

Job Title: CIVIL ENGINEER TRAINEE - GEOTECHNICAL ENGINEER TRAINEE - IPR#45355

Agency: Department of Transportation

Closing Date/Time: 11/29/2021

Salary: \$4,365 - \$4,785 Monthly

Job Type: Salaried Full Time

County: Sangamon

Number of Vacancies: 1

Plan/BU: NR916

DO NOT APPLY ONLINE

****DO NOT CLICK THE APPLY BUTTON****

HOW TO APPLY:

Technical Applications PM1080 (rev 8/21/21) 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 the closing date listed above. The previous application form revised 3/8/21 will be accepted until October 2, 2021. Please visit <https://idot.illinois.gov/about-idot/employment-opportunities/employment/index> to download the Technical Application PM1080.

Unofficial college transcripts must be included with application. Official college transcripts must be submitted upon date of employment. Applicants possessing an Engineer Intern License must also include a copy with application. Applicants not submitting these documents by the posting deadline will not be considered for employment.

In an attempt to fill the posted positions, IDOT will contact applicants during the posting period to schedule interviews. All postings will result in three interview pools, with application cut off dates of: September 27, 2021, October 27, 2021 and November 29, 2021. Those applicants that have been deemed qualified and have submitted a completed application with all required attachments will be invited to interview accordingly based on the date their application documents are received.

Please indicate IPR#45355 on the Technical Application PM1080.

Agency Mission Statement

The Illinois Department of Transportation is seeking to hire a Geotechnical Engineer Trainee.

The IDOT team works diligently to provide safe, cost-effective transportation for Illinois in ways that enhance quality of life, promote economic prosperity and protect our environment. We are problem solvers and leaders, constantly searching for innovations and improvements in support of our commitment to providing the best multimodal transportation system for Illinois.

Our team fosters a culture of inclusivity. We value diversity and hold ourselves to the highest ethical standards as we work together for a common purpose. Team members frequently collaborate with colleagues and others outside the department to best meet customer needs.

Employees enjoy excellent benefits, including health, vision and dental insurance; a retirement plan and deferred compensation options; state holidays and other time off; tuition reimbursement; flexible schedules; and pre-tax benefit programs. The department also offers extensive training and career advancement opportunities.

We invite qualified applicants to apply to become part of our team. We are confident that you will take pride in serving Illinois and its residents and visitors.

Job Responsibilities

This position provides structural engineers with geotechnical recommendations on simple projects so that the most cost effective, safe, and durable structure is constructed. This is accomplished by performing simple analyses to design foundations supporting bridges, retaining walls, culverts, and other traffic structures or to review foundations designed by consultants. The incumbent provides foundation and geotechnical design parameters, plan modifications, and specification input to the structural engineer so the contract documents do not create construction delays or contractor claims. In addition, this position assists the districts, contractors, consultants, and in-house structural engineers in responding to or resolving soils related design and construction problems. This position reports to the Geotechnical Group Engineer. There are no subordinates reporting to this position.

This position operates in an environment where multiple projects are assigned to the incumbent, the general review scope is provided, and the incumbent is expected to work for the most part independently to provide competent recommendations to the Geotechnical Group Engineer by the requested completion date. As part of the incumbent's duties, s/he may be asked to perform geotechnical analyses on simple projects. This may involve working with consultants (both geotechnical and structural), as well as district and bureau staff, to ensure cost effective, safe, accurate geotechnical recommendations along with resolving problems and considering the site and subsurface design constraints.

The incumbent is responsible for developing and maintaining a comprehensive knowledge of geotechnical engineering theories and practice so that s/he is capable of solving and reviewing somewhat unique and simple problems by utilizing advanced geotechnical analyses and procedures. As such, innovative analyses and designs not normally required on more common projects are necessary. The greatest challenge faced by the incumbent is to be resourceful and apply the latest technological developments in geotechnical engineering to these simple departmental projects.

