

**New York State Department of Civil Service**  
DIVISION OF CLASSIFICATION & COMPENSATION

Tentative Classification Standard

**Occ. Code 7311100**

<b>Highway Safety Equipment Technician 1, Grade 15</b>	<b>7311100</b>
<b>Highway Safety Equipment Technician 2, Grade 19</b>	<b>7311200</b>
<b>Highway Safety Equipment Technical Supervisor, Grade 23</b>	<b>7306500</b>

Brief Description of Class Series

Highway Safety Equipment Technicians diagnose, repair, calibrate and certify various computerized and electronic highway safety, law enforcement, and evidentiary instruments. Highway Safety Equipment Technicians are primarily located in the Division of Criminal Justice Services (DCJS), Highway Safety Technology Unit (HSTU). They also may be found in the Division of State Police.

Distinguishing Characteristics

*Highway Safety Equipment Technician 1:* entry level; performs the full range and scope of technical tasks associated with maintaining speed enforcement equipment to ensure proper operation in compliance with manufacturer specifications; maintains electronic computerized simulation equipment used to diagnose, troubleshoot, repair and calibrate speed enforcement equipment; and may provide expert courtroom testimony in the use of highway safety instruments.

*Highway Safety Equipment Technician 2:* full performance; performs the full range and scope of technical tasks associated with maintaining breath alcohol and other impaired driving detection instruments to ensure proper operation in compliance with manufacturer specifications; performs all duties of Highway Safety Equipment Technician 1; maintains electronic computerized simulation equipment used to diagnose, troubleshoot, repair and calibrate impaired driving detection equipment; may provide expert courtroom testimony in the use of highway safety instruments; and may serve as supervisor or lead worker in the field.

*Highway Safety Equipment Technical Supervisor:* first supervisory level; under the general supervision of the Supervisor Public Safety Programs, the Highway Safety Technical Supervisor is responsible for managing the daily operation and supervision of the Highway Safety Technology Unit (HSTU) and Highway Safety Equipment Technicians; plans and implements changes in existing policy and procedure; performs duties as described for Highway Safety Equipment Technician 1 and 2; serves as an

expert witness in court cases; and sets up and directs the Division maintenance and repair center. May provide expert courtroom testimony regarding the use of highway safety instruments, the operations of the Unit, compliance with Federal and State Guidelines, Rules and Regulations, and anything related to the operations of the Unit.

All positions are in the non-competitive jurisdictional class.

### Related Titles

Traffic Signal Equipment Specialists receive, test, and repair microprocessor-based and solid-state traffic signal equipment and control devices. These positions assemble and test new equipment for distribution; repair damaged, broken, or malfunctioning equipment for redeployment in the field; and dispose of equipment that cannot be repaired. These positions are classified only at the Department of Transportation.

State Police Forensic Scientists are non-competitive, technical positions, performing the full range of analyses of various types of evidence received at the State Police Laboratories and handled in either the Drug Chemistry, Biological Sciences, Toxicology, Firearms Examination, or Trace Evidence sections. These positions are located in the Forensic Investigation Center in Albany and in the regional Crime Laboratories located in New Windsor, Port Crane and Olean, New York.

### Illustrative Tasks

#### *Highway Safety Equipment Technician 1*

Reporting to a Highway Safety Equipment Technician 2, evaluates and diagnoses Doppler Radar and Light Detection and Ranging (LIDAR) speed measuring devices and associated test equipment to ensure proper operation and compliance with manufacturers' specifications.

- Repairs microprocessor-based speed enforcement instruments and maintains appropriate repair records.
- Conducts research of published specifications for a variety of speed enforcement instruments.
- Certifies speed enforcement instruments for accuracy and reliability in accordance with published standards.
- Conducts acceptance testing of microprocessor-based speed enforcement instruments and maintains appropriate status records and repairs units for distribution.
- Maintains laboratory instruments and a variety of electronic computerized simulation instruments used to diagnose, troubleshoot, repair, and calibrate speed enforcement instruments.

- Conducts simulation tests of speed detection units for operating deficiencies under varied and adverse conditions.
- Maintains adequate supply of parts used in the repair of and maintenance of speed enforcement instruments.
- Communicates with manufacturers to place inventory orders, stay abreast of any new changes in design, development or service requirements of speed enforcement instruments.
- Maintains accurate physical and electronic records of all testing, repair, maintenance, calibration and certification work performed on speed enforcement instruments received.

Provides technical assistance to internal and external parties.

- Assists in evaluating new technology being considered for purchase.
- Provides software support and software analysis of speed enforcement units for local and municipal police department personnel.
- Provides technical assistance to law enforcement in the proper use and operation of speed enforcement instruments.

Provides expert courtroom testimony on the procedures employed to certify speed enforcement instruments.

### *Highway Safety Equipment Technician 2*

Reporting to a Highway Safety Equipment Technical Supervisor, performs all of the duties of Highway Safety Equipment Technician 1.

Conducts maintenance, troubleshooting, diagnosis and repairs of microprocessor-based forensic impaired driving instrumentation and maintains appropriate repair records.

- Evaluates samples of screening and evidential breath alcohol and other impaired driving detection instruments and maintains appropriate evaluation records.
- Researches published specifications for a variety of impaired driving detection instruments and makes program recommendations.
- Certifies a variety of breath alcohol and other impaired driving detection instruments for accuracy and reliability in accordance with published standards.
- Conducts evaluation, validation and acceptance testing of forensic breath alcohol and other impaired driving detection instruments and their associated software to ensure proper operation and compliance with manufacturer's specifications.
- Maintains appropriate status records of all work performed, including testing of subassemblies such as power supplies, integrated circuitry, motors, and printer assemblies.
- Troubleshoots operational deficiencies of alcohol screening instruments and performs the necessary repairs to return instruments to their full operational capacity.

