

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: Field Project Technician I, II

Position Number: Various

Location: Statewide

Department: Transportation

Division and Bureau: District Engineering

Section and Unit: n/a

Job Overview:

This position serves as an experienced Field Project Technician within the District and is responsible for coordinating and conducting various inspection, sampling, and testing procedures to verify that construction project features and materials conform with standard specifications, Department requirements, and contract agreements. The position is also responsible for coordinating and conducting staking and surveying procedures and performing a variety of other duties as assigned. The position reports to the Field Project Technician III and provides guidance and technical assistance to less experienced Field Project Technicians performing routine inspections, sampling, testing, and surveying procedures.

Essential Functions (Major Duties or Responsibilities):

Field Project Assessments – 60%

- Recommends project priorities and equipment necessary for inspection, sampling, and testing of construction project features and materials. Provides routine technical assistance to less-experiences Field Project Technicians and recommends alternative inspection procedures necessary to complete assignments.
- Recommends optimum placement, configuration, and calibration of field laboratory facilities and equipment. Coordinates blocking and leveling trailers, mounting and securing equipment, performing routine calibrations, posting traffic control signs, and ensuring compliance with prescribed configurations and safety regulations.

- Inspects testing equipment to ensure operability and proper calibration according to defined testing methods and specifications. Recalibrates equipment, replaces serviceable parts, and performs routine equipment repairs as necessary to ensure the integrity of tests and measurements. Refers unusual or complex problems to Field Project Technician IIIs or more experienced technicians.
- Coordinates and conducts inspections of guardrail, signing, compaction testing, electrical, concrete, chip seals, seeding, fencing, striping, and other project components to ensure that alignment, grades, sizes, slopes and other features are compliance with Department standards and contract requirements.
- Coordinates and conducts inspections of backfill, embankments, and road surfaces to ensure that placement, materials, moisture content, lift depths, and compaction methods are in compliance with specifications.
- Coordinates and conducts reviews of Materials Certificates provided by contractors to verify certification of materials delivered to project sites by comparing identifiers (e.g., milling stamps, etc.) with certifications. Determines and establishes appropriate sample collection methods and requirements based on types of materials, intended use, and standards and specifications.
- Coordinates and conducts sample collection of construction project features and materials (or oversees sampling by contractors) according to specific types of features and materials, site conditions, and the most appropriate sampling methods, techniques, and equipment for each test. Determines appropriate adaptations to prescribed sampling methods, justifies additional sampling, and resolves contractor deficiencies through interpretation and application of standards and specifications.
- Coordinates and oversees sample preparation for testing based on the type of material and prescribed procedures. Examines physical characteristics of materials (e.g., height, width, volume, moisture, etc.) and modifies samples (e.g., extended dry time, reshaking, etc.) as necessary to ensure the integrity of tests. Ensures appropriate sampling, labeling, and transportation of samples to laboratories according to State and federal requirements.
- Coordinates and conducts specialized tests on construction project features and materials to verify specifications and determine the general cause of deficiencies.
- Compiles, calculates, and summarizes test results; compares final results to specifications; and maintains records of testing procedures and results. Reviews and approves test results compiled by Field Project Technicians to ensure accuracy and compliance with standards and specifications.
- Monitors contractor compliance with project plans and specifications and coordinates with contractors to identify and resolve deficiencies. Refers complex or contentious issues to Field Project Technician III for further action.
- Ensures appropriate documentation of all aspects of construction inspection, sampling, testing, and surveying, including material quantities; project locations; explanations of changes; conversations with contractors and project communications; project personnel, equipment, and shifts; supervisory instructions; and other relevant project data.

Staking and Surveying – 25%

- Installs survey monuments by measuring distance, direction, and elevation from existing monuments and aerial surveys. Reviews topographic, hydraulic, and other surveyed features provided by Field Project Technicians and assigns and records feature codes.
- Reviews road plans to plan construction staking activities based upon site-specific intervals identified through assessment of design plans and terrain features. Provides ongoing guidance and direction to Field Project Technicians to ensure adherence to plans, resolve in-progress problems, and verify the accuracy of staking.
- Determines the exact location of highway centerlines, traverse points, property boundaries, and design features by surveying distances and elevations from preconstruction survey references.
- Coordinates and oversees chainmen and rodmen during survey activities to ensure efficient staking and surveying procedures; appropriate placement of holding pickets, pogo rods, tape, pins, and/or tacks; effective coordination with other survey project staff and contractors; and identification and resolution of problems
- Determines the correct location of stakes to correlate design plans to site-specific terrain. Coordinates and oversees marking of stakes with letters and number codes to provide a description of the point, point name or number, distance from centerline, and other relevant data.

