

## CITY OF OVERLAND PARK - POSITION DESCRIPTION

<b>TITLE:</b>	Traffic Signal Technician	<b>BAND/LEVEL:</b>	TEC III
<b>DEPARTMENT:</b>	Public Works	<b>JOB NO:</b>	3775
<b>DIVISION:</b>	Public Works Maintenance	<b>DATE:</b>	03/20/2018
<b>REPORTS TO:</b>	Supervisor, Public Works Maintenance	<b>FLSA STATUS:</b>	Non-Exempt
<b>FT/PT/SEASONAL:</b>	Full-time	<b>COST CENTER:</b>	321
<b>REPLACES:</b>	New Position	<b>LAST REVISED DATE:</b>	02/16/2018

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**JOB SUMMARY STATEMENT:** Performs apprentice level maintenance and repair on City owned traffic signals and related communication systems, Intelligent Transportation System (ITS) devices, and computerized controllers. Works in both field and indoor shop environments. Uses basic skill and training in electronics to diagnose corrective action, repair/replace system components and install computer software. Utilizes specialized tools and equipment such as electronic meter reading devices, personnel lifts and computerized diagnostic equipment. Performs skilled maintenance and repair on City owned street lights and related equipment, to include; troubleshooting failures, replacing parts, repairing components and/or replacing entire light systems. Responds to after-hour/weekend emergencies, as assigned. Participates in emergency operations, including snow removal, as required.

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### DUTIES AND RESPONSIBILITIES:

1. Performs basic, apprentice level field maintenance on City owned traffic signals as assigned. Tunes or replaces electronic signal equipment as directed; reads blueprints and intersection drawings; tests "live" wires buried throughout the intersection; replaces signal lamps, poles, and other hardware. Investigates complaints and observes malfunctions. Assists in troubleshooting hardware and software problems, including the analysis of software problems by microprocessor keyboard entry and use of laptop computer.
2. Conducts supervised testing and repair of malfunctioning electronic signal equipment. Uses computer diagnostic equipment to identify defective traffic signal components for repair or replacement, and to confirm proper operation of repaired or replaced components.
3. Performs periodic testing of traffic signal conflict monitors using electronic testing equipment as assigned.
4. Safely operates aerial lift trucks and digger derrick equipment routinely used to maintain and install traffic signals and street lights. Maintains knowledge of safe work practices using aerial lifts and small crane equipment normally used in the process to install, remove or perform maintenance on signals and street lights.
5. Performs routine maintenance of signal and street light controller cabinets including cleaning, lubing, and general repair.
6. May be assigned to be a team leader when part of a maintenance work team.
7. Assists in the training of others to perform experienced level maintenance of street lights, underground utility locating and installation or replacement of street signs. Maintains knowledge of traffic control devices and their use. May be assigned to review temporary traffic control layouts, install temporary traffic control devices and/or assist in the training others to set up temporary traffic control on city streets.
8. Performs skilled maintenance and repair to City owned street lighting systems. Diagnosis system failures including electrical wiring, controllers, lighting components and raw power feeds. Repairs or replaces faulty

street lighting electronics, electrical components and/ or street light structural components, such as pole, mast arms or foundation bases.

9. Performs basic diagnostic on electronic cameras, CCTV observation cameras, preemption devices, dynamic message boards, audible pedestrian devices, and other electronic devices as part of the Intelligent Transportation System. Performs routine system maintenance and supervised repairs as assigned.
10. Monitors traffic detector status (both inductive loop, radar, and video detection) by reviewing computer logs, analyzing data, testing field equipment, and maintaining an intersection history file.
11. Assists in the inspection of new signal installations, as assigned. Reviews signal plans, signal equipment specifications, and applicable signal installation codes. Participates in the startup of new signal systems and confirms city maps are updated.
12. Assists in the installation of new or temporary signal systems, as assigned. Follows proper installation and start up procedures. Reviews and interprets plans/blueprints and specifications.
13. Keeps records, prepares reports. Works with spreadsheets, databases, email communication and word document programs. Inputs work activities into City assigned work management system and assists in maintaining asset inventory of traffic infrastructure.
14. Responds to emergency call-outs involving traffic signal, street lights and/or other traffic related emergencies, as assigned. Responds in accordance to established call-out procedures.
15. Responds in support of citywide emergencies such as flood, storm, major traffic accidents, and snow removal operations. Operates a plow truck during snow operations, as assigned.
16. The employee must work the days and hours necessary to perform all assigned responsibilities and tasks. Must be available (especially during regular business hours or shifts) to communicate with subordinates, supervisors, customers, vendors and any other persons or organization with whom interaction is required to accomplish work and employer goals.
17. The employee must be punctual and timely in meeting all requirements of performance, including, but not limited to, attendance standards and work deadlines; beginning and ending assignments on time; and scheduled work breaks, where applicable.

