

Title: Advanced Surveys Aide	Effective Date: June 19, 2021	Grade: VIII	Job Category: Technician
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CHARACTERISTICS OF WORK

APPLICABLE TO SURVEYS FIELD POSITION:

Under general supervision, this position is responsible for coordinating and/or measuring distances and traversing across various terrains to gather accurate information detailing land characteristics. This position will coordinate and/or perform work with other members on a survey crew. Work will require contact with the public.

APPLICABLE TO SURVEYS OFFICE POSITION:

Under general supervision, this position is responsible for coordinating and/or performing the analysis, compilation, and archival functions for survey control, topographic, and terrain data using the Department’s computer software.

EXAMPLES OF WORK

The following examples are intended only as illustrations of various types of work performed. No attempt is made to be exhaustive. Related, similar, or other logical duties are performed as assigned. The Department may require employees to perform functions beyond those contained in job descriptions. The Department may modify job descriptions based on Department needs. The Arkansas Department of Transportation is an "at will" employer.

APPLICABLE TO SURVEYS FIELD POSITION:

- Coordinate and/or perform the cleaning and care of survey equipment.
- Coordinate and/or perform the cleaning and service of survey vehicles.
- Use hand tools such as sledge, axe, chainsaw, kaiser blade, shovel, etc.
- Coordinate and/or perform the clearing of brush for view; climb trees to trim limbs.
- Coordinate and/or set up safety equipment and flag traffic when necessary.
- Traverse rugged terrain including, but not limited to, bluffs, creeks and streams, brush and timber, fences, etc.
- Coordinate and/or perform the carrying of signposts, reinforcing bars, and other materials.
- Use survey instruments, calculators, automated electronic data collectors, and GPS equipment.
- Keep track of expenses and prepare individual expense reports.
- Coordinate and/or perform the reading and plotting of land descriptions.
- Coordinate and/or perform field reconnaissance functions for Public Land Survey System (PLSS) monuments.
- Provide technical assistance, mentoring and training to lesser-experienced personnel.

APPLICABLE TO SURVEYS OFFICE POSITION:

- Operate current generation of computers, electronic data collector, and computer-aided design and drafting (CADD).
- Coordinate and/or perform the production of maps that conform to national accuracy standards.
- Interpret and utilize aerial imagery provided by the Department.
- Coordinate and/or perform the preparation of various types of maps, charts and graphs as needed.
- Use desktop computer for data processing, coordinate geometry computations, and CADD.
- Coordinate and/or perform the compilation of survey field, photogrammetric, and LiDAR point cloud data into a combined topographic and digital terrain model (DTM) for Department design divisions.
- Provide technical assistance, mentoring and training to lesser-experienced personnel.

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MINIMUM REQUIREMENTS

Education and experience:

The educational equivalent to a diploma from an accredited high school. Experience with the use of computers. Experience or education in control, engineering design or land surveying.

Knowledge, skills and abilities:

Advanced knowledge of math as it relates to surveying, including trigonometry and geometry. Ability to adapt to evolving technology as it relates to surveying, including handheld field computers, desktop computer applications and electronic surveying instruments. Proficient in the use of computers and technology as they relate to surveying. Ability to read and understand highway plans and topographic maps. Working knowledge of the function of a survey crew as well as surveying instruments, terminology, principles and practices. Basic knowledge of the Public Land Survey System (PLSS). Ability to read, interpret and plot basic aliquot parts land descriptions. Working knowledge of survey measurement computation and analysis to include a basic understanding of coordinate geometry (COGO). Ability to train others.

ADDITIONAL MINIMUM REQUIREMENTS APPLICABLE TO FIELD POSITION

Physical requirements:

Physical ability to work with hand tools. Ability to traverse over rugged terrain, through water and work in an outdoor environment. Ability to stand and operate surveying equipment for at least two hours without a break. Ability to carry 50 pounds of equipment and supplies with or without reasonable accommodation.

Working conditions:

Ability to perform assigned duties in all types of weather as well as other work conditions, e.g. noise, dust, fumes, etc. Constant statewide travel.

(“Constant statewide travel” for this position means overnight travel three or four nights per week, 52 weeks per year with reimbursement for expenses.)

Licenses, registrations and certifications:

Valid driver’s license. Survey Intern (SI) certification preferred.

ADDITIONAL MINIMUM REQUIREMENTS APPLICABLE TO OFFICE POSITION

Knowledge, skills and abilities:

Basic knowledge of topographic and digital terrain models, map projection, aerial photography and land surveying. Working knowledge of current computer-aided design and drafting (CADD) graphic design software. Familiarity with Microsoft Access, Excel and Word.

Working conditions:

Available for occasional overnight statewide travel.

(“Accredited” means the educational institution or program is accredited by an accrediting organization recognized either by the United States Department of Education or by the Council for Higher Education Accreditation.)