

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

**Code No. 004061
Grade 16**

SURVEY INSTRUMENT TECHNICIAN

DEFINITION OF CLASS:

This is technical work operating survey instruments used to conduct land and right-of-way construction surveying. Contacts are primarily with co-workers or employees in related units for the purpose of exchanging information. An incumbent in this class offers very limited direct service or assistance to the public.

An employee in this class is responsible for knowledge of survey techniques and the precise operation of survey instruments such as transits, levels, theodolites and electronic distance measuring devices and for transport, set-up and break-down of equipment. Work is often conducted independently from assignments received from the supervisor or guidance of the crew leader and is reviewed for accuracy of data obtained. Guidelines consist of survey principles and practices; equipment operating procedures and specifications; Federal, State and County regulations and Department procedures. An employee in this class selects the proper and most efficient surveying procedure from among several alternatives. The complexity of the work is characterized by the analysis required to organize survey work, assess field conditions and determine proper instrument operation procedures. The work involves conducting specific survey procedures which in turn affects the accuracy of right-of-way design, construction stake-out and property boundaries. The work of this class is conducted outdoors, in all types of weather. An employee is exposed to some risks such as vehicular traffic, noise and exhaust fumes, and working around open trenches and construction areas which involve the use of safety equipment such as reflective vests and safety shoes. The work involves some physical effort such as walking over rough terrain; frequent bending, crouching and stooping, occasional lifting of objects up to 50 pounds; and precise use of hands or fingers to operate survey equipment.

EXAMPLES OF DUTIES: (Illustrative Only)

- Sets up and operates survey equipment such as level, transit, theodolite and electronic distance measuring equipment to accurately obtain data pertaining to angles, elevations, points and contours used for location, right-of-way, property and construction control (horizontal and vertical) surveys.
- Keeps accurate written notes on measurements taken.
- Instructs survey crew members on use of equipment and procedures of field surveys.
- Performs mathematical calculations in the field required to take measurements.
- May cut brush which is obstructing line of sight.
- May direct traffic around work site.
- Acts as survey crew leader when leader is not available.
- Performs related duties as required.

KNOWLEDGE, SKILLS AND ABILITIES:

- Considerable knowledge of methods, equipment and techniques of land surveying.

- Knowledge of State and local laws, codes and regulations concerning surveying.
- Knowledge of mathematics such as algebra and geometry necessary to perform calculations for measurements in the field.
- Skill in the precise calibration, operation and maintenance of survey instruments such as transit, level, theodolites and electronic distance measuring devices.
- Ability to read and interpret engineering plans and specifications in order to determine appropriate location for instrument placement.
- Ability to keep accurate notes of field measurements and calculations and to make accurate diagrams and maps in the field.
- Ability to communicate effectively with others in English.
- Ability to independently perform field work in environments that present moderate discomforts and risks and require some physical exertion.

MINIMUM QUALIFICATIONS:

Experience: Considerable (three (3) years) experience in construction survey work which has included operation of various survey instruments such as transit, level, theodolites and electronic distance measuring devices.

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

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

Physical Abilities: Requires some physical effort such as walking over rough terrain; frequent bending, crouching and stooping, occasional lifting of objects up to 50 pounds; and precise use of hands or fingers to operate survey equipment.

LICENSE:

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

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 II Exam.

Class Created: August 1992

Revised: April 2010

August 2013