

 <p><b>STATE OF INDIANA</b> CLASSIFICATION SPECIFICATION</p>	<b>Class Title:</b> Surveyor 3		<b>Class Code:</b> 001DS3
	<b>FLSA Status:</b> Exempt	<b>Salary Schedule:</b> PAT 3	<b>Effective Date:</b> 11-15-14
	<b>Summary:</b> Incumbent is for leading survey activities and performing calculations to determine exact location and measurements of points, elevations, lines, areas and contours of the Earth's surface to secure data used for design, construction, land acquisition and other purposes. Incumbent is accountable for the planning and directing of survey activities pertinent to each surveying project.		

**Duties:**

- Provides work direction and training for lower level surveyors engaged in obtaining survey data for construction projects and/or in operation, care and maintenance of surveying instruments;
- Instructs, advises and trains lower level survey technicians in safety practices and procedures and in theory, practice and methods in the performance of topographic, drainage, bridge and construction surveys;
- Advises and trains lower-level technicians in various survey procedures and operations (e.g., care and maintenance of survey equipment);
- Plans and coordinates phases of survey projects and schedules activities so as to meet transportation project timetables;
- Sets up and operates equipment to obtain survey data and perform calculations for determination of precise measurements;
- Operates technical survey equipment including automatic level, total station, electronic data collectors, robotic total stations and global positioning satellite (GPS) equipment in order to obtain survey data and calculate precise measurements and traversing and leveling operations (e.g., angles, distance, elevations);
- Makes drawings and sketches of field survey details;
- Researches and compiles information from state, county and city records to complete field surveys; takes notes, searches records, land deeds and titles; prepares notes to present clear view of project; does mathematical computations and prepares time sheets and car mileage sheets;
- Reviews and checks topography in order to verify accuracy, clarity and any unusual features;
- Plans daily work activities for survey crew and provides technical guidance and expertise when required in unusual situations;
- Supervises the research of property records in county court houses in order to obtain information regarding property ownership, including such data as size, locations and easements;
- Assists in contacting property owners to obtain permission to work on private property and in researching land titles and deeds for location of control points;
- Formulates mathematical calculations for curves, bench circuits and property or traverse lines;
- Ensures maintenance of survey instruments and vehicles;
- Stocks survey truck/van with necessary supplies;
- Plots field data using Computer Aided Drafting and Design (CADD) software for the preparation of survey drawings;
- Instructs and trains each member of the survey crew on assigned work tasks;
- Responsible for all phases of surveys such as the location of center lines using transit, chains, plumb bobs and other engineering equipment;
- Establishes vertical control using data derived from U.S. Coast and Geodetic Survey benchmarks;
- Assists in taking cross sections to show elevations of ground along survey lines;
- Performs topographic and plan metric surveys in order to determine ground elevation contours for engineering construction plans;
- Performs hydrographic surveys in order to determine flow lines, banks and bottom elevations of lakes and streams;
- Keeps inventory of equipment and sees that the truck and car are maintained properly;
- Performs horizontal and vertical geodetic control surveys including precise traverses, triangulation and leveling;

- Provides technical surveying expertise and notifies management of any unusual design and construction;
- Performs related duties as required.

### **Job Requirements**

- Considerable knowledge of surveying principles, techniques, theories and practices;
- Knowledge of engineering principles and practices applied in the location, design and construction of roads, bridges, dams, buildings and related structures;
- Knowledge of the various methods that are utilized in the acquisition of land and associated properties;
- Ability to analyze surveying project and schedule job and functional assignments so as to meet timetables;
- Skill and ability to effectively operate all types of surveying instruments including automatic levels, transits, electronic distant measuring devices, level rod, measuring tape, etc.;
- Ability to coordinate and direct the work of lower level technicians in order to meet planned objectives;
- Ability to supervise, teach and train subordinates as leader of a field survey party;
- Ability to establish and maintain good working relationships with surveyors, local officials and the general public;
- Ability to letter and/or write neatly and legibly and to properly record field survey information in survey notebooks in acceptable and understandable form;
- Physical stamina and condition to work outside under varying, sometimes extreme, weather and working conditions;
- Ability to read and interpret maps, plans, drawings, etc.;
- Knowledge of safety rules and procedures and ability to supervise subordinates in their usage;
- Understanding and ability to reduce field survey notes to acceptable form for use by other professional and technical staff;
- Knowledge of laws pertaining to surveying;
- Ability to determine and calculate drainage areas and size requirements of structures;
- Ability to determine true north through the incorporation of trigonometry computations and astronomical observations.

### **Difficulty of Work:**

Incumbent works independently in the field using extensive judgment and experience in selecting surveying procedures and techniques to resolve a variety of situations encountered. Work is broad in scope involving supervision of engineering surveys, each of which possesses varying degrees of intricacy depending upon the location and type of the assigned survey project. Each survey requires the simultaneous carrying out and coordination of a variety of operations.

### **Responsibility:**

Established guidelines, practices and procedures are available in order to carry out a wide variety of duties in accordance with general work instruction. Employee is responsible for completion of work and accuracy of records, forms, reports and technical information disseminated; therefore, errors in work or faulty judgment can cause substantial embarrassment and delays. The incumbent resolves unusual situations not covered under normal guidelines; however, supervisor may be available for consultation and is advised of taken action. Incumbent is in charge of the survey crew when in the field and is responsible for obtaining all lodging near the job site. Incumbent insures that vehicles and equipment are accounted for and maintained and insures that safety procedures are adhered to by lower level technicians.

### **Personal Work Relationships:**

Contact is with associates, local agency officials and the general public. Contact is for the purpose of coordination of information, public relations and to gain cooperation, especially where surveys are being conducted on privately owned property. Contacts are also made with public utility companies for purpose of finding the location of their easements and underground facilities. Incumbent deals with subordinates for the purpose of providing job assignments, instruction, training and in order to coordinate project operations.