8357

TRANSPORTATION ENGINEERING TECHNICIAN

NATURE OF WORK

Serves in a full performance capacity performing intermediate to advanced level duties associated with highway and bridge construction and maintenance, including planning, design, surveys, materials, construction inspection, utility placement and relocation, traffic operations, and bridge safety. Participates in a training program requiring 180 Technician Development Hours.

DISTINGUISHING CHARACTERISTICS

The distinguishing characteristics between Transportation Engineering Technician - Associate (level 2) and Engineering Technician (level 3) is that level two is a technician requiring general supervision in the performance of intermediate level technical work while a level three technician supervises other technicians or medium sized projects, or performs advance level technical work with minimal supervision.

ESSENTIAL JOB FUNCTIONS (Any specific position in this class may not include all of the duties listed, nor do the examples listed cover all of the duties which may be assigned.)

Performs and supervises materials testing in the field and in district and central laboratories, including but not limited to sample and core selection; collection and preparation for shipment; adequacy of coverage; recording of determinations and certificates.

Performs, supervises and coordinates construction surveys including Chief of Party duties; layout and staking of drainage, grade, line, earthwork, curbs and gutters; and preparation of as-built reports and quantity surveys.

Reads and utilizes complex plans and specifications; reviews consultants plans, specifications and bid proposals.

Assures compliance with OSHA and other safety requirements; assures availability of first aid and emergency services on job.

Coordinates traffic controls and detours on job.

Inspects and verifies compliance with federal, state and local requirements for special programs.

Coordinates activities with utilities, local governments and citizen interest.

Assures basic erosion controls during construction.

Computes, checks and verifies quantities and costs of line items.

Inspects and records steel and concrete structures including staking and layout; forming, curing, stripping, finishing, and treating concrete structures in all weather; placement of reinforcing steel on concrete structures; erection and removal of falsework on steel structures; fastening and seating on steel structures.

Communicates with the public and prepares written correspondence and reports.

Maintains property records and safeguards instruments, supplies and equipment.

Coordinates complete bid proposal for a standard project including adequate provisions for compliance with all Federal, State, Local and AASHTO requirements, cost estimates, time estimates and bidding procedures.

Conducts initial review of bids and formulation of recommendations for award of a contract.

Coordinates drafting, computing and reproduction processes for a complex project.
Conducts plans-in-hand inspection of projects.
Develops ownership agreement and work sheet for relocation of utilities or railroads. Reviews and processes permit application for utilities or land developers.
Reviews shop and erection drawings for a steel structure; reviews adequacy of soil boring data for design of highway section.
Compilation and application of materials specifications to design of standard projects.
Organizes work crews with appropriate equipment and materials for performance of maintenance or repair projects; schedules routes for recurring maintenance and inspection work.
Supervises truck drivers and heavy equipment operators to assure safe and efficient use of equipment; supervises the Bituminous or Portland Cement Concrete patching operations.
Selects appropriate items of heavy equipment, trucks and hand tools for accomplishment of maintenance and repairs.
Provides effective and safe traffic controls at job sites.
Inspects and records maintenance work performed on highways, safety structures, drains, ditches, bridges and shoulders.
Prepares and reviews field books and sketches for drainage structures, earthwork, grades and curbs and gutters.
Performs title searches to determine, plot and locate cadastral information.
Reviews, evaluates and prepares recommendations for revision of speed limit zones.
Designs and review plans for upgrading standard traffic signal systems.

KNOWLEDGE, SKILLS AND ABILITIES
Knowledge of consultant and construction contracts, contractor bonding requirements and requirements for inclusion of EEO, Davis-Bacon and OSHA provisions.
Knowledge of nomenclature and uses of standard items of hand tools and mechanized equipment used in maintenance and repair operations.
Knowledge of governmental organizations and divisions of maintenance responsibilities in effect in the region in which employed.
Ability to provide adequate erosion and sedimentation control and to take immediate corrective action on erosion damage.
Ability to run simple levels to determine adequacy of drainage work.
Ability to implement and enforce an effective system to account for and safeguard materials and equipment used by maintenance crews.
Ability to read and utilize topographic maps and standard plans and specifications including metric units and conversions.
Ability to perform mathematical calculations required to determine and verify areas, volumes, weights, quantities and costs required for maintenance work.
Ability to utilize field survey notes or plans for accomplishment of maintenance work.
Ability to work with utility companies and local governments or private owners in moving or working around utilities or installed facilities.
Ability to check on the quantity, quality, condition and specification compliance of materials used for repairs and maintenance; ability to care for and safeguard materials and equipment.
Ability to communicate effectively with the public and prepare written correspondence and reports.
Ability to communicate effectively both orally and in writing.

Ability to work harmoniously with other employees.

MINIMUM QUALIFICATIONS
Certification as a Transportation Engineering Technician by the West Virginia Transportation Engineering Technician Certification Board at BridgeValley Community and Technical College.

Special Requirement
Possession of a valid driver's license.

Substitution (New hires only)
Thirty-six hours in engineering technology from a regionally accredited college or university, plus five years of paid experience in a technical capacity in a civil engineering environment may be substituted for Certification OR an associate or degree in civil engineering technology, plus four years of paid experience in a technical capacity in a civil engineering environment.

Established: 10/21/93
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