Fabrication Inspection – 10%

- Conduct inspection of fabricated construction materials such as concrete beams, corrugated pipes, steel beams, signing materials, signs, wood products. All technician positions at this level are expected to be able to perform the full range of fabrication inspection and testing as requirements in the District dictate. Assignments to other Districts may be made for fabrication inspection and testing.
- Review project plans in order to become familiar with project specifications and material designs to be used, and determine the necessary sampling, testing, dimensions, and inspection to be done at the site. Will also ensure that the shop drawings are approved, and discern any discrepancies.
- Inspect equipment to be used by the contractor to ensure it is certified and calibrated. Check balances to ensure they are within tolerances and ensure that equipment is properly sealed and in safe working order.
- Inspect materials to be used by the plant prior to fabrication. Label samples for proper identification.
- Observe fabrication process to ensure quality fabrication, correct dimensions, and compliance with project specifications and approved shop drawings. Ensuring that the contractor actually uses materials specified in plans and specifications.
- Approve or disapprove materials based on comparison to project specifications and State and Federal standards. Oversee proper transportation and delivery of materials to the

project with permanent marks identifying that it has been inspected such as a metal tag on wood products or a circle M stamp for steel or concrete products.

Other Duties - 5%

- This position performs a variety of other duties as assigned by supervisors. Field Project Technicians are also expected to assist with project management and coordination activities of the Field Project Technician III as directed.

Supervision

The number of employees supervised is: n/a

The position number for each supervised employee is: n/a

Physical and Environmental Demands:

Essential functions involve significant physical demands related to repeated lifting of up to 80 pounds (and occasionally greater weights); carrying survey equipment over rough terrain, climbing and bending to retrieve samples; and operating gas, diesel, and electrically powered equipment. The position involves extensive overnight travel throughout the District in excess of 2,000 miles per month (often on short notice, weekends, and holidays) and working outdoors in all types of weather.

The work environment involves harsh or caustic fumes, dust, extreme temperatures, wind, rain, and snow. Hazards associated with the work can be significant. The majority of the work is performed at construction sites or fabrication plants involving traffic passing the project site and working around heavy machinery such as front-end loaders, pavers, scrapers, rollers, and forklifts. The work also involves and risks associated with working with hazardous materials such as hot asphalt, lime, acids, and other chemicals. The risks of the work are such that extensive training in safety practices and procedures is required. Due to the nature of work elements (e.g., hot asphalt, heavy equipment, etc.) and hazardous tasks such as work around moving traffic and taking samples from hot plants, there is potential for significant personal injury.

Knowledge, Skills and Abilities (Behaviors):

The position requires knowledge of project inspection and testing procedures, including site features and materials; general construction engineering principles; sampling and laboratory testing procedures; State, AASHTO, FHWA, and ASTM standards and specifications; and maintenance and calibration of specialized tools and equipment. The position also requires

knowledge of surveying and highway construction methods and operations; project implementation and documentation techniques; project design and construction criteria and standards; properties and characteristics of materials components and the impacts of site specific circumstances (e.g., soils, temperature, weather conditions, gradations, segregation, stability, flows, additives, absorption rates, etc.); highway construction terminology; business English; and basic algebra, geometry, and trigonometry.

The position requires skill in reviewing, interpreting and applying design plans and specifications to site circumstances; acquiring and documenting field data; constructing sets of field notes; interpreting site conditions (e.g., elevations, features, etc.); and communicating effectively with contractors, landowners, and other Department personnel. The position also requires skill in operating specialized sampling and testing equipment (e.g., Gilson shaker, nuclear gauge, sieves, survey equipment, etc.) and office equipment used to calculate and record data (e.g., PCs, calculator, laptop computers, VAX system, etc.).

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, including coursework in algebra, geometry or trigonometry.

The position prefers (L1) or requires (L2) aptitudes or experience in construction or related field (e.g., laboratory testing, transportation design, engineering, etc.), including experience in inspection, sampling, testing, and/or surveying.

Certifications, licensure, or other credentials include: n/a

Alternative qualifications include: Any combination of additional related work experience and education 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: Civil Engineering Technician I

Job Code Number: D32011

Level: 1

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

FLSA Exempt

FLSA Non-Exempt

Telework Available

Telework Not Available

Classification Complete

Organizational Chart attached

Human Resources:

Signature

Title

Date