

INTELLIGENT TRANSPORTATION SYSTEMS (ITS) NETWORK ENGINEER

JOB DESCRIPTION

Classification Responsibilities: Under general supervision, the Intelligent Transportation Systems (ITS) Network Engineer provides skilled technical services in support of installation, configuration, testing, integration, and ongoing support for ITS applications or infrastructure requiring an in-depth knowledge of the ITS workgroup's platforms and environment. This class assists the ITS Network/Communications Administrator with managing the ITS network, servers and workstations, fiber optic infrastructure, etc.; implementing network/user security (anti-virus software, security applications, password policies); managing the design, operations, and maintenance of closed-circuit television cameras, dynamic message signs, and detectors; and performing database management including backing up the database systems and evaluating system functionality. Specific duties include: performing work on multiple assignments simultaneously such as configuration, integration, development, testing, and resolution of problems for systems; assisting with research, evaluation, and implementation of new technologies and/or packaged software; installing and supporting hardware and/or software; preparing and/or updating system documentation; controlling changes in system environments to ensure stable and reliable delivery of computer resources; developing and analyzing data for problem resolution and strategic planning; implementing, maintaining, and monitoring systems and their related subsystems; participating in projects and/or leading small- to medium-scale projects and activities related to ITS computer systems, data, and infrastructure; planning, analyzing, designing, implementing, coordinating, and scheduling processes, procedures, and strategies for systems that function or communicate across multiple platforms; supporting computing processes executed across multiple platforms and/or networks (both internal and external); and utilizing monitoring, forecasting, trend analysis, and/or reporting tools. This class performs other related work as required.

Distinguishing Features: An employee of this class provides expert technical services in support of installation, configuration, testing, integration, and ongoing support for ITS applications, network peripherals, and remote access to the ITS Network. Work is performed under the general direction of the ITS Engineer or the ITS Network/Communications Administrator who makes assignments and reviews work for compliance with standards as well as end results achieved. This class is FLSA exempt-computer-professional.

QUALIFICATIONS

Employee Values: All employees of the City of Mesa are expected to uphold and exhibit the City's shared employee values of Knowledge, Respect, and Integrity.

Minimum Qualifications Required. Any combination of training, education, and experience equivalent to graduation from an accredited college or university with a bachelor's degree in Computer Science, Engineering, or a related field. Considerable (3 - 5 years) computer systems experience in at least one of the following technical support areas: Applications, Database, Desktop, GIS, Network, Security, Server, or Web Support.

Special Requirements. Must possess a valid Class D Arizona Driver's License by hire date.

Substance Abuse Testing. Due to the safety and/or security sensitive nature of this classification, individuals shall be subject to pre-employment or pre-placement alcohol, drug, and/or controlled substance testing as outlined in City policy and procedures.

Preferred/Desirable Qualifications. Knowledge of National Transportation Communications for ITS Protocol (NTCIP) architecture, National Electronics Manufacturing Association (NEMA) Standards, and computerized traffic signal systems operations is preferred.

ESSENTIAL FUNCTIONS

Communication: Communicates with City employees, vendors, management, contractors, and other City departments in order to relay information about ITS devices and coordinate system operation. Communicates with other municipalities over multi-jurisdictional issues, such as regional connectivity. Communicates with signal system supplier and ITS device equipment manufacturers to correct deficiencies, and to plan for future expansion requirements. Prepares written documents such as ITS specifications, recommendations, documentation, visual aids, and graphs with clearly organized thoughts using proper sentence construction, punctuation, and grammar. Prepares documentation of work performed.

Manual/Physical: Uses common hand tools such as a crimper, pliers, and screw drivers. Distinguishes the colors of wires, cables, electronic components, and/or Blue Stake markings to inspect, install, and/or maintain computer equipment and/or input inventory data. Operates standard office equipment such as a telephone, calculator, and personal computer (PC). Moves material such as central computer equipment, and exhibition demo equipment weighing up to 50 pounds from one place to another using a hand truck and wheeled cart. Moves objects such as: a video monitor, PCs, or controllers a distance of 50 feet. Operates a City vehicle requiring a standard Class D Arizona Driver's License to conduct field reviews. Detects traffic sounds when working near moving traffic, backup warning devices when working around moving equipment, sirens, and calls for help. Meets scheduling and attendance requirements.

Mental: Comprehends and makes inferences from written material including technical documentation related to ITS system hardware, firmware, and/or software. Understands and interprets GIS data, network diagrams and other visual aids as necessary to trouble-shoot, repair, and modify the configuration of the ITS Network. Conducts research and/or analyzes system-related data to improve system performance. Resolves procedural, operational, and other work-related problems by analyzing problems and recommending resolutions or correcting problems. Learns job-related material through on-the-job training regarding controller operation, highly sophisticated machine vision technology, and full motion traffic video

Knowledge/Skills/Abilities:

Knowledge of:

information technologies, procedures, and trends;
computerized traffic signal systems operations principles and practices of computerized traffic control system design and maintenance including video monitoring systems and automated traffic systems; and current ITS theories and practices.

Skill in:

performing work on multiple assignments simultaneously such as configuration, integration, development, testing, and resolution of problems for systems;
assessing, troubleshooting, and following established guidelines in the escalation of hardware, software, and networking problems;
assisting with research, evaluation, and implementation of new technologies and/or packaged software;
installing and supporting hardware and/or software;
preparing and/or updating system documentation; and
controlling changes in system environments to ensure stable and reliable use of computing resources and delivery of computer services.

Ability to:

develop and analyze data for problem resolution and strategic planning;
implement, maintain, and monitor systems and their related subsystems;
participate in projects, and/or leading small-to medium-scale projects and activities related to City computer systems, data, and infrastructure;
participate in design, programming, installation, and/or implementation of information systems;
plan, analyze, design, implement, coordinate, and schedule processes, procedures, and strategies for systems that function or communicate across multiple platforms;
support computing processes executed across multiple platforms and/or networks; and
utilize monitoring, forecasting, trend analysis, and/or reporting tools.

The duties listed above are intended only as general illustrations of the various types of work that may be performed. Specific statements of duties not included does not exclude them from the position if the work is similar, related, or a logical assignment to the position. Job descriptions are subject to change by the City as the needs of the City and requirements of the job change.

Revised 3/23

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EEO-Tech

JOB FCTN-INT

INCREMENTS 46-200

PAY GRADE: 56

IND-9410

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