

ELECTRONICS TECHNICIAN I  
ELECTRONICS TECHNICIAN II

DEFINITION

To perform work in the installation, testing, maintenance, calibration, repair and modification of electrical and electronic equipment and traffic signals.

DISTINGUISHING CHARACTERISTICS

Electronics Technician I - This is the entry level class in the Electronics Technician series. Positions in this class typically have little or no directly related work experience and work under immediate supervision while learning job tasks. The Electronics Technician I class is distinguished from the II level by the performance of less than the full range of duties assigned to the II level. Incumbents work under immediate supervision while learning job tasks, progressing to general supervision as procedures and processes of assigned area of responsibility are learned.

Electronics Technician II - This is the full journey level class in the Electronics Technician series and is distinguished from the I level by the ability to perform the full range of duties assigned with only occasional instruction or assistance as unusual or unique situations arise. Positions in this class are flexibly staffed and are normally filled by advancement from the I level.

SUPERVISION RECEIVED AND EXERCISED

Electronics Technician I

Receives immediate supervision from an assigned supervisor; receives technical and functional supervision from the Senior Electronics Technician.

Electronics Technician II

Receives general supervision from an assigned supervisor; receives technical and functional supervision from the Senior Electronics Technician.

EXAMPLES OF ESSENTIAL DUTIES– Duties may include, but are not limited to, the following:

Install, service, operate, test and repair lights, ballasts, switches, motors, air conditioning units, street lights, traffic signals, and other similar electrical and electronic devices.

Maintain water production and sewage plant equipment such as motor control and automatic switchgear, storm and sewage pumps; install and maintain well starters and related automatic

## Electronics Technician I/II

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control equipment such as high-voltage circuit breakers, air switches, control wires and protective relays.

Participate in the design and engineering of electronic components and systems; set, test and repair all types of electric meters.

Repair computer controllers for traffic signals and motor controls for pumps; program computers for various types of signal control work; troubleshoot hardware and software related problems; install, wire and repair computer mainframes and personal computers; maintain ITS system servers, software and network; perform software and firmware updates to equipment.

Perform scheduled preventative maintenance; answer emergency and trouble calls regarding burned-out fuses; replace broken wires or light standards.

Troubleshoot electrical devices and traffic signals; diagnose potential problems and repair or replace devices as required.

Test emergency generators at various City buildings; clean lubricate and inspect electrical equipment; install energy saving devices in air conditioners; repair air conditioner units as necessary.

Install, configure, and maintain control, video, and communications equipment.

Install and maintain telemetering, pilot wire equipment and City-owned and leased communications equipment; locate and make recommendations to correct radio interference.

Set and service electrical voltage recording devices; locate underground electrical conductors to prevent damage; inspect and repair new and damaged buried cables; supervise contractors performing installation and repair work near cables.

Operate equipment in a safe and efficient manner in a variety of hazardous environments including toxic liquids and gases and high voltages.

Build and maintain positive working relationships with co-workers, other City employees, and the public using principles of good customer service.

Provide inspection of traffic signal projects.

Perform related duties as assigned.

### MINIMUM QUALIFICATIONS

#### Electronics Technician I

Knowledge of:

Basic principles of electrical and electronic system repair, maintenance, and system design.

Types of tools, methods and materials used in electrical work.

Components and parts used in modern street lighting, traffic signals, water pumping, heating, air conditioning and ventilation systems.

Computer hardware and software.

Safe work practices.

Ability to:

Perform maintenance, troubleshoot and repair work on a wide variety of electrical and electronic equipment and devices.

On a continuous basis, know and understand operations, and observe safety rules; intermittently analyze problem equipment; identify and locate equipment; interpret work orders; remember equipment location; and explain jobs to others.

Intermittently, sit while studying or preparing reports; bend, squat, climb, kneel and twist when installing, repairing, and servicing equipment; perform simple and power grasping, pushing, pulling, and fine manipulation; and lift or carry weight of 50 pounds or less.

Understand and interpret written and oral instructions, electrical drawings, blueprints, plans and wiring diagrams.

Use and care for tools and equipment used in maintaining and repairing electrical and electronic devices.

Work safely under emergency and hazardous conditions including live vehicle traffic.

Assist others in municipal electrical and electronic maintenance and repair duties.

Communicate clearly and concisely, both orally and in writing.

Establish and maintain effective working relationships with those contacted in the course of work.

Experience and Training

Experience:

One year of experience in the maintenance and repair of electrical equipment and systems related to an electric or service oriented utility, industrial plant or traffic signal systems.

Training:

Equivalent to the completion of the twelfth (12<sup>th</sup>) grade, GED, or higher level degree supplemented by specialized training in electronics or a related field.

License or Certificate

Possession of a valid California driver's license by date of appointment.

Electronics Technician II

In addition to the qualifications for the Electronics Technician I:

Knowledge of:

Complex principles of electrical and electronic repair, maintenance and system design.

Principles, methods, materials and equipment used in the installation, testing, maintenance, operations and modification of electronics equipment.

Traffic control methods and procedures.

Ability to:

Troubleshoot and repair a wide variety of electrical and electronic equipment and devices.

Experience and Training

Experience:

Two years of responsible electronic maintenance experience performing duties similar to that of an Electronics Technician I with the City of Roseville.

Training:

Equivalent to the completion of the twelfth (12<sup>th</sup>) grade, GED, or higher level degree supplemented by specialized training in electronics or a related field.

License or Certificate

Possession of a valid California driver's license by date of appointment.

If assigned to traffic signal activities, possession of an International Signal Association Level 2 certificate and possession of an I.M.S.A. Traffic Control Certificate.

02-20-19

05-12-07

04-15-06

02-17-05

01-18-99

10-01-88

06-09-80 Electrical Eng Tech I /II

05-16-77 Electrical Technician

07-01-79 Electrical Eng Tech

10-30-73

-67

-65

-64 Electrical Estimator