

# Job Title: CIVIL ENGINEER IV - SENIOR STRUCTURAL PLANNING ENGINEER - IPR#45875

**Agency :** Department of Transportation

**Closing Date/Time:** 03/21/2023

**Salary:** \$5,920 - \$9,230 Monthly

**Job Type:** Salaried Full Time

**County:** Sangamon

**Number of Vacancies:** 1

**Plan/BU:** NR916 - Protech Teamsters

**\*This position is covered by the Revolving Door Prohibition policy.**

**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](http://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 Senior Structural Planning 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 is responsible for structural, geometric, and economic analysis; development and approval of type, size, and location (TSL) plans for large and extremely complex bridges and other highway structures; and review and approval of TSL plans prepared by consultants.

Prepared in-house: 4-5; value: \$3,000,000 to \$10,000,000  
Projects reviewed: 15-20; value: \$20,000,000 to \$200,000,000

This position reports to the Structural Planning Group Engineer. There are no subordinates reporting to this position.

This position functions in an environment of sound engineering judgment and a thorough knowledge of advanced structural engineering to perform the preliminary analysis of structures designed and constructed by the department. The incumbent performs the preliminary engineering required for the economic, aesthetic, and structural evaluation of various complex structure types to determine the suitability and compatibility of alternate bridge types to the environment of the site. These preliminary engineering evaluations are unique in that the structure types considered are of major proportion and complexity, usually crossing the major waterways of the state, and require innovative preliminary analysis infrequently used in the majority of bridge designs.

Typical problems faced by the incumbent include the identification and resolution of complex geometric and structural problems utilizing sophisticated analysis procedures which are unique to each individual structure TSL. S/He is required to determine, from several potential types, the most acceptable and cost-effective structure TSL. The greatest challenge faced by the incumbent is to ensure that the TSL of the recommended structures are compatible with the location and are cost effective and structurally adequate. To accomplish this, s/he is continually challenged to keep abreast of all new and innovative developments in advanced structural design and to determine the potential applications of new structure types, materials, and construction procedures to departmental projects.

The incumbent is personally responsible for the development of TSL plans for large and extremely complex projects. The TSL development process requires the analysis of vertical and horizontal roadway geometry and site survey data and the preparation of structural design and economic evaluation computations necessary to compare alternate structure types and structural systems, all of which are required for the development of cost-effective projects. The incumbent reviews, analyzes, evaluates, and approves TSL plans prepared by consultants to ensure structural adequacy, the most economic structural systems are utilized, and the structure conforms to policy and aesthetic design.

### **(Job Responsibilities continued)**

S/He analyzes and evaluates feasibility studies, bridge type studies, and bridge condition reports for extremely complex projects. The incumbent determines whether to repair, rehabilitate, or totally replace structures based on his/her structural and economic evaluation of data. The incumbent performs field investigations of unique structural problems which include the evaluation of structural integrity and provides direction to district personnel concerning structural salvage or replacement. The incumbent conducts structural and economic investigations which are utilized in the development or revision of preliminary planning policies. When required, the incumbent evaluates and approves consultant man-hour requests and utility assessments sent into the district offices. On occasion, s/he makes field reviews with the district scoping teams to assist in programming culvert extensions/replacements and structure replacement/rehabilitation. The incumbent might also be asked to assist in the inspection of major bridges with the statewide bridge crew.

The incumbent functions with minimal supervision and guidance and is given broad latitude in pursuing his/her objectives. The incumbent is guided by the American Association of State Highway and Transportation Officials (AASHTO) specifications and current interim specifications, Bridge Manual, and all applicable department policies.

The incumbent functions with moderate contact with the Federal Highway Administration (FHWA) and consultants. S/He comes into frequent contact with staff in the district offices and other bureaus within the department on projects in the preliminary planning stage. The incumbent also maintains contact with university personnel to gather research information and to facilitate the completion of assignments. Occasional statewide travel with overnight stays is required.

The effectiveness of this position can be measured by the structural and analytical expertise displayed in the analysis and planning of large and complex projects, the incumbent's ability to solve complex geometric and structural design problems, and the timely completion of assigned projects. It also can be measured by the incumbent's ability to solve field-related problems.

### **Principal Accountabilities**

1. Plans large and extremely complex structures.
2. Performs field investigations of structural problems.
3. Performs preliminary design and analysis of extremely complex structure types utilizing the newest methods and technology.
4. Analyzes and evaluates complex TSL plans prepared by consultants.
5. Performs structural and economic investigations.
6. Analyzes and evaluates feasibility studies and bridge condition reports for extremely complex projects.
7. Assists district office staff in determining appropriate scope of work for projects involving structures.
8. Provides direction and technical assistance in the layout and drafting of preliminary designs.
9. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.
10. Performs other duties as assigned.

### **Qualifications**

#### **Position Requirements**

- Current registration as a Licensed Professional Engineer in the state of Illinois
- Four years of experience in civil engineering and/or structural engineering
- Valid driver's license
- Occasional statewide travel with overnight stays

#### **Position Desirables**

- Current registration as a Licensed Structural Engineer in the state of Illinois
- Ability to prepare complete engineering plans and specifications
- Thorough knowledge of the principles and practices of civil and structural engineering
- Strong oral and/or written communication skills

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

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

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

**Agency Contact:** DOT.CONTACTHR@ILLINOIS.GOV

**Job Family:** Transportation; Sciences and Natural Resources

**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](http://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](http://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](http://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](mailto:donotreply@SIL-P1.ns2cloud.com)
- [systems@SIL-P1.ns2cloud.com](mailto:systems@SIL-P1.ns2cloud.com)