

Definition: Under minimal supervision, to operate and maintain the computerized traffic signal system; review and critique system software; provide computer hardware and software support; develop timing and response plans with computer based optimization.

Examples of Essential Job Functions:

Represent the Traffic Management Center at pre-construction meetings to discuss traffic management, Institute of Transportation Engineers/signal installation and modifications, and critical operations (i.e., system down time) issues.

Expedite successful installations via participation on inspection teams. Oversee ITS field installations, cross-train inspectors, and complete acceptance testing to ensure equipment is properly installed and is operating in accordance with specification requirements.

Incorporate system diagnostic capabilities to detect early malfunction and ensure data integrity. Assist technicians with troubleshooting field components such as detector operations and communications.

Establish, monitor and evaluate traffic system performance and benefits for SCOOT and UTCS.

Document the TMC's traffic control and communications systems. Work with technicians to locate and document Traffic Systems' conduits, interconnect wires and fiber optic networks. Assist with signal systems and communications integration.

Operate and monitor the automated traffic signal control system during daily and special event operations.

Review and analyze traffic characteristics in the system; prepares timing plans and strategies; assist in developing and reviewing special event plans and system expansion plans. Develop a migration to relocate the communications infrastructure.

Compile data for and prepares a variety of technical reports related to traffic engineering, traffic systems planning and automated traffic signal systems.

Assist in identifying traffic signal system maintenance needs; notifies and coordinates with field personnel on emergency traffic signal maintenance and adjustment of timing.

Examples of Non-Essential Job Functions:

Perform signal timing and fine-tuning in the field as required.

Develop and enhance signal control software for embedded systems as necessary.

Coordinate system operation and maintenance with other City departments, and outside agencies, consultants and contractors.

Assist in maintaining the signal maintenance and record system; inputs software changes into the system's database.

Train and assist system users; give tours and demonstrates systems capabilities.

Perform other job related duties as required.

Minimum Requirements:

Experience: Equivalent to journey level professional traffic engineering experience working with computerized traffic signal control systems. Background in electrical engineering or computer science is desirable.

Knowledge of: Automated signal control system operations and characteristics; traffic engineering principles and studies; signal timing and understanding of adaptive signal control; signal timing software such as Synchro or Passer; pertinent Federal, State, and local laws, codes, and regulations; personal computers and Microsoft Windows and Office products; computer programming including database programming languages; and software packages related to automated signal control programs; traffic signal equipment and operations.

Ability to: Maintain, troubleshoot, and monitor the daily operation of an automated traffic signal control system. Oversee and conduct acceptance testing to ensure equipment is properly installed and operating in accordance with specifications. Perform system diagnostics for early detection of malfunctions and data integrity. Establish, monitor and evaluate traffic system performance and benefits. Properly document the TMC's traffic control and communications systems. develop special signal timing plans for critical and unusual conditions; prepare routine technical reports related to traffic signal control and automated systems; operate personal computer and related peripherals; program and upgrade computer software; code and develop software using Assembler, C or C++ and work in Visual Basic environment; establish and maintain cooperative working relationships with those contacted in the course of work; communicate effectively, both orally and in writing.

License and/or Certification Required: Possession of a valid California driver's license. Possession of an Engineer-in-Training Certificate.

Physical Requirements: Ability to stand, walk, climb, use both arms, detect color to distinguish signal wiring schematics; work near motor vehicle traffic when working on signals.

Supervision Received: Works under the technical supervision of the Associate Engineer - A assigned to Traffic who gives general directions and reviews completed and in progress work.

NOTE: The above statements are intended to describe the general nature and level of work being performed by persons assigned to this job. They are not intended to be an exhaustive list of all duties, responsibilities and skills required of personnel so classified. All requirements are subject to possible modification to reasonably accommodate individuals with disabilities.

New - C. Harris
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