



Office of Human Resources  
Traffic Signal Technician III - CJ2610  
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### General Statement of Duties

Performs full performance level work in the installation, construction, maintenance and repair of traffic control systems, with a focus on troubleshooting and configuring traffic control systems.

### Distinguishing Characteristics

The Traffic Signal Technician III is the third class in a three classification series. The Traffic Signal Technician III is distinguished from the Traffic Signal Technician II, which performs intermediate-level work in field and shop installation, serving and maintenance of electrical and electronic intelligent transportation sub-systems. The Traffic Signal Technician III is also distinguished from the Traffic Signal Technician I, which performs entry-level work in the installation and maintenance of traffic control devices under direct supervision.

### Level of Supervision Exercised

By position, oversees the work of lower level technicians and laborers.

### Essential Duties

Installs, constructs, maintains, and repairs traffic signal systems and devices, which includes wiring, conduit, poles, signal heads, controllers, switches, and vehicle detectors under the direction of a supervisor.

Troubleshoots, diagnosis, and repairs traffic signal device malfunctions, and evaluates equipment problems by interpreting blue prints, schematics, and wiring diagrams.

Installs and maintains signal controller cabinets, video and data modems, and CCTV and autoscope cameras systems and control equipment.

Performs software updates for controllers, modems, cameras, and display equipment.

Install fiber optic cables, underground conduit lines, junction boxes, and traffic control devices.

Inspects, removes, and repairs signal control and auxiliary equipment such as traffic signal controllers and cabinets vehicle and pedestrian head assemblies, and lighting and circuitry devices and systems.

Adjusts, repairs, replaces, and modifies electric, electronic, and mechanical components, controllers, relays, switches, fuses, timers, and other related parts and equipment.

Investigates complaints and reports of defective traffic signals and associated equipment.

Installs, maintains, and repairs, vehicle identification and detection systems.

Monitors and programs traffic signal timing controllers and makes necessary adjustments.

Coordinates repairs with contractors and other City departments to ensure work is properly completed within standards and codes.

Attend pre-design, pre-bid, and pre-construction meetings to help identify potential problems.

Operates vehicles and performs pre-trip inspection to ensure proper functioning, which includes checking fluid levels, observing leaks, monitoring condition of hoses and belts, checking tire pressure, ensuring brake lights and lights work, and performs other related inspections.

Operates equipment and uses tools, to ensure that they are secure, clean, and in proper working order, which includes maintenance and repair.

Observes all common safety practices associated with tools and equipment, monitoring work environment for safety and hazards, and ensures safety for self and others.

Places and removes barricades, cones, and other traffic control and safety devices in and around work areas for construction and maintenance projects in accordance with traffic regulation requirements.

May log, record, and create daily work reports for management.

By position, performs seasonal street maintenance duties such as snow plowing, salting and sanding, removing snow and ice from sidewalks, steps, seats, ramps, and parking lots, and hauls ice and snow away by truck.

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

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

**Oral Communication** - Expresses information to individuals or groups effectively; taking into account the audience and nature of the information; makes clear and convincing oral presentations; listens to others, attends to nonverbal cues and responds appropriately.

**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 and extensive on-the-job experience to perform one’s job, works with, understands, and evaluates technical information related to the job, and advises others on technical issues.

**Technical Problem Solving** – Troubleshoots, diagnoses, analyzes, and identifies systems malfunctions to determine the source and cause of problems.

**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.

**Working with People** - Shows respect for the views and contributions of other team members. Shows empathy, listens, supports, and cares for others, and reconciles conflict.

## Knowledge & Skills

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

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

Knowledge of machines and tools including their designs, installation, uses, repair, and maintenance.

Knowledge of materials, methods, and the appropriate tools to construct objects, structures, and buildings.

Knowledge of procedures for operating motor vehicles including cars, trucks, or watercraft.

