



Office of Human Resources
Electronic Systems Technician I - CJ2511
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General Statement of Duties

Performs full performance work installing, programming, modifying, troubleshooting, repairing and maintaining a wide variety of specialized technical electronic equipment and electrical systems.

Distinguishing Characteristics

The Electronic Systems Technician I is distinguished from the Electronic Systems Technician II which performs specialized, professional, complex work installing, programming, modifying, troubleshooting, repairing, and maintaining a wide variety of specialized technical equipment and electrical systems. It is also distinguished from the Electronic Systems Technician III which installs, diagnoses, programs, designs, configures and maintains a wide variety of complex electronic communication infrastructure and access control systems. These positions are primarily found at DEN.

Essential Duties

Repairs and maintains electronic systems and equipment such as, radars, radios, computers, cellular phones, closed circuit TV camera systems, Smart City devices, cable TV, security, runway lighting, paging, fire alarm and other related electronic, control and signaling systems.

Troubleshoots, tests, diagnoses, calibrates, and performs bench and field repairs to the component level.

Designs and fabricates circuits and related equipment as needed to utilize existing equipment, modify applications, or resolve unusual problems.

Installs and maintains radio systems, antennas, transmission lines, power supplies, closed circuit TV camera systems, videos, microwave transmitters and receivers, alarm and signaling equipment, encoders and decoders, computer data systems, and other related communication systems.

Performs preventative maintenance for electronic control and signaling equipment to minimize repair problems and to meet manufacturers' specifications.

Reviews service contracts, evaluates, and recommends equipment purchasing as assigned.

Provides training and maintenance instructions to operators or installers of specialized systems and equipment.

Operates a variety of computer systems designed to monitor and/or operate specific electronic and electrical systems.

Researches and prepares technical reports and manuals containing detailed processes and procedures.

Maintains detailed documentation of data collection on required and completed repair work.

By position, writes computer programs compatible with operating systems to expand functions.

By position, may be required to be on-call to address emergent needs.

By position, participates in snow removal duties.

By position, responds to after hours calls or emergency calls outside of normal scheduled or business hours.

Performs other related duties as assigned.

Any one position may not include all of the duties listed. However, the allocation of positions will be determined by the amount of time spent in performing the essential duties listed above.

Competencies

Attention to Detail - Is thorough when performing work and conscientious about attending to detail.

Reading - Understands and interprets written material, including technical material, rules, regulations, instructions, reports, charts, graphs or tables; applies what is learned from written material to specific situations.

Technical Competence - Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.

Technical Problem Solving - Troubleshoots diagnoses, analyzes, and identifies system malfunctions to determine the source and cause of the problem.

Technology Application - Uses machines, tools, or equipment effectively; uses computers and computer applications to analyze and communicate information in the appropriate format.

Written Communication – Composes, reviews, edits, and issues written materials for diverse audiences and communicates purpose in a succinct and organized manner that is appropriate for context, time, and place.

Knowledge & Skills

Knowledge of circuit boards, processors, chips, and computer hardware and software, including applications and programming.

Knowledge of electronic theory, circuits, components, and material properties (excluding computers).

Knowledge of electrical equipment, components, instruments, and systems, including their design, installation, testing, uses, repair, or maintenance.

Knowledge of safety hazards and necessary safety precautions sufficient to be able to establish a safe work environment for self and others.

Level of Supervision Exercised

By position, performs lead work.

Education Requirement

Graduation from high school or the possession of a GED, HiSET or TASC Certificate.

Experience Requirement

Three (3) years of experience building and maintaining electronic systems and equipment and making component level repairs.

Education & Experience Equivalency

Additional appropriate education may be substituted for the minimum experience requirements.

Licensure & Certification

This job requires driving. Requires a valid Driver's License at the time of application.

By position, requires a valid Commercial Driver's License (CDL "B") with appropriate endorsements by the end of probation

By position, requires FCC General Radio Telephone Operator's License by the end of the probationary period.

For positions in DOTI, the following licenses or certifications are required at time of hire:

- IMSA Traffic Signal Senior Field Technician Level III.

For position in DEN, the following licenses or certifications are required at time of hire:

Licenses and certifications must be kept current as a condition of employment.

Working Environment

Potential exposure to hazards from electrical/mechanical/power equipment.

Potential exposure to temperature changes: variations in temperature from hot to cold.

Subject to pressure for multiple calls, inquiries, and interruptions.

Subject to varying and unpredictable situations.

Temperature Changes: Variations in temperature from hot to cold when works in the field.

Works in precarious or high locations.

Level of Physical Demand

3-Medium (20-50 lbs.)

Physical Demands

(Physical Demands are a general guide and specific positions will vary based on working conditions, locations, and agency/department needs).

Carrying: Transporting or moving an object.

Climbing: Ascending or descending an object or ladder.

Color vision: Ability to distinguish and identify different colors.

Depth Perception: Ability to judge distances and space relationships.

Field of Vision: Ability to sharply detect or perceive objects peripherally.

Fingering: Picking and pinching, through use of fingers or otherwise.

Lifting: Moving objects weighing no more than 50 pounds from one level to another.

Reaching: Extending the hands and arms or other device in any direction.

Repetitive motions: Making frequent or continuous movements.

Standing: Remaining in a stationary position.

Vision Far Acuity: Ability to perceive or detect objects clearly at 20 feet or more.

Vision Near Acuity: Ability to perceive or detect objects at 20 inches or less.

Background Check Requirement

Criminal Check

Employment Verification

Motor Vehicle Record

By position, License/Certification

Assessment Requirement

None

Probation Period

Six (6) months.

Class Detail

Pay Grade: NE-17

FLSA Code: N

Established Date: 7/4/2021

Established By: BM

Revised Date:

Revised By:

Class History: