



Office of Human Resources
Electronic Systems Technician I - LJ2745
THIS IS A PUBLIC DOCUMENT

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.

Employees may be re-deployed to work in other capacities in their own agencies or in other City agencies to support core functions of the City during a City-wide emergency declared by the Mayor.

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:

- Requires IMSA Traffic Signal Field Technician Level II at time of hire.
- Requires IMSA Traffic Signal Bench Technician Level II within one (1) year of hire.

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

Working Environment

For DPL Positions Specifically:

Potential exposure to hazardous anesthetic agents, body fluids, and bio-wastes.

Atmospheric Conditions: conditions that affect the skin, eyes or respiratory system.

Potential exposure to cold temperature, cold enough to cause bodily discomfort.

Potential exposure to cold weather conditions (indoor/outdoor).

Potential exposure to conditions that affect the skin or respiratory system.

Potential exposure to dust.

Potential exposure to extreme temperature changes.

Potential exposure to hazardous conditions where there is a danger to life, body, and/or health.

Potential exposure to hazardous/toxic chemicals.

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

Potential exposure to hazards of steam and heat.

Potential exposure to heat temperatures, hot enough to cause bodily discomfort.

Potential exposure to hot and humid work environment.

Potential exposure to housekeeping/cleaning agents/chemicals.

Potential exposure to infection from disease-bearing specimens.

Potential exposure to infections and contagious diseases.

Potential exposure to odorous chemicals.

Potential exposure to pesticides or fertilizers.

Potential exposure to the risk of blood borne diseases.

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

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

Potential exposure to unpleasant elements (accidents, injuries, and illness).

Extreme cold conditions.

Handles emergency or crisis situations.

Noise sufficient to cause distraction or possible hearing loss.

Personal Safety: aware of surroundings, people, and events.

Pressure due to multiple calls and inquiries.

Subject to long, irregular hours.

Subject to many interruptions.

Subject to burns and cuts.

Subject to electrical and radiant energy hazards.

Subject to hazards of flammable or explosive gases.
Subject to injury from moving parts of equipment or vehicles.
Subject to precarious or high locations.
Subject to pressure for multiple calls, inquiries, and interruptions.
Subject to varying and unpredictable situations.
Subject to traffic, roadways, and pedestrians.
Subject to vibrations and strain on the body to cause bodily harm if endured daily.
Temperature Changes: variations in temperature from hot too cold.
Temperature Changes: variations in temperatures from hot too cold when works in field.
Wet: frequent contact with water or other liquid.
Wet: frequent contact with water, liquid, chemicals, or sanitary sewage.
Works in precarious or high locations

Level of Physical Demand

For DPL Positions Specifically:
3-Medium (20-50 lbs.) to 4- Heavy Work (50-100 lbs.)

Physical Demands

For DPL Positions Specifically:

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

Agility: Ability to move quickly and easily.
Balancing: Maintaining equilibrium.
Carrying: Transporting or moving an object.
Climbing: Ascending or descending an object or ladder.
Color vision: Ability to distinguish and identify different colors.
Crawling: Moving about in a low or crouched position.
Crouching: Positioning body downward and forward.
Depth Perception: Ability to judge distances and space relationships.
Eye/Hand/Foot Coordination: Performing work through using two or more body parts or other devices.
Feeling: Perceiving attributes of objects by means of skin receptors, communication, or otherwise.
Field of Vision: Ability to sharply detect or perceive objects peripherally.
Fine Dexterity: Sufficient coordination to operate a vehicle and manipulate objects.
Fingering: Picking and pinching, through use of fingers or otherwise.
Handling: Seizing, holding, grasping, through use of hands, fingers, or other means.
Hazards: Conditions where there is danger to life, body and/or health.
Hearing/Talking: Perceiving and comprehending the nature and direction of sounds/ability to communicate ide-as.
Hearing: Perceiving and comprehending the nature and direction of sounds.
Kneeling: Assuming a lowered position.
Lifting: By Position, may move objects 20-50 pounds, or 50-100 pounds from one level to another.
Neck Flexion: Perceiving objects located above or below.
Physical Strength: Exerts force to transport objects of 50 pounds or more.
Pulling: Exerting force upon an object so that it is moving to the person.
Pushing: Exerting force upon on object so that it moves away from the person.
Reaching: Extending the hands and arms or other device in any direction.
Repetitive motions: Making frequent or continuous movements.
Sitting: Remaining in a stationary position.
Stamina: Ability to work over long periods of time without tiring.
Standing: Remaining in a stationary position.
Stooping: Positioning oneself low to the ground.

Talking: Communicating ideas or exchanging information.

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.

Walking: Ability to move or traverse from one location to another.

Written Comprehension: Ability to discern the meaning of written words.

Background Check Requirement

Criminal Check

Employment Verification

Motor Vehicle Record

By position, License/Certification

Assessment Requirement

None

Probation Period

None

Class Detail

Pay Grade: NE-17

FLSA Code: N

Established Date: 7/4/2021

Established By: BM

Revised Date: 1/14/2022

Revised By: AD

Class History: 1/14/2022 – Revised DOTI certification requirements.