

LAND SURVEYOR

JOB DESCRIPTION

Classification Responsibilities: Under general supervision, performs a variety of technical, skilled land survey engineering work in the field; oversees work performed by land survey personnel; and performs related duties as required.

Distinguishing Features: An employee in this class performs skilled, technical land survey work using land surveying equipment, including but not limited to data collectors, Global Navigation Satellite System (GNSS) equipment, total stations, and levels. Actively participates in all assigned land surveys: including but not limited to boundary surveys, topographic surveys, and construction surveys. Records relevant data in field books and appropriate notes in data collector. Reduces mapping data in the office. Reads and interprets technical engineering plans and plots. Performs calculations for construction projects in the field and/or office (examples: roadway grades, curb and gutter grades, utility and right-of-way locations, and ditches). Prepares legal descriptions of property, right-of-way, utility easements, etc. to describe legal boundaries. This class performs construction staking duties including but not limited to staking out features, placing hubs or nails, placing lath, grading, slope staking, and cut sheets. This class may be called upon to perform the duties of Chief Land Surveyor in the Chief's absence. Work is performed under the general supervision of the Chief Land Surveyor who reviews work through reports, results achieved, conferences, and on-site observation checking for production, accuracy, timeliness, and completeness. This class will apply their professional seal to projects performed under their direct supervision. Employees may progress to this class by noncompetitive promotion upon meeting the specific criteria-based promotion requirements. This class is FLSA nonexempt.

QUALIFICATIONS

Employee Values: All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

Minimum Qualifications Required. Graduation from high school or GED. Any combination of training, education, and experience equivalent to six (6) years of surveying experience, including a minimum of one (1) year experience as a Land Surveyor.

Special Requirements. Must be registered in the State of Arizona as a Land Surveyor within one (1) year of hire date. Must possess a valid Class D Arizona Driver's License by hire or promotion date.

Substance Abuse Testing. Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment or pre-placement alcohol, drug, and/or controlled substance testing as outlined in City policy and procedures.

Preferred/Desirable Qualifications. Supplemental coursework in land surveying, advanced mathematics, and civil engineering is preferred. Experience in Microsoft Excel, AutoCAD/C3D, Geographic Information Systems (GIS), Certified Federal Surveyor (CFEDS), Federal Aviation Administration (FAA) Part 107 license, Unmanned Aerial Vehicles (UAV) operation, and mapping are desirable.

ESSENTIAL FUNCTIONS

Communication: Communicates with the public, other City employees, vendors, and contractors to prepare for and carry out assignments. Instructs and trains land survey personnel regarding proper land surveying procedures. Prepares written legal descriptions and departmental memos with clearly organized thoughts and using the proper sentence construction, punctuation, and grammar. Ability to maintain concentration, accuracy, and ethical behavior. Ability to work well with coworkers, managers, business partners, and the public. Ability to always maintain a professional demeanor.

Manual/Physical: Ability to work in the office and in the field: including outdoors in all types of weather, on or near a roadway, in a construction zone, or in an isolated desert environment. Must be able to work in an office environment for extended periods of time. Must be able to be on feet (standing, walking, and/or hiking) throughout the entire workday. Must have manual dexterity of hands and body to lift/carry/push and/or pull 30 pounds. Must dig holes up to three (3) feet deep using shovel pick, digging bar, and/or other tools. Must be able to operate motor vehicles requiring a valid Class D Arizona Driver's License. Must be able to handle multiple and complicated tasks, have prompt decision-making skills in times of pressure, and high work volume. Will work with the Chief Land Surveyor to maintain internal quality control procedures on all work products. Reviews the work products of others to ensure compliance with standard operating procedures, federal regulations, state regulations, Maricopa Association of Governments (MAG), and City standard details. Inspects and evaluates work-related conditions around traffic and construction equipment to determine compliance with prescribed safety standards. Distinguishes colors to determine markings for underground utilities. Detects traffic sounds when working near moving traffic, backup warning devices when working around moving equipment, and sirens or other warning signs while working in traffic or around construction equipment. Uses common hand tools such as a hammer, saw, screwdriver, ax, brush hook, shovel, or pick to complete work assignments. Operates a variety of standard office equipment (examples: calculator, copy machine, etc.). Enters data or information into a data collector to store land surveying information which is downloaded into a computer. Prepares and updates maps, schedules, graphs, benchmarks, and monument ties to update land survey data. Performs physical inventories of land surveying equipment and supplies. Moves land survey instruments and supporting equipment from one place to another. Uses GNSS, total stations, levels, rods, cones, etc. Digs up ground using a pick, shovel, or spade to locate property corners, manholes, valves, and central points. Works with spray paint using normal protective equipment. Sets up barricades, traffic cones, or flag trees to close or re-route traffic lanes to help protect crews. Works in a variety of weather conditions while performing daily work assignments. Meets scheduling and attendance requirements.

Mental: Plans, organizes, and directs the activities of land survey personnel. Prioritizes and assigns work to land survey personnel and prioritizes own land survey assignments. Resolves procedural, operational, and work-related problems such as conflicts in plans, errors in work, missing corners, etc. Coordinates work activities and program functions with other City departments, other cities, or other agencies to expedite and clarify any conflicts. Conducts research and analyzes property descriptions, maps, plans, records, etc., to complete projects in a professional manner. Performs mathematical calculations, statistical computations, and daily land surveying operations. Comprehends and makes inferences from legal documents, land survey requests, construction plans, and plats to complete assignments. Understands and interprets construction plans, schematic drawings, layouts, graphs, and profiles to complete job assignments. Learns job-related material through on-the-job training. Must be able to handle multiple, complicated tasks, and have prompt decision-making skills in times of pressure and high work volumes.

Knowledge/Skill/Abilities:

Knowledge of:

field to finish land survey methods and techniques;
traffic safety requirements and procedures;
civil engineering and land survey terminology; and
the concepts of algebra, geometry, and trigonometry.

Skill in:

the use and care of optical and electrical land surveying instruments and equipment; and
the use and care of computers and common computer programs (examples: Word, Excel, AutoCAD, Civil3D, Google Earth, etc.)

Ability to:

oversee, review, and evaluate all phases of the work of land survey personnel engaged in determining exact locations, measurements, and contours;
plan work projects and make assignments to land survey personnel;
provide instructions regarding land surveying procedures and in the use of instruments;
operate land survey instruments in performing the range of tasks common in land survey work;
stake, and direct the staking of, retention basins, streets, curbs, gutters, sidewalks, underground utilities (examples: water, gas, sewer, storm, etc.), culverts, catch basins, right-of-way, property lines, and other construction features;
perform boundary and topographical land surveys to locate, by relative position and elevation, physical features and property lines;
keep field notes and compute areas, distances, and volume;
make field sketches and computations necessary to record field observations and data;
make estimates as to the time required to perform land survey jobs;
check measurements and computations made by office personnel;
survey new construction projects and record measurements, and change onto a set of "as-built" plans;
set right-of-way markings and property corners;
read construction plans and specifications;
read and interpret standard details and specifications;
maintain and be accountable for expensive land survey equipment, and a survey truck;
communicate with supervisors, inspectors, and other departments using a cellular phone to relay status, situations, and instructions;
establish and maintain effective working relationships with management and other personnel; and
may perform the duties of Chief Land Surveyor as required.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included do not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

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