

## **SURVEY PARTY CHIEF**

### **JOB DESCRIPTION**

**Classification Responsibilities:** Under general supervision, performs a variety of technical, skilled survey engineering work in the field; supervises a survey crew; performs related work as required.

**Distinguishing Features:** An employee of this class performs skilled, technical survey work, including the supervision of a survey crew. Working conditions include: making decisions, occasionally under stressful conditions; performing mathematical calculations and interpreting construction plans quickly so that contractors can keep crews and equipment productive; laboring (examples: pounding stakes and taking measurements) in hot (100+ degrees F) and dusty conditions; and working alongside heavy equipment in traffic, on steep slopes, and near open trenches. This class can progress through noncompetitive criteria-based promotion to the next higher class of Senior Survey Party Chief after consistently and successfully performing skilled, technical surveying work in the field, including supervision of a survey crew, achieving a “successful performance” on all core value ratings on most recent performance appraisal, and upon becoming certified in the State of Arizona as a Land Surveyor. Work is performed under the general supervision of the Chief Surveyor who reviews work through reports, results achieved, conferences, and on-site observation, checking for production, accuracy, timeliness, and completeness. 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 at least three years of surveying experience, including a minimum of one year experience at the level of an Instrument Technician.

**Special Requirement.** Must possess a valid Arizona Driver’s License by hire 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 civil engineering and surveying as well as certification as a Land Surveyor in the State of Arizona are preferred. Knowledge of Microsoft Excel, AutoCAD, and GIS (Geographic Information Systems) are desirable.

### **ESSENTIAL FUNCTIONS**

**Communication:** Communicates with the general public, engineers, other City employees, and vendors in order to prepare and carry out surveying operations. Instructs and trains subordinates in a classroom setting regarding proper surveying procedures. Interprets and prepares most legal descriptions, stake right-of-way, utility easements, and boundary surveys, etc., with clearly organized thoughts.

**Manual/Physical:** Reviews the work products of others to ensure compliance with standard operating procedures, federal regulations (example: re-establishing section corners and property corners), state regulations (examples: surveys to be accomplished per state statutes, MAG (Maricopa Association of Governments), and City specifications. Inspects, monitors, and evaluates information to identify proper conditions and equipment needed for work assignments to determine compliance with prescribed operating and safety standards that apply to specific projects to be undertaken. Distinguishes colors to determine markings for utilities. Detects traffic sounds when working near moving traffic, backup warning devices when working around moving equipment, and sirens or other warning signs when working in and around traffic and construction equipment. Operates a crew cab pickup truck requiring a standard Arizona Driver's License to transport crew and equipment to work areas. Uses common hand tools, such as a hammer, saw, screwdriver, axe, brush hook, shovel, pick, etc., to carryout assignments as situation dictates. Operates a variety of standard office equipment such as calculators and copy machines to complete mathematical computations and copy information for distribution and filing. Enters data or information using a data collector in order to store surveying information to be downloaded into a computer. Prepares and updates maps, schedules, graphs, benchmark elevations, and monument ties to update survey files and data. Performs physical inventories of all survey equipment and tools. Moves survey instruments and supporting equipment from one place to another using Global Positioning System (GPS), Total Stations, levels, rods, cones, stakes, or hammers. Digs up ground using a pick, shovel, or spade to locate property corners, manholes, valves, or to set stakes, etc. Cleans work area, survey truck, and survey equipment. Works with paints or spray paint cans, using normal protective equipment. Sets up barricades, traffic cones, or flag tree to class or re-route traffic lanes as necessary in order to protect crews. Works in a variety of weather conditions while performing everyday work assignments. Meets scheduling and attendance requirements.

**Mental:** Plans, organizes, and directs the activities of survey crew's work assignments. Supervises and evaluates the work of subordinate personnel. Prioritizes and assigns work to personnel and prioritizes own work. Resolves procedural and operational problems, including conflicts in plans, errors in work, personnel issues, etc. Coordinates work activities and program functions to complete assignments in specified time period with other City departments, other cities, county, SRP (Salt River Project), or other utility companies. Coordinates with general contractor and the public, at times under adverse conditions, for a timely completion of work assignments. Conducts research and analyzes data such as property descriptions, maps, plans, records, ties, etc., to carryout assignments in a professional manner and according to the law. Performs mathematical calculations and statistical computations to complete surveying assignments. Comprehends and makes inferences from written material, such as legal descriptions, survey requests, construction plans, plats, etc. Understands and interprets blueprints, schematic drawings, layouts, graphs, profiles, or contours. Learns job-related material through on-the-job training regarding modern equipment and procedures and in a classroom setting in order to update survey knowledge.

**Knowledge/Skill/Abilities:**

Knowledge of:

field survey methods and techniques;  
the survey instruments used in the measurement and location of lines, elevations, areas, angles, points, and contours of the earth's surface;

civil engineering and survey terminology;  
the principles, practices, and procedures of employee supervision and training; and  
the concepts of algebra, geometry, and trigonometry.

Skill in the use and care of optical and electrical surveying instruments and equipment (examples: Total Station [Topcon GTS-313], GPS, etc.).

Ability to:

supervise, review, and evaluate all phases of the work of a field survey crew consisting of Instrument Technicians and Survey Aides engaged in determining exact locations, measurements, and contours;  
organize and prioritize projects and assign work to subordinate personnel;  
provide instructions regarding surveying procedures and in the use of instruments;  
make decisions quickly so contractors can keep crews and equipment productive;  
stake and direct the staking of retention basins, streets, curbs and gutters, sidewalks, underground utilities (examples: water, gas, sewer, storm, etc.), culverts, catch basins, rights-of-way, property lines, and other construction features;  
stake, and direct the staking of, the route of bridges over main irrigation canals at the intersection of arterial streets by applying algebra and trigonometry to calculate the alignment and elevation;  
perform boundary and topographical surveys to locate, by relative position and elevation, physical objects 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 survey jobs;  
check measurements and computations made by office personnel;  
give instructions in surveying procedures and in the use of instruments;  
survey new construction projects and record measurements and changes onto a set of "as-built" plans;  
set right-of-way markings and property corners;  
apply algebra and trigonometry for such functions as running closures on a traverse, calculating the hypotenuse to set right-of-way points, setting radius points for curb return and right-of-way, calculating arcs, and laying out horizontal and vertical curves;  
read construction plans and specifications;  
reduce field notes and apply trigonometric and curve data tables;  
operate survey instruments and perform the range of tasks common in survey work;  
read and interpret standard details and specifications;  
maintain and be accountable for expensive survey equipment, radios, and a survey truck;  
communicate with supervisors, inspectors, and other departments, using a cellular phone, to relay status, situations, and instructions;  
handle the physical requirements of the class on a relief basis (examples: using a 10-pound sledgehammer to pound stakes, etc.);  
research materials for completion of work assignments, other divisions, etc.; and  
establish and maintain effective working relationships with management and subordinate personnel, often under such unpleasant working conditions as when the survey crew is performing hard, physical labor in the heat, in the dust created by construction equipment, and having to redo physically-demanding work.

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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EEO-Tech

JOB FCTN-TEC

INCREMENTS 53-200

PAY GRADE: 46

IND-9410

SWORN-No