Illinois Department of Transportation

Memorandum

To:	DEPUTY SECRETARIES, DIRECTORS AND BUREAU CHIEFS
From:	Dianna L. Taylor Bureau Chief of Personnel Management
Subject:	Technical Vacancy
Date:	April 6, 2017

Attached are the Position Summary Sheet and Position Description for the vacant technical position listed below. Please post this vacancy announcement Friday, April 7, 2017 in the designated areas.

The deadline for applicants to submit their names for consideration is **4:30 p.m.** on **Thursday, April 20, 2017**. Applicants will not be accepted after that time and date.

NOTE: A copy of each applicant's ACTIVE Illinois Professional Engineer License must accompany application for this position. Please be advised that if a high volume of applications are received, the applications may be screened to establish a smaller pool of applicants for interview. The screening will be based on the information contained in the application.

All applicants will receive a position description for the position they are applying for. If you have any questions, please contact the Bureau of Personnel Management at 217/782-5594.

CE V	Geotechnical Engineer Region 3/District 5/Project Implementation Highways Project Implementation Paris

Attachments
41717

Technical Applications (PM 1080 rev 9/19/16) **must be received** by the Bureau of Personnel Management, Room 113, 2300 South Dirksen Parkway, Springfield, IL 62764 (Fax# 217/557-3134) or emailed to DOT.CO.BPM.EmploymentApplications@Illinois.gov by **Thursday, April 20, 2017**, **4:30 p.m.** Please include address, daytime phone and position for which applying if not already listed on application. Applicants will be notified in writing to schedule interviews.

NOTE: A copy of each applicant's ACTIVE Illinois Professional Engineer License must accompany application for this position. Please be advised that if a high volume of applications are received, the applications may be screened to establish a smaller pool of applicants for interview. The screening will be based on the information contained in the application.

Illinois Department of Transportation

An Equal Opportunity Employer

Position Summary Sheet

Classification:	**Civil Engineer V**	**Salary:**	**$6,315 - $8,263***
Position Title:	**Geotechnical Engineer**	**Union Position:**	☒ **Yes** ☐ **No**
Position Number:	**PW115-23-55-203-10-01**	**IPR#:**	**41717**

Office/Central Bureau/District/Work Address:

OHPI/Region 3/District 5/Bureau of Project Implementation/13473 IL Hwy 133 W., Paris, IL

Description Of Duties:

This position is accountable for the supervision and direction of technical personnel engaged in surface and subsurface soil investigation and the application of geotechnical principles as related to the planning, design, construction and maintenance of the highway system.

Special Qualifications:

Required:

- Current Illinois Professional Engineer license
- Valid driver's license

Desired:

- Nine years' experience in civil engineering of which at least five years should be in the design and construction of highways, three years of which should have been supervising engineering functions
- Extensive knowledge of the principles and practices of civil engineering
- Strong oral and/or written communications skills

Shift/Remarks:

7:00 am – 3:30 pm / Monday – Friday

*Individual salary offers are computed based on an applicant's current position and experience level in comparison to the posted title as well as internal equity of staff in the organizational unit.

ILLINOIS DEPARTMENT OF TRANSPORTATION
POSITION DESCRIPTION

DATE:	March 16, 2016	**POSITION:**	Geotechnical Engineer
APPROVED BY:		**OFFICE/DIVISION:**	OHPI/District 5/Bureau of Project Implementation/Materials
CODE:	PW115-23-55-203-10-01	**REPORTS TO:**	Materials Engineer

Position Purpose

This position is accountable for supervision and direction of technical personnel engaged in surface and subsurface soil investigation, and for the application of geotechnical principles as related to the planning, design, construction and maintenance of the highway system.

Dimensions

Subordinate Personnel:	Direct – 2; Indirect – 4-10
Number of Earthwork Projects and Soils Reports Annually:	10 to 20
Number of Foundation Boring Projects (Structures) Annually:	20 to 50
Contract Construction Value of Projects Requiring Soils or Foundation Investigation:	$20 to $40 Million Annually

Nature and Scope

This position reports to the District Materials Engineer as do the Mixtures Control Engineer, Physical Tests Engineer, General Materials Engineer, and an Executive Secretary. Reporting to this position is a Supervising Field Geologist and a Field Geologist/Drill Rig Technician.

