

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

**Code No. 004118
Grade 18**

TRANSPORTATION SYSTEMS TECHNICIAN II

DEFINITION OF CLASS:

This is journey level skilled technical work involving either the construction, modification, installation, testing, maintenance, and field and bench repair on a variety of computer-based solid state, digital, electronic, electromechanical and microprocessor based traffic control equipment; or, the assembly, installation and/or testing of traffic signal heads, wiring, poles, cabinets, span cable, pedestrian signals, overhead messenger wire, overhead communications cable, microwave links, variable message signs, lane control and channelization devices, video traffic surveillance cameras, school flasher signal assemblies, and related equipment. Contacts are primarily with the employees of the crew to which assigned, the purpose of which is to receive and provide information regarding work assignments. This class of work may entail some public service/assistance, but it is incidental to the primary focus of the work performed.

An employee in this class is assigned either traffic intersection (overhead construction) installation and wiring work on traffic systems master controllers, school flashers, and other traffic control, monitoring and information equipment; or, routine maintenance and repair of traffic control equipment. The work requires an understanding and application of electronics, electromechanical and microprocessor practices and methods as they apply to traffic signal control equipment as well as some knowledge of video, audio and data communications principles as they apply to task oriented assignments involving fiber optic and related transportation system equipment. Work is assigned to employees on a daily/weekly basis and employees are expected to proceed on their own. Finished work is spot-checked to ensure it has been completed according to unit standard operating procedures and normal trade practices. In addition, employees use technical manuals, equipment manufacturers' instructions, and code requirements to complete assigned tasks. Resolution of signal malfunctions may require detailed electronic and electrical analysis of hardware and software and thirty (30) to forty (40) different actions to perform corrective action. The work facilitates the effective and reliable operation of the County's transportation communication system, and enhanced public safety. The work is primarily performed outdoors. Strict observance of safety precautions and procedures is required since much of the work involves working with and around electrical voltage and high powered equipment and/or working from extended heights. Employees in this class must possess good strength and agility in order to recurrently lift objects weighing up to fifty (50) pounds and to be able to occasionally maneuver objects weighing up to one hundred (100) pounds.

EXAMPLES OF DUTIES: (Illustrative Only)

Installation, Maintenance, and Repair

- Determines cause of traffic control equipment failures and repairs as required.
- Determines cause of video and audio equipment failures and repairs as required.
- Installs and repairs computer adapters.

- Performs bench and field repair, overhauls and performs maintenance tasks on a variety of computer-based solid state, digital, electronic, electromechanical and microprocessor-based traffic control equipment.
- Installs complex master control equipment involving computer logic, telephone intercommunication, and solid state modular circuitry.
- Wires interconnection logic and special circuitry logic packages.
- Maintains and repairs underground and overhead interconnection equipment used for coordinated traffic signal systems.
- Tests and installs traffic controllers, signals, cabinets, and related equipment for coordinated traffic signal system.
- Tests fiber optic cable using a variety of test equipment.
- Logs all work in an accurate and timely manner in order that a complete record of all work at intersections is kept, primarily for legal purposes and secondarily for the maintenance data base.
- Performs related duties as required.

Overhead Construction

- Installs overhead messenger wire, electrical cable, and traffic and pedestrian signal heads from a "bucket" truck.
- Installs traffic signal poles and pedestals, pedestrian or vehicle signals, span cable, service and disconnect boxes, push buttons, electrical services, and overhead and underground communications cable.
- Installs and wire connects traffic control cabinets.
- Assembles, wires and tests traffic signal head and school flasher assemblies, and wires vehicle detectors in controller cabinet.
- Installs overhead lane control and other overhead signs, video cameras, traffic advisory radio system equipment, banners, trail blazing signs, fiber optic signs and channelization devices from a "bucket" truck.
- Tests field connections for proper signal head illumination.
- Repairs malfunctioning traffic signals except traffic controller problems.
- Performs related duties as required.

KNOWLEDGE, SKILLS AND ABILITIES:

Installation, Maintenance, and Repair

- Knowledge of electronic, electromechanical and microprocessor principles as they apply to traffic signal control equipment.
- Knowledge of video, audio, microwave, and AM transmission principles as related to routine field and bench repairs of various communication equipment.
- Ability to understand and carry out technical oral and written instructions.
- Ability to perform field and bench repairs as required, occasionally from extended heights.
- Ability to independently move, push, pull or otherwise maneuver heavy pieces of equipment and tools occasionally weighing up to one hundred (100) pounds.
- Must be free from colorblindness.
- Ability to attend meetings and/or perform assignments at locations outside the office.

Overhead Construction

- Knowledge of electronic principles and the electrical aspects of traffic signal control devices.
- Ability to install telemetry equipment as applied to the interconnection of traffic control systems.

- Ability to wire-connect high speed data and digital devices.
- Ability to install video, audio and AM transmission equipment.
- Ability to read and interpret wiring diagrams and traffic signal installation drawings.
- Ability to detect and trouble-shoot traffic signal control electrical wiring problems.
- Ability to understand and carry out technical oral and written instructions.
- Ability to perform work outdoors in all weather conditions at extended heights working from a "bucket" truck.
- Must be free from colorblindness.

MINIMUM QUALIFICATIONS:

Installation, Maintenance and Repair

Experience: Three (3) years of experience in the construction, modification, installation, testing, maintenance, and field and bench repair of electromechanical and electronic traffic control equipment.

Education: Completion of high school or High School Certificate of completion recognized in the State of Maryland supplemented by completion of either formal school or on-the-job training in electronics appropriate to traffic signal control devices.

Equivalency: An equivalent combination of education and experience may be substituted.

Physical Ability: Ability to independently move, push, pull or otherwise maneuver equipment and tools occasionally weighing up to one hundred (100) pounds.

License:

- Possession and maintenance at all times of a valid Class “C” (or equivalent) driver’s license from the applicant’s state of residence.

Overhead Construction

Experience: Three (3) years of experience involving electrical wiring and intersection set up of traffic signal control devices and related equipment.

Education: Completion of high school or High School Certificate of completion recognized in the State of Maryland supplemented by completion of either formal school or on-the-job training in electrical wiring appropriate to traffic signal control devices.

Equivalency: An equivalent combination of education and experience may be substituted.

License:

- Possession and maintenance at all times of a valid Commercial Driver’s License from the applicant’s state of residence. **Note:** There is no substitutions for this section.

PROBATIONARY PERIOD:

Individuals appointed to a position in 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 II Exam with a Drug/Alcohol Screen.

Class Established: November 1970

Revised: December 1973

March 1975

February 1976

June 1980

August 1985
Classification Study: May 1991 (M)
Classification Study: June 1998 (M)
April 2010
August 2013
March 2014
October 2014
February 2016
September 2016

Formerly Titled: “Traffic Signal Technician I”