

Job Title: CIVIL ENGINEER III- GEOTECHNICAL ENGINEER - IPR#46185

Agency : Department of Transportation

Closing Date/Time: 02/02/2023

Salary: \$5,430 - \$9,000 Monthly

Job Type: Salaried Full Time

County: Sangamon

Number of Vacancies: 1

Plan/BU: NR916 - Protech Teamsters

This position is a union position; therefore, provisions of the relevant collective bargaining agreement/labor contract apply to the filling of this position.

All applicants who want to be considered for this position MUST apply electronically through the illinois.jobs2web.com website. State of Illinois employees should click the link near the top left to apply through the **SuccessFactors employee career portal.**

Applications submitted via email or any paper manner (mail, fax, hand delivery) will not be considered.

Agency Mission Statement

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

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.

The department offers extensive training and career advancement opportunities. Employees also receive a robust benefit package including:

- Monday-Friday work schedule
- Flexible work schedules are available in many program areas.
- Health, Life, Vision, and Dental Insurance
- Pension Plan
- (10) Weeks paid Maternity/Paternity Leave
- Deferred Compensation Program and other pre-tax benefit programs (Medical/Daycare)
- Employees earn (12) paid Sick Days annually.
- New Employees earn (10) paid Vacation Days their first year of service and can earn up to (25) paid Vacation Days annually.
- Employees earn (3) paid Personal Days annually.
- (13-14) paid holidays annually (based on start date)
- Tuition Reimbursement

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 typical to complex projects so that the most cost effective, safe, and durable structure is constructed. This is accomplished by performing typical to complex analyses to design or review and approve consultant designed foundations supporting bridges,

retaining walls, culverts, and other traffic structures. 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 districts, contractors, consultants, and in-house structural engineers in responding to or resolving soils related design and construction problems.

Annual projects: 25-50
Contract value: \$75 million

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 and the general review scope is provided. The incumbent is expected to work independently to provide competent recommendations to the Geotechnical Group Engineer by the requested completion date.

The greatest challenge faced by the incumbent is to be resourceful and apply the latest technological developments in geotechnical engineering to these typical to complex departmental projects. Typical problems include consultant and in-house designed bridges, box culverts, and retaining walls; existing structure, foundation, and slope repairs; and assorted foundation construction issues.

The incumbent prepares in-house structural geotechnical reports (SGR) on typical to complex 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 structure's type, size, and location (TSL) plans, design computations, final contract plans, and construction specifications. The incumbent is also responsible for making sure that the appropriate subsurface soils data has been gathered and is commensurate with the complexity of the project. In addition, TSL plans, final plans, local agency designs, and construction submittals on typical to complex projects are reviewed and recommendations are issued by the incumbent to address any geotechnical problems uncovered. As such, the recommendations made by the incumbent will often relate to a foundation, retaining wall, or site soils ability to carry design loads; the adequacy or development of plan details; or the review or writing of specifications. S/He is responsible for the analyses, design, or review of typical to complex bridge foundations, earth retaining systems, ground modification designs, ground anchors, river cofferdams, temporary soil retention systems, as well as sign, light, and traffic structure foundations.

(Job Responsibilities continued)

This includes designs of typical to complex single 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. The incumbent is also responsible for the construction control of pile driving, drilled shaft installation, mechanically stabilized earth (MSE) and soil nailed wall internal stability, noise wall foundations, and other less common requests. S/He may need to conduct field inspections to view and address geotechnical challenges in either the planning, design, or construction phases. The incumbent is responsible for developing and maintaining a comprehensive knowledge of geotechnical engineering theories and practices so that s/he can solve and review somewhat unique and typical to complex problems utilizing advanced geotechnical analyses and procedures. These typical to complex problems require innovative analyses and designs not normally required on more common projects. As part of the incumbent's duties, s/he may be asked to perform geotechnical analyses on typical to complex projects. This may involve working with consultants (both geotechnical and structural), as well as district and bureau staff, to ensure cost effective, safe, and accurate geotechnical recommendations along with resolving problems, considering the site, and subsurface design constraints.

The incumbent has broad latitude using his/her judgment 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 typical to complex issues to maintain unit productivity. The incumbent must maintain a working knowledge of and be guided by the American Association of State Highway and Transportation Officials (MSHTO) design and construction specifications and applicable departmental policies.

S/He maintains moderate external contact with the Federal Highway Administration (FHWA) on foundation policies and technology transfer as well as occasional contact with university personnel involved in research to answer questions on geotechnical issues. The incumbent has internal contact with the central bureaus of

Construction and Materials and the districts. Occasional statewide travel that may include overnight stays 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 his/her ability to communicate typical to complex issues with the Geotechnical Group Engineer, co-workers, and consultants.

Principal Accountabilities

1. Prepares and/or reviews consultant SGRs on typical to complex projects.
2. Reviews the foundations and geotechnical aspects of structural consultant and in-house TSL plans for typical to complex structures.
3. Reviews the foundations and geotechnical aspects of structural consultant and in-house final plans for typical to complex major structures.
4. Reviews typical to complex construction submittals including cofferdams, seal coat, temporary soil retention systems, drilled shaft installation procedures, ground modification designs, tie-back anchor and micro-pile designs, value engineering, construction problems, MSE and soil nailed wall internal stability, noise wall foundations, and other less common requests.
5. Reviews typical to complex local agency structure foundations and geotechnical reports as well as repair plans for foundations, slopes, and retaining walls.
6. Designs typical to complex single 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
- Master's degree in engineering; OR
- Engineer Intern license in the state of Illinois PLUS 43 months of civil engineering experience
- Valid driver's license
- Occasional statewide travel that may include overnight stays

Position Desirables

- Working knowledge of modern methods and techniques as related to bridges and structures
- Ability to supervise and inspect the work of contractors on major engineering projects in accordance with plans and specifications
- Good oral and written communication skills

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

Work Location: 2300 S Dirksen Pkwy Springfield, IL 62764-0001

Agency Contact: DOT.CONTACTHR@ILLINOIS.GOV

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

Job Family: Transportation

APPLICATION INSTRUCTIONS

Use the "Apply" button at the top right or bottom right of this posting to begin the application process.

If you are not already signed in, you will be prompted to do so.

State employees should sign in to the career portal for State of Illinois employees – a link is available at the top left of the Illinois.jobs2web.com homepage in the blue ribbon.

Non-State employees should log in on the using the "View Profile" link in the top right of the Illinois.jobs2web.com homepage in the blue ribbon. If you have never before signed in, you will be prompted to create an account.

If you have questions about how to apply, please see the following resources:

State employees: Log in to the career portal for State employees and review the Internal Candidate Application Job Aid

Non-State employees: on Illinois.jobs2web.com – click "Application Procedures" in the footer of every page of the website.

The main form of communication will be through email. Please check your "junk mail", "spam", or "other" folder for communication(s) regarding any submitted application(s). You may receive emails from the following addresses:

- donotreply@SIL-P1.ns2cloud.com
- systems@SIL-P1.ns2cloud.com