## GENERAL QUALIFICATIONS

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### EDUCATION & SPECIAL LICENSE(S)/CERTIFICATIONS:

- High school education with additional, formal courses in basic electrical wiring, electronics, operation and repair of electrical systems or a combination of formal education and experience.
- An Associate's degree in Electronic Technology, Computer Wiring/ Repair, or related field of study preferred. Possession of an appropriate, valid drivers license.
- Must have and maintain a Class A commercial driver's license with air brake and tanker endorsements within 12 months of hire and must maintain an insurable driving record.
- Must have the following certifications within 12 months of employment with the City:
  - Certification in bucket truck and digger derrick operation.
  - International Municipal Signal Association (IMSA) Traffic Signal I and Street Lighting I.

### EXPERIENCE:

- Two years' experience in electrical repair of street lights or an equivalent level of experience.
- Minimum 1 year experience in the maintenance and repair of traffic signals, computer electronics, and/or commercial type AC electrical systems.

**SKILLS:**

- Good written and oral communication skills.
- Computer and microprocessor skills.
- Analytical skills.
- Attention to detail.
- Basic mathematical skills.
- Computer software skills such as database, spreadsheet, word-processing, and traffic controller programs.
- Electronic skills at circuitry level.
- Basic electrical skills.
- Electronic troubleshooting.
- Project management skills.
- Time management skills.
- Tact and diplomacy.
- Organizational skills.
- Work zone and electrical safety skills.
- Teamwork skills.
- Leadership skills.

**MENTAL REQUIREMENTS:**

- Ability to read and comprehend city, state and federal regulations.
- Ability to prioritize work and work independently.
- Ability to analyze complex problems and recommend possible solutions.
- Ability to assess situation and use judgement in responding.
- Ability to meet deadlines.
- Ability to carry out assignments through oral and written instructions.
- Ability to learn and understand PC software applications.
- Ability to read and understand signal schematics and plans.
- Ability to work under distracting conditions, including heavy traffic and inclement weather.
- Abstract and logical reasoning.
- Alpha and numeric recognition.
- Mechanical aptitude.
- Concentration.
- Ability to analyze safety situations.
- Ability to train and guide others.

**PHYSICAL REQUIREMENTS:**

- Hand and eye coordination adequate to input keyboard and operate various technical components.
- Ability to drive City vehicles.
- Ability to receive and transmit messages by radio and phone.
- Ability to travel to and tour work sites.
- Exposure to chemicals, dust, smoke, gases and vapors.
- Exposure to exhaust fumes and vehicle noise.
- Exposure to extreme environmental conditions.
- Exposure to high voltage.
- Ability to work at heights up to 50 feet.
- Ability to operate/drive heavy equipment.
- Hand-eye coordination to examine small parts and equipment.
- Ability to use hand and power tools (soldering iron, screwdrivers, cable strippers, knives, drills, saws, spectrum analyzer and microcomputer controllers).
- Ability to identify and distinguish colors.
- Ability to distinguish smells.
- SEE ESSENTIAL FUNCTIONS BELOW FOR ADDITIONAL PHYSICAL REQUIREMENTS.

**SUPERVISORY RESPONSIBILITY (Direct & Indirect):**

- None.

The preceding job description has been designed to indicate the general nature and level of work performed by employees within this classification. It is not designed to contain or be interpreted as a comprehensive inventory of all duties, responsibilities, and qualifications required of employees assigned to this job.