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

### **Education Requirement**

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

### **Experience Requirement**

Three (3) years of experience in traffic signal installation, construction, maintenance, and repair.

### **Education & Experience Equivalency**

A combination of appropriate education and experience may be substituted for the minimum education and 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 "A") with appropriate endorsements by the end of probation.

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

IMSA (International Municipal Signal Association) Work Zone Traffic Control Safety Certification is required at the time of application.

IMSA Traffic Signal Level II Certification in a designated area is required at the time of application.

Obtain IMSA Traffic Signal Level III Certification in Bench, or Field within 1 year of hire or promotion as designated by management.

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

### **Working Environment**

Extreme Cold: temperature cold enough to cause marked bodily discomfort.

Extreme Heat: temperature hot enough to cause marked bodily discomfort.

Temperature Changes: variations in temperature from hot to cold.

Wet: frequent contact with water or other liquid.

Humid: conditions with high moisture content to cause bodily reactions.

Noise: sufficient noise to cause distraction or possible hearing loss.

Vibrations: Strain on the body to cause bodily harm is endured daily

Hazards: Conditions where there is danger to life, body and/or health.

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

Potential exposure to hazardous chemicals.

Potential exposure to extremes of heat and cold in all weather conditions.

Potential exposure to hazardous chemicals.  
 Potential exposure to hazards from electro/mechanical/power equipment.  
 Potential exposure to toxic chemicals.  
 Potential exposure to unpleasant elements (accidents, injuries and illness).  
 Subject to burns and cuts.  
 Subject to hazards of flammable, explosive gases.  
 Subject to injury from moving parts of equipment.  
 Works in precarious or high locations (ladders, scaffolding, etc.)  
 Subject to many interruptions.  
 Subject to varying and unpredictable situations.  
 Handles emergency or crisis situations.  
 Subject to long irregular hours.  
 Handles absentee replacement on short notice.

### 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.):

Standing: remaining on one's feet in an upright position.  
 Walking: moving about on foot.  
 Sitting: remaining in the normal seated position.  
 Carrying: transporting an object, usually by hand, arm, or shoulder.  
 Pushing: exerting force upon an object so that the object is away.  
 Pulling: exerting force on an object so that it is moving to the person.  
 Climbing: ascending or descending objects usually with hands/feet.  
 Balancing: maintaining body equilibrium to prevent falling over.  
 Stooping: bending the body by bending spine at the waist.  
 Kneeling: bending legs to come to rest on one or both knees.  
 Crouching: bending body downward and forward by bending legs.  
 Crawling: moving about on hands and knees or hands and feet.  
 Reaching: extending the hand(s) and arm(s) in any direction.  
 Handling: seizing, holding, grasping, or otherwise working with hands.  
 Fingering: picking, pinching, or otherwise working with fingers.  
 Feeling: perceiving attributes of objects by means of skin receptors.  
 Talking: expressing or exchanging ideas by means of spoken words.  
 Hearing: perceiving the nature of sounds by the ear.  
 Repetitive motions: Making frequent movements with a part of the body.  
 Eye/hand/foot coordination: performing work through using two or more.  
 Far acuity: ability to see clearly at 20 feet or more.  
 Near acuity: ability to see clearly at 20 inches or less.  
 Depth Perception: ability to judge distance and space relationships.  
 Field of Vision: ability to see peripherally.  
 Accommodation: ability to adjust vision to bring objects into focus.  
 Color Vision: ability to distinguish and identify different colors.  
 Lifting: raising or lowering objects weighing no more than 50 pounds, from one level to another.

### Background Check Requirement

Criminal Check

Employment Verification  
By position, Motor Vehicle Record  
Licenses/Certification

**Assessment Requirement**

None

**Probation Period**

Six (6) months.

**Class Detail**

**Pay Grade: J-620**  
**FLSA Code: N**  
**Established Date: 9/21/2018**  
**Established By: LS**  
**Revised Date:**  
**Revised By:**  
**Class History:**