Civil Engineer Trainee (1 Position)

Traffic Signal Systems Engineer Trainee

**Position Number:** PW110-23-58-507-20-01  
**Opening Date:** March 11, 2019  
**Closing Date:** April 5, 2019

**Office/Central Bureau/District/Work Address:**  
Office of Highways Project Implementation / Bureau of Operations / Region 5 / District 8 / 1102 Eastport Plaza Drive, Collinsville, IL

**Position Purpose:**  
This position assists in the coordination and timing of simple traffic signal systems. Attendance at training sessions held at the advanced Transportation Research & Engineering Laboratory and other courses in traffic engineering principles will provide the expertise necessary to assist consultants and complete simple in-house signal coordination and timing projects. The incumbent assists the Electrical Services Supervisor and learns proper fail-safe protection and timely and economical installation and alteration of simple interconnected traffic/railroad signal warning systems for the counties in the district.

**Qualifications:**

**Position Requirements:**
- Bachelor of Science in Civil Engineering from an ABET accredited university prior to date of employment or must be a Licensed Engineer Intern in the state of Illinois (includes those expecting to graduate in spring 2019)
- Minimum 2.5 cumulative GPA in engineering related courses (If GPA is between a 2.0-2.5, candidate must have passed Fundamentals of Engineering Exam.)
- Valid driver’s license

**Position Desirables:**
- Strong oral and written communication skills

**How to Apply/Remarks:**
Technical Applications PM1080 (rev 6/1/17) 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 4:30 pm on the closing date listed above. Applications will not be accepted after this date and time. Applicants will be notified in writing to schedule interviews.

**Agency Contact:** Bureau of Personnel Management, 217/782-5594

To be considered for a permanent position within IDOT, you must either be a US citizen or a non-citizen with permanent work authorization.

Only education/coursework listed within the application will be considered for determining eligibility for this position.

**NOTE:** 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. Please include IPR number on the application.

**NOTE:** Please be advised that if a high volume of applications is 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.

*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.*
Position Purpose

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Dimensions

Geographical Area: 11 counties
Existing Traffic Signal Systems: 38
Interconnected Traffic/Rail Signals: 13
Project Reviews: .15
Training: +3

Nature and Scope

This position reports to the Electrical Services Supervisor. No subordinates report to this position.

The environment for this training position centers on the department’s interconnected traffic/railroad systems. The incumbent learns proper fail-safe protection for simple interconnected systems throughout the counties and metropolitan areas within the district. The incumbent assists the Electrical Traffic Control Supervisor in ensuring compliance with state and federal regulations for simple traffic/railroad interconnected signal systems. S/He reviews Signal Coordination and Timing (SCAT) consultants work, assists with in-house signal system timing projects, and assists local agencies to ensure their systems are maintained and utilized.

The major challenges of this position include participating in simple training to learn, maintain, and keep abreast of the latest interconnected signal technology and training to be the district’s signal systems regulatory expert. A typical problem of this position is learning to maintain simple systems within constraints of sound engineering judgment while remaining within the limitations of plans and specifications.

The incumbent personally participates in the Advanced Transportation Research and Engineering Laboratory (ATREL) at Rantoul, IL – to test equipment, evaluate the latest technology, revise specifications, and research needed traffic/railroad signal improvements. The incumbent is learning the expertise needed to operate simple systems, to develop or update timing plans for simple projects that are not assigned to consultants, and to contribute to design specifications for simple interactive traffic/railroad signal systems. S/He personally reviews SCAT consultant’s work, monitors traffic conditions, and adjusts simple traffic signal timings.

The incumbent functions under direct supervision in accomplishing assigned duties, referring problems to the Electrical Services Supervisor for resolution. S/He must operate within the guidelines set forth by the Manual.
of Uniform Traffic Control Devices, the Bureau of Operations’ Policy and Procedures Manual, the Construction 
Manual, and the Standard Specifications for Road and Bridge Construction. S/He is constrained by district, 
departmental, and federal policies as well as plans and specifications.

The incumbent maintains internal contacts with the district Bureau of Project Implementation to ensure that 
simple reports, pay items, equipment, and material are submitted, state inspected, and/or approved; the 
Bureau of Program Development to ensure that simple plans are completed to meet letting dates, to obtain 
traffic data, and to view simple locations studies; and the Central Bureau of Operations Traffic Systems 
Engineer and Traffic and Railroad Signal Engineer. Outside contacts are maintained with the Federal Highway 
Administration, Illinois Commerce Commission, and University of Illinois personnel for training purposes.

The effectiveness of this position is measured by the incumbent’s ability to learn the substance and application 
of simple technical materials; quality and timeliness of simple traffic/rail signal systems installation, update, and 
maintenance, and the correct resolution of simple problems that arise in the field.

**Principal Accountabilities**

1. Participates in simple ATREL training to test equipment; evaluate the latest technology, revise 
specifications, and research improvements.

2. Trains to provide in-house assistance for the safe and efficient operation of simple interconnected traffic 
signal systems.

3. Develops and/or updates simple timing plans for in-house projects and assists with simple design 
specifications for district interactive traffic/railroad signal systems.

4. Reviews SCAT consultant’s work and assists Signal Design consultants.

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

6. Performs other duties as assigned.

**Subordinates of this position**

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<th>Position Classification</th>
<th>Position Number</th>
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**Supervisor of this position**

Immediate Supervisor Position Classification: Engineering Technician V
Working Title: Electrical Services Supervisor

**Position Requirements**

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  must be a Licensed Engineer Intern in the state of Illinois
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Agency Approvals

[Signatures and titles]

Bureau Chief of Personnel Management

Secretary, Department of Transportation