### GENERAL DESCRIPTION

Performs highly complex (senior-level) engineering technician work. Work involves performing surveys and inspections; collecting and correlating engineering and traffic data; and preparing and reviewing reports, drawings, and calculations. May provide guidance to others. Works under limited supervision, with considerable latitude for the use of initiative and independent judgment.

### EXAMPLES OF WORK PERFORMED

- Analyzes data on construction projects, and prepares drawings and documentation for computer entry.
- Analyzes traffic data and traffic volumes for state, district, and county traffic maps.
- Conducts inspections of maintenance and construction projects for compliance with specifications and requirements.
- Conducts laboratory tests to verify whether construction materials conform to department specifications.
- Conducts cost analysis studies.
- Conducts statistical studies of traffic counts, predicts future trends in traffic volume, and submits reports to be used in planning highway improvements and relocations.
- Inspects materials, plant equipment, and production procedures.
- Installs, operates, and maintains equipment and instruments related to the gathering of engineering and traffic data; and coordinates the procurement of parts.
- Maintains construction project records.
- Prepares drawings and cross sections of maintenance and construction projects; prepares tracings, inks, and letters; and prepares estimates, plans, and specifications.
- Prepares, processes, and maintains reports.
- Tests and maintains systems using analog or digital microprocessing equipment, and assists in the set-up and operation of equipment.
May oversee the setting of grade location, alignment, and level for construction and maintenance work; and the installation and operation of automatic traffic counting machines.

May prepare schedules for and oversee the service and repair of traffic counting machines, and may maintain records related to the operation of machines and activities of the traffic unit.

May provide guidance to others.

Performs related work as assigned.

GENERAL QUALIFICATION GUIDELINES

EXPERIENCE AND EDUCATION

Experience in surveying, traffic, or engineering work. Graduation from a standard senior high school or equivalent is generally preferred. Experience and education may be substituted for one another.

KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of surveying; of engineering principles, techniques, and procedures; of mathematics; of methods, procedures, equipment, and materials used in construction and maintenance work; of applicable inspection methods, procedures, and techniques; of laboratory testing procedures and methodologies; and of applicable safety requirements.

Skill in the operation and maintenance of applicable equipment, tools, and surveying instruments.

Ability to conduct inspections and laboratory tests, to prepare reports, to perform mathematical calculations, to communicate effectively, and to provide guidance to others.