**ESSENTIAL FUNCTIONS**

ACTIVITY	DURATION	DESCRIPTION
Standing	Freq. - Const.	even and uneven surfaces
Walking	Freq. - Const.	even and uneven surfaces
Sitting	Freq. - Const.	motor vehicle operation / office environment
Driving	Freq. - Const.	motor vehicle operation
Bending	Freq. - Const.	required to complete requirements
Stooping	Freq. - Const.	required to complete requirements
Twisting	Freq. - Const.	required to complete requirements
Kneeling	Freq. - Const.	required to complete requirements
Squatting	Freq. - Const.	required to complete requirements
Crawling	Occasional	required to complete requirements
Stairs	Occasional	enter / exit vehicle - cab and truck bed
Ladders	Occasional	enter / exit various surfaces on vehicles

LIFTING	WEIGHT	HEIGHT	FREQUENCY	DURATION	DESCRIPTION
Sand bag	50 lbs.	floor to waist	variable	occasional	two hand lift
Controller	20 lbs.	floor to chest	variable	occasional	two hand lift
Miscellaneous tools	0- 10 lbs.	0- 60 inches	variable	frequent	one or two hand lift
commercial light head	40 lbs.	floor to overhead	variable	occasional	two hand lift
residential light head	25 lbs.	floor to overhead	variable	occasional	two hand lift
signal head	35 lbs.	floor to chest	variable	occasional	two hand lift
Cable spool	56 lbs.	floor to waist	variable	occasional	two hand lift
Battery	60 lbs.	floor to chest	variable	occasional	two hand lift

*\* This is a list of observed essential functions on one date only that provides a sample range of occupational requirements; there are other items that are required to be lifted as a requirement of this position. Frequencies will be variable and dependent on type of work that is required at given time.*

CARRY	WEIGHT	DISTANCE	FREQUENCY	DURATION	DESCRIPTION
Sand bag	50 lbs.	0- 50 feet	variable	occasional	two hand carry
Controller	20 lbs.	0- 50 feet	variable	occasional	two hand carry
Miscellaneous tools	0- 10 lbs.	0- 50 feet	variable	occasional	two hand carry
commercial light head	40 lbs.	0- 50 feet	variable	occasional	two hand carry
residential light head	25 lbs.	0- 50 feet	variable	occasional	two hand carry
signal head	35 lbs.	0- 50 feet	variable	occasional	two hand carry
Cable spool	56 lbs.	0- 50 feet	variable	occasional	two hand carry
Battery	60 lbs.	0- 50 feet	variable	occasional	two hand carry

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PUSHING	FORCE	FRQNCY/DUR	DESCRIPTION
component cabinet	30 lbs.	occasional	horizontal force; two hand push
cable / wire	TBD	occasional	horizontal force; two hand push

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PULLING	FORCE	FRQNCY/DUR	DESCRIPTION
component cabinet	30 lbs.	occasional	horizontal force; two hand pull
cable / wire	TBD	occasional	horizontal force; two hand pull

*\* This is a list of observed essential functions on one date only that provides a sample range of occupational requirements; there are other items that are required to be lifted as a requirement of this position. Frequencies will be variable and dependent on type of work that is required at given time.*

REACHING	DURATION	DESCRIPTION
Below Knee Height	freq. to const.	type of job dependent
Below Waist Height	freq. to const.	type of job dependent
Forward > 2 Feet	freq. to const.	type of job dependent; motor vehicle operation
Above Shoulder Height	freq. to const.	type of job dependent
Lateral Reach	freq. to const.	type of job dependent; motor vehicle operation

*\* Duration is rated on highest observed required level of performance; certain requirements may be at a lesser level.*

FINE MOTOR	DURATION	DESCRIPTION
Gripping	frequent	type of job dependent; motor vehicle operation; 1- 2 hand controls
Pinching	frequent	type of job dependent; motor vehicle operation; 1- 2 hand controls
Wrist Flexion & Extension	frequent	type of job dependent; motor vehicle operation; 1- 2 hand controls
Wrist Lateral Deviations	frequent	type of job dependent; motor vehicle operation; 1- 2 hand controls
Pronation & Supination	frequent	type of job dependent; motor vehicle operation; 1- 2 hand controls

*\* Duration is rated on highest observed required level of performance; certain requirements may be at a lesser level.*

**Proprioception Requirements:** maintenance are required to be able to identify / assemble / disassemble items (nuts, bolts, washers, etc.) with bilateral hands / fingers without having a direct line of site to the item.

Color Vision - Required