

STATE OF MONTANA

JOB DESCRIPTION

Montana state government is an equal opportunity employer. The State shall, upon request, provide reasonable accommodations to otherwise qualified individuals with disabilities.

Job Title: Drill Crew Leader Position Number: 46001, 46009, 46010

Location: Helena Department: Transportation

Division and Bureau: Engineering/Geotechnical and Pavement Bureau

Section and Unit: Field Investigation Unit

Job Overview: This position serves as the Drill Crew Leader and is responsible for planning, coordinating, and overseeing on-site drilling projects. Duties include overseeing drilling projects and drill operators; operating, maintaining, and repairing drilling equipment and tools; and providing training and technical assistance to drillers. The incumbent reports to the Field Investigation Unit Supervisor (#46005) and indirectly supervises two drill operators.

Essential Functions (Major Duties or Responsibilities):

Project Oversight - 50%

This position oversees on-site drilling operations according to the drilling request and specific conditions present at each site to ensure drilling and sampling occur efficiently and safely.

- Plans and directs drilling projects as received from the Field Investigation Unit Supervisor or Geotechnical Engineer and organizes the transport of drilling crews and equipment to specific sites to ensure the necessary resources and personnel arrive on-site safely and at the appointed time.
- Determines the initial on-site properties of soil and rock including a physical description, relative strength and depth of changes in materials, and water levels to determine specific sampling procedures and equipment needs.
- Determines the equipment type, operational method, and location of in-place soil strength tests based upon drilling specifications outlined by geotechnical engineers. Oversees the application of the appropriate testing methodology to establish engineering properties using

a variety of methods, including split tube SPT sampler, Shelby tube undisturbed sampler, Cone Penetration Test equipment, in-place vane shear tests, and triple tube wireline core barrels to determine Rock Quality Designation.

- Assesses equipment needs prior to commencing drilling projects to determine optimum equipment relative to safety considerations, costs, and type operation. Completes daily drilling report logs detailing equipment used and received, locations of holes, etc., to ensure adequate documentation according to applicable drilling standards and Department policies and procedures. Completes Tail-Gate safety check list and go over the information with the other members of the crew.
- Monitors personnel involved in drilling operations and provides on-going training in the safe transport and handling of drilling equipment and tools and appropriate work zone sign placement. Ensures drilling personnel are aware of potential hazards and special drilling conditions or considerations.
- Determines supply and equipment needs, , and develops purchase requests for review by the Unit Supervisor. Purchases term supplies and replacement products for field projects.

Drilling Operations - 35%

This position operates and maintains a variety of subsurface drilling equipment, tools, and sampling equipment as well as provides training and technical assistance to drill operators during drilling projects.

- Conducts specialized and/or complex drilling and field investigation projects, i.e., the design and implementation of drilling fluid systems, barge drilling operations, etc., and drilling projects with critical deadlines.
- Checks boring locations and utility locates using a variety of tools and GPS equipment and documents the information to ensure drilling operations conform with project requirements.
- Guides the installation of monitoring wells selecting the appropriate drilling equipment for the subsurface conditions according to the statutes governing the Board of Water Well Contractors and Administrative Rules of Montana adopted by the Board. Supervises the installation of monitor well casings, filter packs, bentonite seals, and concrete reinforced locking well caps to protect against surface contamination of groundwater and tampering by unauthorized persons.
- Manages the operation of drilling equipment during subsurface soils investigations and monitor well and instrument installation to collect geologic and hydrogeologic data necessary for the development of roadway, structure, slope, and drainage for specific project design.
- Oversees the collection and preservation of soil and rock samples by assessing the drilling project requirements and using a sampling method necessary to collect and assemble samples for delivery to a laboratory for engineering property testing.

- Coordinates the installation of borehole inclinometers, piezometers, or other instrumentation to collect and report respectively, the slope stability or slope movement along with the specific plane of movement and the hydrogeological properties of groundwater.
- Performs routine and emergency maintenance and repair of specialized drilling equipment and tools in the field to ensure that material samples are properly collected and drilling deadlines are met.

Indirect Supervision - 10%

This position indirectly supervises 2 drill operators.

