



# Illinois Department of Transportation

## Memorandum

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To: DEPUTY SECRETARIES, DIRECTORS AND BUREAU CHIEFS  
From: Becky Koehler  
Bureau Chief of Personnel Management  
Subject: Technical Vacancy  
Date: July 11, 2018

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Attached are the Position Summary Sheet and Position Description for the vacant technical position listed below. Please post this vacancy announcement July 12, 2018 in the designated areas.

The deadline for applicants to submit their applications for consideration is **4:30 p.m. on Wednesday, July 25, 2018**. Applications 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.**

If you have any questions, please contact the Bureau of Personnel Management at 217/782-5594.

CE IV

Assistant Geometrics Engineer  
Region 2/District 3/Program Development  
Office of Highways Project Implementation  
Ottawa

Attachments  
42878

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](mailto:DOT.CO.BPM.EmploymentApplications@Illinois.gov) by **Wednesday, July 25, 2018**, 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

<b>Classification:</b>	<b>Civil Engineer IV</b>	<b>Salary:</b>	<b>\$5,800 - \$7,515*</b>
<b>Position Title:</b>	<b>Assistant Geometrics Engineer</b>	<b>Union Position:</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Position Number:</b>	<b>PW114-23-53-303-30-01</b>	<b>IPR#:</b>	<b>42878</b>

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#### Office/Central Bureau/District/Work Address:

Office of Highways Project Implementation / Region 2 / District 3 / Bureau of Program Development, 700 E. Norris Drive, Ottawa, IL

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#### Description Of Duties:

This position is responsible for interpreting policies and procedures which govern the geometric design, capacity analysis, and access control limits of highways for the design of intersections, interchanges, rest areas, and weigh stations. This position is also responsible for the direction of route location and design studies during peak work loads; and design, review, and preparation of intersection designs for approval by the Geometrics Engineer.

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#### Special Qualifications:

##### Required:

- Current Illinois Professional Engineer license
- Valid driver's license
- Occasional statewide travel with overnight stays and overtime

##### Desired:

- Six years' experience in civil engineering of which at least three years should be in the specific area of highway engineering
- Working experience in studies and plans, and construction
- Knowledge of the policies and procedures that govern the design of highway projects; and ability to analyze and solve highway engineering problems
- Strong oral and written communication skills

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#### Shift/Remarks:

8:00 am - 4:30 pm / Monday - Friday

**THIS POSITION IS COVERED UNDER THE REVOLVING DOOR PROHIBITION (RDP) POLICY.**

\*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.

\*\*Technical Application PM1080 (revised 6/1/17) is required. No previous version of the PM1080 will be accepted.

**ILLINOIS DEPARTMENT OF TRANSPORTATION  
POSITION DESCRIPTION**

<b>DATE:</b>	April 2018	<b>POSITION:</b>	Assistant Geometrics Engineer
<b>APPROVED BY:</b>	William Cruz	<b>OFFICE:</b>	OHPI / Region 2 / District 3
<b>CODE:</b>	PW114-23-53-303-30-01	<b>REPORTS TO:</b>	Senior Geometrics Engineer

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***Position Purpose***

This position is accountable for interpreting policies and procedures governing geometric design, capacity and access control of highways for the design of intersections, interchanges, rest areas, and weigh stations. This position is also accountable for developing and implementing the district's Highway Safety Improvement Program (HSIP). This position is responsible for the direction of route location and design studies during peak workloads. This position is also responsible for preparing and analyzing crash reports as requested. Design, review, and preparation of intersection designs for approval by the Senior Geometrics Engineer are performed by this position.

***Dimensions***

Intersection Designs:	10 to 20
Interchange Designs:	5 to 10
Consultant Geometric Reviews:	10 to 20
Other Bureau Reviews:	5 to 10
HSIP Projects:	5 to 10 per year
HSIP Contract Value:	\$5+ million per year

***Nature and Scope***

This position reports to the Senior Geometrics Engineer. No staff reports to this position.

This position is responsible for the development of the district's HSIP. This process includes the analysis of multiple years of crash data in order to identify locations with the most severe safety risks. The incumbent is required to create designs, which are cost-effective, while also ensuring that the appropriate countermeasures are selected and implemented. The incumbent is also responsible for the development of the identified HSIP contract plans and documents. The incumbent is also responsible for the development of intersection geometrics that conform to state policy and for recommending appropriate deviations from state policy to the Senior Geometrics Engineer and/or the Bureau of Design and Environment. The incumbent is required to create designs which are cost-effective and often unique, using sound engineering principles and value engineering. The incumbent frequently deals with the public and requires the incumbent to possess excellent oral communication skills.

Typical problems include the continuing evaluation of new and innovative policies and procedures, resolution of implementation problems, interpretation of policy and procedure, and resolution of problems associated with designs prepared by county and municipal governments, consultants, and district bureaus. The greatest challenge to this position is the imagination required in developing a geometric configuration which will be appropriate while creating a safe and cost-effective highway improvement with minimal adverse social and environmental impacts.

This position is responsible for developing geometric highway designs, analyzing traffic volumes, proposing access control limits, determining pavement/shoulder/median and right-of-way widths, designing horizontal/vertical alignments, design speeds, sight distance, super-elevation, and performing capacity analysis for intersections and interchanges. This position is also responsible for analyzing crash data to help determine safety program needs. The incumbent provides advice and guidance to consultants, county, and municipal engineers during their

preparation of geometrics, cross-sections and alignments. These functions are highly innovative and have specific objectives for fiscal restraints, cost effectiveness and safety. The incumbent's decisions are based on state and federal policies and experience incorporating innovation, field observations, educational seminars, and current literature. This position recommends for approval, to the Senior Geometrics Engineer, designs or solutions for resolving conflicting situations and highly technical problems dealing with interchange and intersection designs.

This position has latitude to accomplish responsibilities. S/He is constrained by all applicable departmental/state/federal rules and regulations. Matters of a unique nature are referred to the supervisor with recommendations for resolution.

In performing the functions of this position, the incumbent has internal contacts with personnel from the district Bureaus of Project Implementation (Local Roads Section), Operations, and Program Development (including Studies and Plans, Land Acquisition, Project Support and Programming), as well as with the central Bureaus of Design and Environment, and Safety Programs and Engineering. External contacts include consultants, local governmental entities and the general public. This position may require occasional statewide travel with overnight stays and overtime.

The effectiveness of this position is measured by the accurate and timely completion of assigned tasks and the increase in the safety and mobility afforded the motoring public by the effective use of available funds with the least adverse social and environmental consequences.

***Principal Accountabilities***

1. Develops alternatives and reviews geometric designs in the district's program prior to the public involvement process.
2. Reviews geometric designs on state highways which have been prepared by consultants, counties, municipalities, and other district bureaus.
3. Reviews and prepares safety projects prior to submission to safety committee for inclusion in the district's program.
4. Prepares/reviews geometric revisions during development of project plans and/or after construction contracts have been awarded.
5. Presents designs to the public and other agencies.
6. Implements the Highway Safety Manual in conjunction with Phase I planning.
7. Conducts before and after studies on previously completed safety projects to gain a better understanding of how our past safety jobs are performing.
8. Performs duties in compliance with departmental safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.
9. Performs other duties as assigned.