling, climbing, pushing and pulling as well as working in tiring and uncomfortable positions. Work is performed both indoors and outside, as well as in a shop and in a broad variety County Government facilities which entails exposure to dirty, dusty and/or greasy conditions, as well as to areas utilized for public health services and protective custody. An employee is required to respond to after-hours emergency service calls and may be placed on stand-by duty during severe weather or other urgent conditions.

EXAMPLES OF DUTIES: (Illustrative Only)

- Plans and lays out the routing, placement, type, size, gauge, balance, load, continuity, and proper and safe operation of electrical lines, circuits, systems, equipment and controls.
- Installs, modifies, repairs, loads and tests systems, circuits and devices.
- Troubleshoots and maintains emergency and stand-by systems, generators, uninterruptible power systems and fire alarms.
- Determines, arranges, places, and routes distribution panels, boxes, circuits, fittings, connections and controls.

- Determines and installs wiring, conduit, fixtures, transformers and other electrical devices in the size, type and arrangement needed for proper and safe operation of electrical systems, circuits and equipment.
- Performs demolition work associated with either the installation, modification, repair or removal of electrical systems, equipment and related components.
Conducts routine operational checks and preventive maintenance tasks, noting and correcting malfunctions.
- Instructs apprentice employees in the skills of the trade.
- Drives to and from work sites.
- Performs related duties as required.

KNOWLEDGE, SKILLS AND ABILITIES:

- Knowledge of the makeup, operation, and installation of a variety of electrical systems, circuits, equipment and controls common to Montgomery County Government facilities.
- Knowledge of the various gauges, sizes, and types of wire, conduit, couplings, fittings, relays, boxes, circuit breakers and other electrical devices and the ability to arrange and install them in ways that insure proper and safe operation of systems, circuits and equipment worked on.
- Knowledge of the National Electrical Code and revisions and local building and fire codes as related to the work performed within the electrician trade.
- Knowledge of the occupational hazards and safety precautions of the electrician trade.
- Skill in the use of hand tools and test equipment such as wire cutters and strippers, drills, soldering irons, screwdrivers, test meters, test lamps, voltmeters, ammeters, watt meters and ohmmeters.
- Ability to interpret and apply building plans, blueprints, wiring diagrams and engineering drawings, and use formulas basic to the trade to figure such things as voltage and resistance.
- Ability to plan, layout and complete the installation, modification and repair of various systems circuits, equipment and controls.
- Ability to conduct failure analysis and to modify systems and equipment.
- Ability to rig and handle all materials necessary to accomplish a job assignment.
- Ability to perform work inside and outside year round, where it may be necessary to work from scaffolding, high ladders and mobile aerial equipment.
- Ability to work stand by shifts or to respond to after-hours emergency service calls.
- Ability to wear and use personal protective clothing and equipment for protection from shock hazard when exposed to energized equipment or when exposed to dust, fumes, and other irritants to eyes, ears, nose and respiratory system.
- Ability to prepare material lists and specifications.
- Ability to understand and carry out oral and written instruction.
- Applicant must pass a County administered test of recognition of colors commonly used in the electrical field.

MINIMUM QUALIFICATIONS:

Experience: Completion of a recognized Apprentice Electrician program.

Education: Graduation from high school or High School Certificate of completion recognized in the State of Maryland.

Equivalency: None.

Physical Ability:

- Ability to occasionally lift items that weigh up to 50 pounds and to infrequently carry items that weigh over 50 pounds.
- Ability to work overhead or in stretched, cramped, and awkward or tiring and uncomfortable positions.

LICENSE:

- Possession of a journey level electrician's license issued by the Montgomery County Board of Electrical Examiners.
 - Possession and maintenance at all times of a valid Class "C" (or equivalent) driver's license from the applicant's state of residence.
- Note:** There will be no substitutions for this section.

PROBATIONARY PERIOD:

Individuals appointed to this class will be required to serve a probationary period of six (6) months, during which time performance will be carefully evaluated. Continuation in this class will be contingent upon successful completion of the probationary period.

MEDICAL EXAM PROTOCOL: Core Exam II.

Class Established: September 1963

Revised: April 1968

November 1970

May 1971

July 1974

December 1984

Corrected: July 1987

Revised: March 1988

Classification Study: May 1991 (M)

December 2001

Classification Study: September 2002 (M)

December 2008

April 2010

August 2013

Medical Protocol revised December 2008