



ENGINEERING TECHNICIAN II

CHARACTERISTICS OF WORK:

This is the journeyman-level occupational class for the engineering technician job series. This work requires strict compliance with set operating procedures, general supervision by the higher-level technicians and/or professional engineers, and nominal decision making; duties performed are mainly in the functional areas of projects, traffic control and safety, research and development, roadway design, right-of ways, testing, transportation planning and bridges. Incumbents in this class may supervise subordinate employees in the completion of various projects.

EXAMPLES OF WORK:

Examples of work performed in this classification include, but are not limited to, the following:

Conducts testing procedures such as moisture density relationship of soils, sieve analysis of granular material, loss by ignition, and hydrometer analysis of soils.

Plans and implements special traffic count studies and speed-delay studies, collects roadway use and investment data, and assists in the running of survey parties.

Inspects and records results of earth work, treated subbases, prime major drainage structures, traffic signals, lighting and piling; inspects and tests concrete posts and ROW markers, and checks asphalt and concrete plants to ensure that specifications are met.

Produces and supervises the production of completed bridge construction plans; drafts all phases of city and county maps and draws topographical reproductions.

Computes horizontal curve data, vertical curve data and skewed horizontal controls; plots complex land descriptions for acquisition.

Performs time delay studies and develops sign layouts; assists in the direction and coordination of sign crews and supervises the installation of intermediate traffic control projects.

Performs field investigations to assist in the development of plats and contract documents for special research features and for use in design-drafting of major highway features such as pavement, bridges and interchanges.

Operates complex research instruments such as pavement marking reflectivity measurement device, stress and strain measurement device, light meter and outflow meter.

Inspects and records constructions of rigid and flexible pavements, piles, structures, and traffic control devices.

Drafts drainage ditches, structures, and details of highway intersections and pavement markings; computes pavement marking quantities, limits, and materials for ditch treatments based upon design criteria.

Performs related or similar duties as required or assigned.

COMPETENCIES:

The following competencies describe the knowledge, skills, abilities, and attributes that lead to a successful employee in this position. An applicant will be expected to exhibit these competencies or the ability to reach competency achievement within a specified time. These competencies are linked to the essential functions of the job. Employees in this position may be evaluated on these competencies as part of the performance appraisal system. Example behaviors are listed below each competency and are used for illustrative purposes only. Specific behaviors may be identified and included later by the hiring agency. It is understood that some of these behaviors might not be acquired until a reasonable time after hire. Failure of an employee to successfully demonstrate some or all of these competencies, as deemed important by his or her reporting official, may result in the employee being placed on a performance improvement plan. If after a reasonable period of time, usually three (3) months, the employee fails to demonstrate successful performance, the employee may be terminated. These competencies include, but are not limited to, the following:

PUBLIC SECTOR COMPETENCIES:

Integrity: Demonstrates a sense of responsibility and commitment to the public trust through statements and actions.

Models and demonstrates high standards of integrity, trust, openness, and respect for others. Demonstrates integrity by honoring commitments and promises. Demonstrates integrity by maintaining necessary confidentiality.

Work Ethic: Is productive, diligent, conscientious, timely, and loyal.

Conscientiously abides by the rules, regulations, and procedures governing work.
Meets deadlines. Work product is of a high quality. Follows through on assigned tasks until they are completed correctly. Takes ownership of tasks and duties.

Service Orientation: Demonstrates a commitment to quality public service through statements and actions.

Seeks to understand and meet and/or exceed the needs and expectations of customers.
Treats customers with respect, responding to requests in a professional manner, even in difficult circumstances.
Provides accurate and timely service.
Develops positive relationships with customers.
Obtains first-hand customer information and uses it to improve projects and/or services.

Accountability: Accepts responsibility for actions and results.

Is productive and carries fair share of the workload. Focuses on quality and expends the necessary time and effort to achieve goals. Demonstrates loyalty to the job and the agency and is a good steward for state assets. Steadfastly persists in overcoming obstacles and pushes self for results. Maintains necessary attention to detail to achieve high level performance. Deals effectively with pressure and recovers quickly from setbacks. Takes ownership of tasks, performance standards and mistakes. Knows the organization's mission and functions and how it fits into state government.

Self Management Skills: Effectively manages emotions and impulses and maintains a positive attitude.

Encourage and facilitates cooperation, pride, trust and group identity. Fosters commitment and team spirit. Works effectively and cooperatively with others to achieve goals. Treats all people with respect, courtesy, and consideration. Communicates effectively. Remains open to new ideas and approaches.
Avoids conflicts of interest. Promotes cooperation and teamwork. Continuously evaluates, adapts, and copes effectively with change. Allows self and others to make mistakes and learns from those mistakes. Adheres to high ethical standards.

Interpersonal Skills: Shows understanding, courtesy, tact, empathy, and concern to develop and maintain relationships.

Demonstrates cross-cultural sensitivity and understanding. Identifies and seeks to solve problems and prevent or resolve conflict issues. Encourages others through positive reinforcement. Expresses facts and ideas both verbally and in writing in a clear, convincing and organized manner, helping others translate vision into action. Models appropriate behavior. Recognizes and develops potential in others; mentors. Builds constructive and effective relationships.

Communication Skills: Receives, attends to, interprets, and responds to verbal messages and expresses information to individuals or groups effectively.