This position is accountable for supervising the Geotechnical Section, which includes establishing a coordinated program which (1) considers the extent and performance of soil and rock conditions as determined by subsurface exploration and laboratory testing; (2) provide an economical and safe design as determined from analysis and interpretation of the data obtained; and (3) assures that the intent of the designs are carried out in construction as determined by job quality control testing and inspection. This position is unique in that a high degree of expertise in a specialized technical field is required along with the sound management skills essential to coordinating the field, laboratory and office functions.

Typical problems are directing and coordinating the section to accomplish a geotechnical program that is often shifted or accelerated by changes in the overall district highway program; motivating and evaluating subordinates in order to assure that objectives and deadlines are met; establishing and maintaining an effective and congenial working relationship with staffs from several consulting firms, contractors, and number state, federal, and local governmental agencies; initiating, formulating, and recommending both tried and innovative solutions for sophisticated soil problems, depending on the circumstances and economies involved. The greatest challenge of this position is developing courses of action to take when limited sub-surface borings and tests results are available.

The incumbent personally implements appropriate laboratory tests, prepares the soils profile, performs stability analyses and develops parameters for forecasting soil behavior under different situations. From this base of information, the incumbent submits recommendations regarding design criteria and construction procedures. This position reviews the District's design plans to ensure they have adequately addressed the soil requirements and routinely follows through the construction phase to ensure the soil or foundation problems are encountered. S/He monitors nuclear density procedures, ensures the District is in compliance with State

and Federal radiation safety requirements, and serves as the District Radiation Safety Officer. Priorities are established for the annual boring program and adjusted as necessary. The incumbent designs soil-cement, lime modifications, and stabilization procedures for sub grades, and supervises the construction of these stabilization procedures. This position accepts or rejects borrow materials, on local and state projects, reviews and approves soil reports submitted by consultants, is the leader of the District's Soil Committee which determines the need for and magnitude of soil surveys for local agencies' highway projects. This incumbent also serves on the District's Confined Space Entry Team, which performs all confined space work requests for design or construction purposes.

The Geotechnical Engineer accomplishes her/his accountabilities through the following staff:

Supervising Field Geologist – who is responsible for supervising the District's drill rig crew and related support equipment, and for the supervision and performance of laboratory and field testing of soils and aggregates for the District.

Field Geologist/Drill Rig Technician – who is responsible for the operation of a mobile drill rig, core rig and related equipment to obtain soil, rock and pavement samples for soil surveys, foundation borings, embankment borrow pits and pavement analysis.

The incumbent is given wide latitude in accomplishing all soil related activities because of the highly specialized nature of the work. S/He not only draws on extensive technical knowledge, but also relies on familiarity with the unique soil conditions that occur in the District. This position is governed by the State and Federal standards and the principles and practices of soil mechanics. Only extraordinary technical problems are referred to the Bureau Chief or the Central Bureau for resolution.

The incumbent has frequent internal contacts with the Bureaus of: Program Development, for limited or complete field investigations and review and/or compiling of geological data utilized in location studies, for providing soil reports and recommendations for sub grade, embankment, and slope construction, and for providing geological data related to mineral, water and other subsurface deposits for Land Acquisition; Project Implementation, for continuous monitoring of projects in the field involving embankments, sub grades, sub grade treatment, slope corrections, etc.; Operations, for soil strength analysis involving foundations for high mast lighting, overhead traffic signs and signal mast arm structures, and for problems involving damage, sub grades, pavement and slope stability issues; and Central Bridges and Structures, for providing foundation boring logs and recommendations for substructure bearings and end slope design.

Outside contacts include contractors, consulting firms, University of Illinois, the Illinois Geological Survey and federal agencies for soil related matters. Work is also performed for the Capital Development Board, Department of Natural Resources, Department of Administrative Services and local governmental agencies.

The effectiveness of this position is measured by the prompt and accurate completion of soil reports, cost effective solutions to soil failure problems and the successful completion of construction projects.

Principal Accountabilities

1. Ensure that all district geotechnical investigations, determinations, evaluations and recommendations in the planning, design, construction and maintenance of transportation facilities are effective and economical.

2. Provides consulting services to local governmental agencies.

3. Reviews design plans and monitors embankment and foundation construction within the District.

4. Reviews Soil Engineering Reports prepared by other to ensure conformity to state policies and procedures.

5. Maintains the required record system for nuclear density testing equipment and monitors operating personnel for safety and radioactive exposure.

6. Assigns, trains, motivates and evaluates staff.

7. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.

8. Performs other duties as assigned.