ARDOT

Classification Specifications

Title: **Geophysical Data Analyst**	Effective Date: June 22, 2019	Grade: XIV	Job Category: Technician
Prior Title: Initial Distribution	Prior Effective Date:	Grade:	Page: 1 of 1

CHARACTERISTICS OF WORK

Under the direct supervision of the Section Head or Senior Asset and Pavement Engineer, this position is responsible for overseeing a comprehensive Ground-Penetrating Radar (GPR) program for the Asset Management Section with the primary focus of assessing the conditions and the performance of the underground roadway assets. This position also provides GPR data collection and analysis services to other Divisions of the Department (e.g. Environmental Division, Right of Way Division, Construction Division, and Roadway Design Division).

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.

- Develop, implement and maintain a methodology to monitor the subsurface condition of the roadway network.
- Establish and maintain a methodology to predict future performance and trends in underground assets.
- Develop and analyze 2D and 3D simulations to support network level data interpretation.
- Operate and maintain GPR equipment.
- Establish and maintain standards for collecting, storing, processing and analyzing GPR data for network and project level investigations.
- Develop QA/QC standards to aid in monitoring the GPR data for accuracy and integrity.
- Determine and apply performance measures for GPR data to monitor the performance of the underground roadway network.
- Conduct other relevant subsurface investigations needed by the Department.

MINIMUM REQUIREMENTS

The educational equivalent to a bachelor's degree from an accredited college or university in geophysics or a closely related field; or the educational equivalent to a diploma from an accredited high school and four years of experience in geophysics or closely related field. Valid driver's license. Statewide travel as necessary. Ability to read and understand highway maps and plans. Demonstrated proficiency in the use of computers and technology. Demonstrated proficiency in Microsoft Word, Excel and Access. Knowledge in geophysical/non-destructive testing methods, electromagnetic wave theory and propagation antennas, potential theory, signal processing in geophysical methods, mathematical modeling and accelerated computing and computer simulations preferred. Experience in operating GPR equipment. Experience with GSSI SIR-30, SIR-4000, air-launched and ground-coupled antennas preferred. Experience in GPR data analysis and interpretation.

("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.)

Arkansas Department of Transportation   EEO-approved: *Joann P. McFadden*