Receives nonverbal cues, such as body language in ways that are appropriate to listeners and situations. Takes into account the audience and nature of the information. Listens to others and responds appropriately. May make oral presentations. Communicates ideas, suggestions and concerns as well as outcomes and progress throughout the course of an activity. Provides thorough and accurate information. Can accurately restate the opinions of others even when he/she disagrees.

Self-Development: Adapts behavior or work methods in response to new information, changing conditions, or unexpected obstacles.

Seeks efficient learning techniques to acquire and apply new knowledge and skills. Uses training, feedback, or other opportunities for self-learning and development. Develops and enhances skills to adapt to changing organizational needs. Remains open to change and new information and ideas. Is committed to and actively works to continuously improve himself/herself.

TECHNICAL COMPETENCIES:

Technical Proficiency: The ability and willingness to exhibit competency in the technical areas needed to do a specific job.

Reads, comprehends, and correctly applies all rules, regulations, and policies applicable to work assignments. Performs work with a minimum amount of supervision in areas that are familiar. Knows how to properly track running totals of job quantities. Demonstrates the ability and willingness to learn technical areas of the job with which he/she is not familiar. Follows professional guidelines when documenting quantities for a job. Runs contractor estimates in site manager accurately and efficiently.

Workflow Management: The ability and willingness to perform work within defined specifications and timelines and to manage conflicting priorities.

Operates under specific time constraints and within specified deadlines. Effectively prioritizes tasks in order to meet deadlines. Works on appropriate priorities to get the job done. Ensures that all project documentation is properly collected and entered into site manager for estimate cutoff periods. Follows-up on task completion effectively and in a timely manner. Demonstrates the ability to accurately inspect multiple contractor activities for specific projects

Problem Solving/Decision Making: The ability and willingness to work with people to identify and solve problems in order to effectively and efficiently complete assigned tasks.

Exhibits ability to identify and address issues. Ensures that all problems encountered are addressed at the appropriate level and communicates all relevant information on a timely basis with accuracy and completeness. Exercises sound reasoning. Displays the ability and willingness to work with other offices or other divisions in order to collectively complete assigned tasks or problems as that arise. Communicates effectively with other project team members when solving problems. Accepts constructive criticism effectively

(i.e., does not get defensive) when problem solving. Demonstrates an awareness of item specifications for items being inspected. Communicates effectively with district lab personnel when determining if testing has been completed.

Stakeholder Relations: The ability and willingness to interact and communicate effectively with stakeholders.

Proactively provides stakeholders with proper information in an effort to reduce occurrences of future problems. Supports the agency mission and goals in all interactions with internal and external stakeholders. Acts as an advocate for agency policy. Communicates effectively with project engineers. Demonstrates professionalism when dealing with difficult project stakeholders. Follows all traffic laws when driving a MDOT vehicle. Presents him/herself in a professional manner when wearing an MDOT uniform.

ESSENTIAL FUNCTIONS:

These essential functions include, but are not limited to, the following. Additional essential functions may be identified and included by the hiring agency.

1. Assists higher-level technicians on various design and/or construction projects.
2. Performs general office duties.

MINIMUM QUALIFICATIONS:

These minimum qualifications have been agreed upon by Subject Matter Experts (SME's) in this job class and are based upon a job analysis and the essential functions. However, if a candidate believes he/she is qualified for the job although he/she does not have the minimum qualifications set forth below, he/she may request special consideration through substitution of related education and experience, demonstrating the ability to perform the essential functions of positions. Any request to substitute related education or experience for minimum qualifications must be addressed to the State Personnel Board in writing, identifying the related education and experience which demonstrates the candidate's ability to perform all essential functions of the position.

Physical Requirements: These physical requirements are not exhaustive, and additional job related physical requirements may be added to these by individual agencies on an as needed basis. Corrective devices may be used to meet physical requirements.

Moderate Work: May frequently exert force equivalent to lifting up to approximately 25 pounds and/or occasionally exert force equivalent to lifting up to approximately 50 pounds.

Vision: Requires the ability to perceive the nature of objects by the eye.

Near Acuity: Clarity of vision at 20 inches or less.

Midrange: Clarity of vision at distances of more than 20 inches and less than 20 feet.

Far Acuity: Clarity of vision at 20 feet or more.

Field of Vision: Ability to observe an area up or down, left or right while eyes are fixed on a given point.

Depth Perception: Three-dimensional vision. Ability to judge distance and space relationships so as to see objects where and as they actually are.

Accommodation: Ability to adjust focus.

Motor Coordination: While performing the duties of this job the incumbent is regularly required to walk; use hands to finger, handle or feel objects, tools, or controls; reach with hands and arms; and stoop kneel, crouch, or bend. The incumbent is frequently required to sit. The incumbent is occasionally required to stand; and climb or balance.

Speaking/Hearing: Ability to give and receive information through speaking and listening skills.

Experience/Educational Requirements:

Education:

Completion of three (3) years (ninety (90) semester hours) of college from an accredited college or university, twenty-four (24) hours of which shall have been in an engineering-related field.

OR

Education:

Graduation from a standard four-year high school or equivalent (GED).

AND

Experience:

Three (3) years of experience in work directly related to the above-described duties.

Substitution Statement:

Directly related education and directly related experience may be substituted on an equal basis.

Documentation Requirements:

Applicant must attach a valid copy of his/her official college transcript or other evidence of completion of required coursework, where applicable.

INTERVIEW REQUIREMENTS:

Any candidate who is called to an agency for an interview must notify the interviewing agency in writing of any reasonable accommodation needed prior to the date of the interview.

Additional essential functions and behavioral anchors may be identified and included by the hiring agency.