(Job Responsibilities continued)

The incumbent prepares in-house Structure Geotechnical Reports (SGRs) on simple projects, reviews consultant-prepared SGRs, and communicates review comments to the consultants to ensure completeness of the SGR which is used in the development of the Type Size and Location (TSL) plans, design computations, final contract plans, and construction specifications. The incumbent ensures appropriate subsurface soils data has been gathered and is commensurate with the complexity of the projects. In addition, TSL plans, final plans, local agency designs, and construction submittals on simple projects are reviewed and recommendations are issued by the incumbent to address any geotechnical problems uncovered. The recommendations made by the incumbent will be often related to a foundation, retaining wall, or site soils ability to carry design loads, the adequacy or development of plan details, and the review or writing of specifications. S/He is responsible for the analyses, design, or review of simple bridge foundations, earth retaining systems, ground modification, ground anchors, river cofferdams, temporary soil retention systems as well as sign, light, and traffic structure foundations, construction control of pile driving, and drilled shaft installation. The incumbent may need to conduct field inspections to view and address geotechnical challenges in either the planning, design, or construction phases.

The incumbent has broad latitude in utilizing judgment on how to complete assignments, as well as having the responsibility to seek input and concurrence from the Geotechnical Group Engineer when deviating from policy and resolving simple issues to maintain unit productivity. The incumbent must maintain a working knowledge of and be guided by the American Association of State Highway Officials (AASHTO) design and construction specifications and applicable departmental policies. This position maintains contact with Bureau of Bridges and Structures and district staff. S/He maintains moderate contact with the Federal Highway Administration on foundation policies as well as technology transfer and occasional contact with university personnel involved in previous or current research to answer questions on geotechnical issues. Occasional overnight travel is required. The effectiveness of this position is measured by the accuracy and expertise observed by the Geotechnical Group Engineer, the timeliness with which tasks are completed, and the ability to communicate simple issues with the supervisor, consultants, and co-workers.

Principal Accountabilities

1. Prepares and/or reviews consultant SGRs on simple projects.
2. Reviews foundations and geotechnical aspects of structural consultant and in-house TSL plans for simple structures.
3. Reviews foundations and geotechnical aspects of structural consultant and in-house final plans for simple structures.
4. Reviews simple construction submittals including cofferdams, seal coats, temporary soil retention systems, drilled shaft installation procedures, ground modification designs, tie-back anchor and micro-pile designs, value engineering, construction problems, mechanically stabilized earth (MSE) and soil nailed wall internal stability, noise wall foundations, and other less common requests.
5. Reviews simple local agency structure foundations and geotechnical reports as well as repair plans for foundations, slopes, and retaining walls.
6. Designs simple shaft foundations for high mast light towers, overhead sign trusses, and traffic signal mast arms when standard design tables provided on the standard base sheets and manuals cannot be used.
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.

Qualifications

Position Requirements

- Completion of a bachelor's degree in engineering from an ABET accredited college OR a master's degree OR a current Engineer Intern License in the state of Illinois (includes those expecting to graduate in fall 2021 or spring 2022)
- Minimum 2.5 cumulative GPA in engineering related courses (If 2.0-2.5 GPA, candidate must have passed Fundamentals of Engineering exam)
- Valid driver's license
- Occasional overnight travel is required

Position Desirables

- Strong oral and written communication skills

Work Hours: 8:00 AM to 4:30 PM Monday-Friday

Work Location: Springfield - 2300 S Dirksen Pkwy

Office: Office Highways Project Implementation/Bureau of Bridges and Structures

Agency Contact: DOT.CO.BPM.EmploymentApplications@Illinois.gov

Job Function: Transportation

Collective Bargaining Agreement language applies to this requisition

We are currently transitioning our application process away from paper process to an electronic application process. This position has not been transitioned please follow the directions below when applying to this position.

Please visit the IDOT website at <http://www.idot.illinois.gov/about-idot/employment-opportunities/employment/index> to obtain the required bid forms and application forms.