MAINE TURNPIKE AUTHORITY
Job Description

Job Title: **Engineering Technician II**
Department: Engineering
Reports To: Construction Project Manager
FLSA Status: Non-Exempt/M&O Unit

Summary

This is skilled, advanced technical work in engineering specialties of a sub-professional level. Employees in this class perform difficult technical duties in field and office engineering specialties, which include surveying, inspecting, drafting and elementary designing assignments. Work may involve the coordination of a small group of unskilled and semi-skilled non-professional engineering personnel in the performance of moderately difficult tasks. Assignments are received through oral instructions, survey notes, sketches, maps or detailed work plans. Work is checked during process and reviewed upon completion by professional superiors.

Essential Duties and Responsibilities

(Any one position may not include all of the duties listed, nor do the listed examples include all tasks, which may be found in positions of this class.)

- Acts as Resident Construction Inspector (under direction of a professional superior) on an assigned project, assuring quality and workmanship and conformance to contract specifications and plans. Will interact with contractors, consultants, and suppliers on a routine basis.

- Monitors contractor lane closures, as well as other traffic control devices.

- Acts as senior instrument man-surveyor of a survey party on non reconnaissance, laying out construction work or inspecting project work in progress, directs and participates in the operation of transit or level, runs survey lines, takes stadia readings, determines station and cross-section elevations, and ties in the monuments for a check. Uses data collector and computer software to manipulate readings into workable drawings for project use.

- Performs difficult drafting work such as detailed mapping, drafting, lettering and tracing both in pencil and in ink, interprets and plots from field notes of survey, boring, construction and right-of-way master plans, and progress records maps. Performs elementary design work such as drainage, slope treatment, template, and depth of foundation base details, utilizing standard procedures under the immediate supervision of a professional superior. Uses applicable computer software and Computer aided design and drafting (CADD) software to create drawings and plans for project use.

- Computes quantities and areas using a calculator and simple formula, checks similar computations made by others.

- Acts as senior checker of construction details performing inspectional duties on the grade surfacing, and construction phases of the project as regards the materials, moisture content, mixtures, curing, and amounts used, prepares samples of construction materials for laboratory testing.

- Assists other members of department in filing, inventory, reproduction of engineering and right-of-way paper documents and plans, as well as electronic files.

- Assists in maintaining hazardous waste generated at highway project sites and being qualified to sign a Uniform Hazardous Waste Manifest to properly manifest hazardous waste offsite for proper disposal.

- Performs related work as required.

Required Knowledge, Skills and Abilities

Considerable knowledge of engineering field instruments and equipment and their use in construction work.

Considerable knowledge of drafting instruments and the techniques of their use for all standard applications, including CADD and related computer software.

Considerable knowledge of highway or structural materials and their application to particular projects.

Significant knowledge of chapter 6 of the Manual of Uniform Traffic Control Devices (MUTCD) and proper procedures for setting up and taking down traffic control devices.

Considerable skill in the use of field engineering, testing, or drafting instruments.

Ability to read and interpret specifications, maps, and technical drawings.

Must pass a Pulmonary Function Test and be medically approved to wear a respirator. Must be clean shaven at all times for proper fitting of a respirator if at such time their job requires the use of a respirator.

Must understand and follow all appropriate Maine Turnpike Safety rules, policies and procedures. Must understand and interpret all related OSHA safety rules as they apply to the outside contractors and suppliers and be aware of responsibilities in regards to any violations to these rules.

Must be trained, or have the ability to be trained (as a competent person), in hazardous waste management within 6 months of taking this classification and receive annual refresher training.

Education and/or Experience

Two years of college level study in Civil Engineering or related (i.e., Associates Degree in Construction Management) and minimum of 4 years recent progressively responsible experience in construction inspection/engineering related duties/surveying and/or use of CADD or equivalent combination of education and experience **OR** 2 years as an Engineering Technician I.

Certificates, Licenses and Registrations

Maine class C drivers license is required.
Certification in Erosion Control, as a Maine Concrete Technician and as a New England Transportation Technician Certification Program (NETTCP) HMA Paving Inspector is required.

Special Requirements

Protective footwear meeting the ANSI-Z 41 standard, is required for this position. Shoes, sneakers, or any other type of footwear are not acceptable.

Language Skills

Ability to read and understand documents such as policies, safety rules and procedure manuals. Ability to write basic correspondence. Ability to speak effectively and to accurately convey information to staff, patrons, state and local government, and the general public in a concise and courteous manner.

Mathematical Skills

Ability to apply basic mathematical and algebraic concepts such as whole numbers and fractions. Ability to calculate figures and amounts such as discounts and percentages.

Reasoning Ability

Ability to apply common sense understanding to carry out instructions in written, oral or diagram form. Ability to deal with problems involving concrete variables in standardized situations. Applies good judgment

in a variety of settings including stressful situations. Ability to know when to ask questions and how to find information when needed.

Physical Demands

Sufficient physical stamina to work long hours under occasional adverse weather conditions.

While performing the duties of this job, the employee is frequently required to stand and communicate through speaking and listen intently. The employee is occasionally required to walk, sit, use hands to manipulate, handle or feel, reach with hands and arms, and stoop, kneel, crouch or crawl. The employee must regularly lift and/or move up to 50 pounds and occasionally lift and/or move up to 75 pounds.

Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, ability to adjust focus and ability to drive at night.

The physical requirements and working conditions described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform essential functions.

Pay Range

Range 16, Maintenance & Operations Unit

Working Hours

Typical hours are Monday through Friday, 7:30 am to 4:00 pm. When assigned to a construction project, this position is subject to working non-routine hours including regular night shifts. Employee must be available to come in early or work late on occasion.

Work Environment

The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.

While performing the duties of this job, the employee is frequently exposed to outside weather conditions. The employee is occasionally exposed to wet and/or humid conditions, moving mechanical parts, fumes or airborne particles and frequently exposed to the dangers of moving vehicles of all sizes and types. There is frequent exposure to maintenance and construction activities where the noise level is usually very loud. The employee may be required to work a non-standard workweek and occasionally asked to travel.