

CITY OF OMAHA CLASS SPECIFICATION

No. 6880

TRAFFIC SIGNAL TECHNICIAN III

NATURE OF WORK

This is senior level work involving the installation, maintenance, repair, planning, evaluation and testing of traffic signal systems, traffic signal communication systems and methods and their associated components. Employees in this class exercise considerable independent judgment in the performance of their duties, based on established practices and procedures, and may provide technical and general supervision, training and mentoring for subordinate employees.

ESSENTIAL FUNCTIONS (Any one position may not perform all of the duties listed, nor do the listed examples include all of the duties that may be performed in positions allocated to this class.)

Installs, upgrades, maintains, and performs scheduled, unscheduled, and emergency repairs on traffic signal systems, traffic signal communications equipment, and their associated components.

Checks and makes pre-determined adjustments to traffic controller timing programs as indicated.

Uses computers to facilitate setup, programming, and troubleshooting of traffic signal controllers and associated components.

Maintains and repairs assigned tools and equipment.

Programs traffic signal controllers to perform defined operations and signal timing functions.

Conducts inspections of work performed by independent contractors.

Documents and compiles reports reflecting one's own completed work as well as the work of subordinates.

Monitors the traffic signal communication system to report outages, faults, malfunctions or other issues that may arise.

Maintains inventories and inventory records of equipment and materials, oversees their maintenance, determines the needs of each for assigned maintenance operations or projects and recommends purchases to keep stock at adequate levels.

Works with supervisors, engineers and contractors to plan, develop, evaluate and deploy traffic signal and communication systems, including hardware, software and other related components.

Performs other duties as assigned, or as the situation dictates, within the scope of this classification.

REQUIRED KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of the standard tools, materials, and practices used in electronic, electro-mechanical, and solid state equipment repair work.

Knowledge of the principles and applications of electrical theory.

Knowledge of the theories, principles, and applications of serial and IP communications via twisted pair copper wire, fiber-optic cable, and other transmission media.

Knowledge of the hazards and safety precautions necessary in the traffic signal equipment installation and repair trade.

Skill in the installation and repair of under and above ground vehicle detection devices.

Skill in the care and use of tool, equipment, and testing devices used by the Traffic Maintenance division.

Skill in making logical analysis of complex electrical systems and determining causes of malfunctions.

Skill in the use of computers and their associated software.

Ability to use testing equipment to locate, identify, and analyze faults in traffic signal equipment.

Ability to modify, maintain, repair, or replace faulty traffic signal equipment.

Ability to read and interpret sketches, schematics, diagrams, prints, circuit diagrams, and specifications.

Ability to use the standard tools used in the construction trades.

Ability to discern colors, especially wiring color codes.

Ability to understand written or oral instructions.

Knowledge of the contents of the Manual on Uniform Traffic Control Devices.

Knowledge of pertinent and current innovations regarding traffic signals.

Knowledge of in-depth advanced traffic management systems.

Ability to stand and walk from 51 to 75% of the time; to sit from 26 to 50% of the time; and to climb, reach, balance, bend, stoop, squat, kneel, crouch, crawl, push, pull, lift and type up to 25% of the time.

Ability to use up to ten (10) pounds of force to move objects from 100% of the time.

EDUCATION AND EXPERIENCE (The knowledge, skills, and abilities above may be acquired through, but are not limited to, the following combination of education and/or experience.)

Associate's degree in electronics, industrial or digital electronic theory and repair

OR

Five years of experience in the traffic signal repair industry

OR

An equivalent combination of experience, education and/or training.

SPECIAL QUALIFICATIONS

Must acquire and maintain a Class "B" Commercial Driver's license with "N" and air brake endorsements by the end of the probationary period.

Must obtain and maintain certification through the International Municipal Signal Association (IMSA) in Work Zone Safety, Traffic Signal Level I and II by the end of the probationary period.

Must acquire and maintain a 2nd Grade Hoisting and Portable Engineering Certificate by the end of the probationary period.

WORKING CONDITIONS

Work is performed both in and out of doors in all weather conditions. At times incumbents may be exposed to extremes in heat, cold, and humidity, in high places or confined spaces, in conditions such as smoke, dust, mists, gases, high noise levels, and in heavy traffic.

EQUIPMENT OPERATION (Any one position may not use all of the tools and equipment listed, nor do the listed examples comprise all of the tools and equipment that may be used in positions allocated to this classification.)

Service Van	Oscilloscope
Computer Controller	Test Equipment
Eprom Programmer	High Reach Boom Truck with Hoist
Underground Cable Locators	Two-way Radio
Digital Multi-meter	Fusion Splicer
Optical Time Domain Reflectometer (OTDR)	

Approved: 11/23/11