- Establishes and revises overall field drilling work, priorities, and procedures and monitors progress through meetings and consultations. Conducts field safety meetings and goes over the Tail-Gate Safety Sheet and, disseminates information, and promotes information exchange to support and advance Department goals and objectives.
- Develops and recommends overall site safety responsibilities with regard to all aspects of performing subsurface investigations.
- Determines and fulfills on-site training needs of subordinate staff and provides ongoing guidance and technical assistance as necessary.
- Monitors and manages the performance of subordinates during field work. Ensures staff compliance with standard drilling procedures and safety protocol. Makes sure that all staff receive drilling time on the machines in differing soil types.
- Provide input to the Unit and Bureau Supervisors on position descriptions and performance standards. Relay information to the Supervisor regarding staff performance based on observable, measurable appraisal standards. Recommend, implement, and monitor corrective actions.
- Present recommendations for improving section work flow and staff performance. Ensure unit staff has the supplies, materials, and equipment needed to carry out their work.

Other Duties - 5%

- This position performs a variety of other duties assigned by the Unit Supervisor in support of ongoing Unit and Section operations.

Supervision

The number of employees supervised is: indirectly supervises 2 positions

The position number for each supervised employee is: varies

Physical and Environmental Demands:

- Lifting heaving objects (up to 75 lbs) on a regular basis
- Ability to walk over uneven terrain or in water
- Exposure to extreme weather
- Exposure to loud noises
- Exposure to high-speed traffic
- Extensive travel and long hours
- Operating a personal computer
- Demands for accuracy in all aspects of work
- Ability to meet inflexible deadlines
- Decision making that affects public health and safety
- Perform duties under stressful conditions

The majority of work is performed at various field project locations involving extensive statewide travel (in excess of 12,000 miles a year) as well as hazards and demands associated with an active project site, including exposure to high-decibel noises and heavy equipment; traversing rough and uneven terrain; and extreme weather and driving conditions. The incumbent must be able to lift and transport supplies, samples, and equipment weighing in excess of 75 pounds. Unanticipated project problems, safety concerns, and other impediments require the incumbent to work long

Knowledge, Skills and Abilities (Behaviors):

This position requires thorough knowledge of the methods and techniques of subsurface drilling and sampling; Environmental Protection Agency regulations governing safety and techniques of drilling and sampling soil and water known to be contaminated with hazardous materials; methods and techniques used in monitor well installation and abandonment as well as precautions against cross contamination of groundwater resources; and applicable State, federal, AASHTO, and FHWA requirements and standards.

This position requires skill in operating, maintaining, and repairing specialized drilling and sampling equipment and tools, vehicles, and various drilling support equipment and hand tools, equipment maintenance and repair, and light duty welding and fabrication. Proper Hole abandonment procedures for monitoring wells, instrumentation and general borings.

Minimum Qualifications (Education and Experience):

The required knowledge and skills are typically acquired through a combination of education and experience equivalent to a high school diploma or equivalent.

This position requires a minimum of four (4) years progressively responsible experience in geotechnical drilling operations, soil sampling, diamond core drilling, monitor well installation and geotechnical instrumentation installation.

Certifications, licensure, or other credentials include: The incumbent must possess and maintain a valid Class A/Type 2 driver's license with air brake and tanker endorsement. The incumbent must also possess (or have adequate experience to obtain) a Montana Monitoring Well Constructor's license.

Alternative qualifications include: Any combination of education and experience equivalent to the minimum qualifications.

Special Requirements:

List any other special required information for this position

- | | |
|--|--|
| <input type="checkbox"/> Fingerprint check | <input checked="" type="checkbox"/> Valid driver's license |
| <input type="checkbox"/> Background check | <input type="checkbox"/> Other; Describe |
| Union Code | Safety Responsibilities |

The specific statements shown in each section of this description are not intended to be all inclusive. They represent typical elements and criteria considered necessary to perform the job successfully.

Signatures

My signature below indicates the statements in the job description are accurate and complete.

Immediate Supervisor	Title	Date
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Administrative Review	Title	Date
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My signature below indicates that I have read this job description.

Employee	Title	Date
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Human Resources Review

Job Code Title: Drill Operator Job Code Number: 475215 Pay Band: 5

My signature below indicates that Human Resources has reviewed this job description for completeness and has made the following determinations:

- | | |
|---|--|
| <input type="checkbox"/> FLSA Exempt | <input checked="" type="checkbox"/> FLSA Non-Exempt |
| <input type="checkbox"/> Telework Available | <input checked="" type="checkbox"/> Telework Not Available |
| <input checked="" type="checkbox"/> Classification Complete | <input type="checkbox"/> Organizational Chart attached |

Human Resources:

Signature	Title	Date
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