

JOB CODE 19070

Effective Date: 06/17

DISTINGUISHING FEATURES OF THE CLASS:

The fundamental reason this classification exists is to perform skilled technical survey engineering work of increasing difficulty on a survey crew. This position serves as a lead over Instrument Technicians and Survey Aides. Work is ordinarily performed under the general supervision of the Survey Supervisor or Survey Engineer who reviews work to ensure that it is performed according to instruction and that it conforms with sound survey engineering principles.

ESSENTIAL FUNCTIONS:

- Directs all phases of work of a field survey crew in determining exact location and measurements of control points, elevation, lines, and areas to secure data used for construction, contract payment, qualities, map making, boundary delineation, or other purposes;
- Calculates information needed to conduct surveys from plans, notes, maps, deeds, or other records;
- Performs survey calculations by computing grade, vertical curves, horizontal curves, and deflection angles for horizontal curves;
- Keeps accurate notes, records, and sketches on work performed and data secured:
- Keeps notes of level circuits, traverse closures, precise levels, property corners, topography notes, horizontal and vertical curves, cross-sections for earthwork, calculation, and building grades;
- Directs the surveying for construction and layout of water and sewer lines, paving projects, storm drains, simple bridges, parks, and other public works projects;
- Works with project coordinators and contractors in providing survey data for expediting construction projects;
- Surveys new construction projects and records measurements and changes onto a set of record drawing plans;
- Operates survey instruments on more difficult and exacting survey work;
- Sets right-of-way markings and property corners for acquisition of additional right-of-way by City;
- Directs and trains Instrument Technicians and Survey Aides;
- Holds and plumbs rod in obtaining elevations and distances;
- · Holds surveying chain in measuring distances;



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- Digs ground using a pick, shovel, or other hand tool to search for and locate survey monuments;
- Maintains regular and reliable attendance.
- Demonstrates superior seamless customer service, integrity, and commitment to innovation, efficiency, and fiscally responsible activity.

Required Knowledge, Skills and Abilities:

Knowledge of:

- Field survey engineering methods and techniques.
- Construction plans and specifications.
- Survey instruments used in the measurement and location of lines, elevations, areas, angles, points, and contours of the earth's surface.

Ability to:

- Perform a broad range of lead responsibilities over others.
- Review or check the work product of others for conformance with standards.
- Perform higher level mathematical calculations such as algebra, and trigonometry using a calculator or computer.
- Use complex optical and electronic instruments and equipment used in survey engineering.
- Compute angles, arcs, and distances from survey data.
- Prepare accurate sketches of conditions found in the field.
- Work cooperatively with other City employees, craftsmen, property owners, contractors, and the public.
- Understand and follow written and oral instructions in the English language.
- Complete forms to record or report information in standard format as specified by the form.
- Exercise sound judgment in completing assignments.
- Communicate orally with other City employees and the public in face-to-face, one-on-one settings, in group settings, and using a telephone or hand-held radio.
- Produce written documents with clearly organized thoughts using proper English sentence construction, punctuation and grammar.
- Travel across rough, uneven or rocky surfaces at construction sites.
- Measure distance using a tape measure or electronic distance measuring device.
- Make precise arm-hand positioning movements and maintains static arm-hand position to operate survey instruments.
- Coordinate the movement of more than one limb simultaneously.
- Bend or stoop repeatedly or continually over time to use survey instruments, or to load and unload supplies from the crew truck.



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- Drive stakes with up to a 16-pound sledge hammer to set grades on construction projects.
- Make continuous or repetitive hand-arm movement to send signals to a survey crew.
- Move objects 20-50 pounds long distances (20 feet or more).
- Work in a variety of weather conditions with exposure to the outdoor elements and dust.
- Remain in a standing position for extended periods of time.
- Walk distances up to a 1/2 mile at a time; up to five miles per day.
- Work safely without presenting a direct threat to self or others.
- Establish priorities for own workload based upon such factors as need for immediate action, work objectives, work schedule, knowledge of future need, etc.
- Make decisions in normal routine situations in accordance with rules, regulations, and policies and take appropriate action in accordance with decisions made.
- Observe or monitor objects to determine compliance with prescribed operating or safety standards.
- Work various shifts, weekends, evenings and holidays.
- Draw or letter charts, schedules, graphs, maps, or similar objects.
- Use graphic instructions such as layouts or blueprints.
- Comprehend and make inferences from written material in the English language.

Additional Requirements:

- Some positions will require the performance of other essential and marginal functions depending upon work location, assignment or shift.
- Some positions require the use of personal or City vehicles on City business.
 Individuals must be physically capable of operating the vehicles safely, possess a valid driver's license and have an acceptable driving record. Use of a personal vehicle for City business will be prohibited if the employee is not authorized to drive a City vehicle or if the employee does not have personal insurance coverage.

ACCEPTABLE EXPERIENCE AND TRAINING:

NSPS/ACSM Certified Survey Technician – Level 3 or three years of experience in technical survey engineering, including two years of experience operating electronic survey equipment and preparing survey field notes. Other combinations of experience and education that meet the minimum requirements may be substituted.