- Maintains accurate physical and electronic records of all testing, repair, maintenance and calibration work performed on all instruments received.

Conducts field visits to check use of instruments and make recommendations for improvements.

Performs duties in support of the operation and maintenance of impaired driving detection technology.

- Maintains laboratory instruments and laboratory test instruments including oscilloscopes, thermometers, multimeters, frequency counters, output power meters and instrument specific test systems.
- Maintains a variety of electronic, computerized simulation instruments used to diagnose, troubleshoot, repair and calibrate impaired driving detection instruments.
- Performs remote troubleshooting of DataMaster DMT instruments or similar evidentiary instruments for municipal police agencies across New York State.
- Monitors chemical reagents used as reference standards in breath analysis units.
- Provides software and other technical support for breath alcohol detection instruments for local and municipal police department personnel.

Provides data management and report generation functions for data derived from impaired driving evidential tests Statewide.

Instructs municipal police in the proper use and operation of highway safety instruments.

#### *Highway Safety Equipment Technical Supervisor*

Under the general supervision of the Assistant Director Office of Public Safety or similar official, the Highway Safety Instrument Technical Supervisor serves as unit head and manages the daily operations of the Highway Safety Technology Unit (HSTU) including the supervision of Highway Safety Equipment Technicians and technical support staff.

- Directs and develops maintenance schedules for Highway Safety instruments and sets priorities for scheduled maintenance, repair, and required certification of evidentiary instruments.
- Plans and implements changes in existing policy and procedure governing the work of the HSTU.
- Procures repair and replacement parts for highway safety instruments.
- Monitors use, maintenance and repair of instruments in the field and makes recommendations regarding changes.
- Establishes and evaluates performance measures of technical work performed by technicians and technical support staff.

- Functions as the agency's lead expert on operation, maintenance and certification of highway safety instruments and provides final approval on all work performed by technical staff.
- Researches funding and writes and administers state and/or federal grants to secure funding for the purchase of speed and alcohol measuring instruments.

Participates in establishing instrument specifications for purchase and makes formal recommendations to agency management including cost benefit analysis of new technology.

- Inspects and reviews specifications of highway safety instrumentation for approval prior to purchase under state contract.
- Designs instrument evaluation programs to ensure compliance to state and federal regulation of speed and alcohol measuring devices.
- Acts as agency liaison with highway safety instrument manufacturers providing technical support to their instrument design team, inspecting new instrument and conducting performance tests to determine operational deficiencies.
- Schedules and coordinates highway safety instrument manufacturer training for technical staff including classroom study and hands-on field operation; advises local municipal police department technicians in the care and use of Highway Safety instrumentation.

Participates in formulating policy regarding certification of highway safety instrument and represents agency at conferences, seminars, symposia and other events on alcohol and speed detection instruments.

- Facilitates work groups addressing issues and challenges to state DWI laws and other vehicle and traffic laws.
- Functions as agency liaison between New York State Governor's Traffic Safety Committee and New York State's municipal police agencies.
- Provides expert technical assistance to the New York State Municipal Police Training Council in formulating training programs on the operation and use of Highway Safety instrumentation.

Provides technical assistance to prosecutors regarding the use of alcohol measuring devices and other technical instruments in alcohol-related court trials and other court matters arising from and related to instruments handled by the HSTU.

Testifies in court proceedings as an expert witness regarding the various instrument handled by, procedures of, and matters and issues handled by the Unit.

Is named by the New York State Department of Health as, and functions as, the Technical Supervisor, as per 10 NYCRR Part 59.9.

## Minimum Qualifications

### *Highway Safety Equipment Technician 1*

Non-competitive: four years of experience\* in electronics installation, troubleshooting, repair, maintenance, or design of solid-state electronic equipment, intelligent transportation systems, or commercial, industrial, and/or military electronic/electrical integrated system components.

### *Highway Safety Equipment Technician 2*

Non-competitive: six years of experience\* in electronics installation, troubleshooting, repair, maintenance, or design of solid-state electronic equipment, intelligent transportation systems, or commercial, industrial, and/or military electronic/electrical integrated system components.

\*Substitutions:

A Bachelor's degree in engineering, technology, chemistry, or physics may substitute for four years of the required experience.

60 semester credits hours of college-level study in engineering, technology, chemistry or physics; or successful completion of a two-year technical professional certification program in the electronics field may substitute for two years of the required experience.

Graduation from a high school technical electronics education program recognized by the New York State Education Department as meeting the standards for technical education may substitute for one year of the required experience.

### *Highway Safety Equipment Technical Supervisor*

Non-Competitive: A minimum of 30 credit hours, including at least eight credit hours in Chemistry, and six years of progressively responsible experience\*\* in the research and evaluation of technology used in the speed enforcement and alcohol measuring field and in the maintenance and certification of highway safety instruments used, including one year of specialized experience in microcomputer instrument repair at the component level and one year of experience in supervision.

\*\*College level study in the field of engineering, technology, chemistry, physics or electronics may be substituted for general experience on a year-for-year basis with 30 semester credit hours equaling one year of experience up to a maximum of an additional three years.

**Note:** Classification Standards illustrate the nature, extent and scope of duties and responsibilities of the classes they describe. Standards cannot and do not include all of the

work that might be appropriately performed by a class. The minimum qualifications above are those which were required for appointment at the time the Classification Standard was written. Please contact the Division of Staffing Services for current information on minimum qualification requirements for appointment or examination.

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