



Illinois Department of Transportation

Memorandum

To: DEPUTY SECRETARIES, DIRECTORS AND BUREAU CHIEFS
From: Becky Koehler
Bureau Chief of Personnel Management
Subject: Technical Vacancy
Date: January 26, 2018

Attached are the Position Summary Sheet and Position Description for the vacant technical position listed below. Please post this vacancy announcement January 30, 2018 in the designated areas.

The deadline for applicants to submit their applications for consideration is **4:30 p.m. on Tuesday, February 13, 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 (2 pos) Senior Design Squad Leader
Region 5/District 8/Program Development
Highways Project Implementation
Collinsville

Attachments
42438

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 **Tuesday, February 13, 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

Classification:	Civil Engineer IV (2 Positions)	Salary:	\$5,800 - \$7,515*
Position Title:	Senior Design Squad Leader	Union Position:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Position Number:	PW114-23-58-303-30-01	IPR#:	42438

Office/Central Bureau/District/Work Address:

Office of Highways Project Implementation / Region 5 / District 8 / Bureau of Program Development / 1102 Eastport Plaza Drive, Collinsville, IL

Description Of Duties:

This position is accountable for developing and preparing various contract plans and related documentation for highway construction within a district that is both highly urbanized and rural in nature. This requires the incumbent to have extensive knowledge of urban and rural design standards. In addition, the district is experiencing rapid commercial, industrial, and residential growth, which necessitates the need to develop new (or rehabilitate existing) highway systems in congested areas complicating the task of highway design.

Special Qualifications:

Required:

- Current Illinois Professional Engineer license

Desired

- Six years of experience in civil engineering including four years of supervisory responsibility of which three years should be in highway engineering
- Thorough knowledge of the principles and practices of civil engineering
- Thorough knowledge of modern methods and techniques as applied to the design, construction, and maintenance of public works
- Skill in the design of highways, streets and structures and in making complete engineering plans and specifications
- Ability to supervise the work of other engineers and technicians
- Ability to perform difficult technical research and make comprehensive recommendations on engineering problems
- Strong oral and/or written communication skills

Shift/Remarks:

8:00 am – 4:30 pm / Monday – Friday

*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**

DATE:	September 2015	POSITION:	Senior Design Squad Leader
APPROVED BY:	<u>Francis Opfer</u>	DIVISION:	Dist. 8/Program Development Studies & Plans Section
CODE:	PW114-23-58-303-30-01	REPORTS TO:	Studies & Plans Project Engineer

POSITION PURPOSE

This position is accountable for preparing and developing various contract plans and reports that are used for highway construction, and all related calculations and documentation.

DIMENSIONS

Subordinates Personnel:	2-8 Direct 1-2 Indirect
Number of Contracts:	10 to 50 Annually
Contract Value:	Up to \$200 Million Annually

NATURE AND SCOPE

This position reports to the Studies & Plans Project Engineer as do a number of other Studies & Plans Section positions. Reporting to this position are the Design Squad Leader, Senior Designer-Reviewer, Senior Designer, Junior Designer, Design Trainee, ET Senior Designer, Senior Designer Technician, ET Junior Designer, Draftsperson and Junior Draftsperson.

This position is accountable for the directing of (or preparing of) contract plans and related documentation for highway construction within a District that is both highly urbanized and rural in nature. This requires the incumbent to have extensive knowledge of urban and rural design standards. In addition, the District is experiencing rapid commercial, industrial, and residential growth, which necessitates the need to develop new (or rehabilitate existing) highway systems in congested areas, which complicates the task of highway design. This increases the amount of direction and supervision required on assigned projects and results in additional work load for the Senior Design Squad Leader.

This position functions in an environment which is characterized by fluctuations in the number of plan preparation assignments received, consultant plans reviewed, seasonal manpower requirements, and prescribed time frames for completion of assigned projects. The projects assigned to this position include the most complex and difficult ones in the District program and require a great deal of expertise and experience to accomplish. These projects entail highly complex structures; multi-jobs involving a project that would be composed of several interchanges, bridges, ramps or numerous miles of mainline highways; or major projects in urban areas. This position must maintain flexibility in assigning projects to subordinates due to the fact that changes in programs often occur to accommodate emergencies or a realignment of priorities. The position is also responsible for monitoring the projects assigned to consultants.

Typical problems faced by the incumbent include working with subordinates and consultants to resolve complex technical problems related to plan preparation, and developing timetables which facilitate timely completion of projects assigned and which also consider workload fluctuations due to program changes. The incumbent's greatest challenge is to coordinate the efforts of the squad sufficiently to meet letting deadlines while ensuring that the plans prepared for transportation facility improvements are completed in the most efficient manner. The incumbent also coordinates the efforts of the squad to facilitate the workflow from consulting engineers to ensure that letting deadlines will be met and that plans prepared by the consultants will be completed in the most cost efficient manner.

POSITION DESCRIPTION
SENIOR DESIGN SQUAD LEADER
PAGE 2

The incumbent is accountable for the determination of grade lines, drainage requirements, pavement analyses and special details required for complete designs prepared by either the squad or consultants. The incumbent is responsible for the preparation of general notes and/or special provisions to clearly explain special design details or construction procedures. In addition, this position is responsible for calculating quantities for all pay items to assure accuracy and completeness; plotting field notes on plan and profile and cross section sheets; preparing and/or checking earthwork computations to obtain the most economical and adaptable designs and conducting field reviews of affected sections before, during and after construction.

The incumbent is required to assure that all pertinent topographic and design data has been included on all plan sheets in a clear and concise manner. The incumbent must keep abreast of the latest design guidelines and policies in order that plan preparation can proceed in an effective manner and within established schedules.

The incumbent is required to develop solutions compatible with field conditions that may or may not be readily addressed by policy. This requires the development of several alternatives and justification involving cost data and construction techniques in order to logically select the most appropriate design. The incumbent is required to design priority projects that must be developed within limited timeframes. In these situations, the incumbent may be required to perform all related tasks normally accomplished by an entire squad. Because of changing priorities, the incumbent may be required to postpone current projects and commence new projects, i.e. prioritize. The incumbent is expected to motivate his/her staff accordingly in order meet the needs of changing priorities. The incumbent may be required to train and motivate construction personnel utilized for design work during non-construction seasons. This entails extensive training and motivation. The incumbent's greatest challenge is to ensure that all projects are developed according to established time frames.

In addition, the incumbent reviews and researches proposed projects; organizes methodology of development; lists agencies that require contacting for review or approval; determines required survey data; reviews existing conditions; coordinates the activities of utilities, soils, hydrology, hydraulics, and any special components of the project; establishes intermittent schedules for subordinates; assigns workloads which match needs with abilities; reviews activities of subordinates; designs drainage systems; resolves technical problems not covered by policy; selects the amount of design detail required for any special problem that needs additional emphasis or explanation; routinely checks status of approval or permits required; calculates or computerizes all complex designs involving economics, geometrics, earthwork, hydraulics, and simple structures; conducts field reviews and final reviews of plans and all component parts of a project in order to assure completeness and accuracy; computes all quantities; reviews consultant plans; provides design assistance to various consultant firms; assists in preparation of replies to correspondence relative to current projects; provides construction personnel with explanation of design intent; provides design expertise at preconstruction conferences and to assist if problems develop during construction; develops special provisions; reviews work completed by subordinates; provides adequate training and development of subordinates; and handles emergency or top priority projects personally.

The incumbent accomplishes these responsibilities through subordinate staff, which may consist of Studies & Plans personnel and/or temporarily assigned Construction personnel. As a supervisor, the incumbent is responsible for training, motivating, coordinating and assigning tasks to subordinate personnel.

In accomplishing the objectives of this position, the incumbent must operate within the limits of prescribed design standards and specifications. This, in conjunction with input from the Project Engineer, serves as the basic restrictions to the Senior Design Squad Leader's ability to make decisions and produce a final product. Recommendations pertaining to major changes in consultant prepared plans, departures from original contract design specifications and payments to consultants are referred to the Project Engineer for further consideration. With respect to subordinate personnel, the Senior Design Squad Leader is responsible for evaluating and making recommendations to the Project Engineer on matters pertaining to hiring, firing and disciplinary action.

In performing the functions of this position, the incumbent shall exercise good engineering judgment in the design and development of construction plans and the preparation of reports. The incumbent has the authority to assign workloads and specific tasks, select design format, insure that designs meet specifications, and provide various alternative solutions to complex design problems. All decisions are according to Illinois Department of Transportation Policies and Procedures, Federal Highway Administration guidelines, and applicable AASHTO publications.

The position is accountable to assure project reports and bridge condition reports are completed in a timely manner, to assure that annual program goals are met, and to strive to improve quality and cost effectiveness.

As part of this position, the incumbent will be required to manage consultants on highly complicated or complex highway projects. The incumbent reviews, or supervises the review, of consultant plans submitted to the department. The incumbent will provide assistance and guidance/supervision to the consultants, as needed, in order that the consultants can complete and submit the plans in accordance with an established letting schedule.

In performing the functions of this position, the incumbent is required to coordinate with personnel in Project Support, Land Acquisition, Materials, Location Studies, Administration, Operations, Construction, Local Roads, Central Bureau of Design & Environment, Central Bureau of Bridges & Structures, FHWA, US Army Corps of Engineers, various consultant firms, various local officials, railroads, the general public, other State and Federal Departments, and other entities as needed.

The incumbent is evaluated according to his/her ability to coordinate and direct the squad to develop accurate, concise, and clear contract plans, project reports, and bridge condition reports - including related calculations and documentation - within established time frames utilizing cost conscious, good engineering practices and judgment.

PRINCIPAL ACCOUNTABILITIES

1. Assures that all projects are completed according to established schedules and that all plans and reports have been appropriately coordinated, reviewed, and corrected in order to minimize errors and control costs according to established policies.
2. Assures that all plans have been developed with due consideration to accuracy and field conditions in order to minimize construction cost overruns.
3. Assures that all permits, reports, and special items have been completed and properly documented.
4. Utilizes Computer Aided Drafting and Design tools, Word, Excel, and other necessary programs for plan preparation, report preparation, calculation, and documentation.
5. Resolves technical problems not addressed by policy through the use of good engineering judgment.
6. Provides liaison between the District Studies & Plans Section and consulting engineers on matters pertaining to highly complex transportation facility plans and design.
7. Manages consultants, reviews consultant plans, and provides adequate assistance and liaison to consultant firms engaged in plan and report preparation.

POSITION DESCRIPTION
SENIOR DESIGN SQUAD LEADER
PAGE 4

8. Reviews the progress of all assigned projects, both in-house and consultant, and assures that all projects are completed in a timely, accurate, and effective manner.
9. Assures that all correspondence is answered within five working days.
10. Trains, motivates, and directs subordinates in order to assure proper growth. Prepares performance evaluations for assigned subordinates (temporarily or permanently assigned).
11. Acts in the capacity of the Project Engineer in his/her absence.
12. Performs duties in compliance with department safety rules. Performs all duties in a manner conducive to the fair and equitable treatment of all employees.
13. Performs other duties as assigned.