

## CITY OF BURBANK

### COMMUNICATIONS NETWORK ENGINEER

#### DEFINITION

Under general direction, to provide design, maintenance, and operations engineering expertise for wired, wireless, and network communication and control systems; and perform related work as required.

#### ESSENTIAL FUNCTIONS

Plans, directs, designs, and to manage the communications infrastructure and networks, including resource allocation; reviews network utilization for capacity planning; solves complex network problems related to wired and wireless infrastructure, especially in the area of design, functionality, and technical standards; researches and recommends network standards; coordinates changes to network infrastructure to improve performance, reliability, and availability; performs or oversees minor and major network design and implementation; leads and collaborates with network support teams; acts as a Wi-Fi Mesh and network project manager; designs and supervises the implementation of firmware and software rollouts; ensures wireless network security; reviews and maintains detailed drawings and Information Technology Infrastructure Library (ITIL) documentation; performs site Radio Frequency (RF) analysis and propagation surveys; meets with contractors, vendors, and outside agencies regarding project requirements, responsible for maintaining system operations records; drives on City business.

#### MINIMUM QUALIFICATIONS

##### Employment Standards:

- Knowledge of – principles and practices of organization, administration, and budget; best business and purchasing practices; configuration and administration of networks, firewalls, routers, switches, Access Control Lists (ACL) policies, Wireless Local Area Networks (WLANs), Wireless Metropolitan Access Networks (WMANs), Virtual Local Area Networks (VLANs), Layer 2 and Layer 3 Virtual Private Networks (L2/L3 VPNs), Internet Protocol Security (IPSec), Multiprotocol Label Switching (MPLS); Internet Protocol (IP) and routing protocols; wireless Mesh and networking design criteria and security standards as defined by the Institute of Electrical and Electronic Engineers (IEEE); 802.11, 802.15.4/Zigbee; Worldwide Interoperability for Microwave Access (WIMAX), Code Division Multiple Access (CDMA), and Microwave wireless standards; UHF/VHF radio communications equipment; Industrial Controls and Supervisory Control and Data Acquisition (SCADA) systems; Tropos and Trilliant Mesh networks and products; Cisco; Extensible Authentication Protocol (EAP); Tunneling Transport Layer Security (TTLS); Temporal Key Integrity Protocol (TKIP); Public Key Infrastructure (PKI); Certificate of Authority (CA); Remote Authentication Dial-In User Service (RADIUS); Federal Information Processing Standards (FIPS); 2 Factor authentications and encryptions.
- Skill in – fostering a teamwork environment; utilizing computers and a variety of computer software; project management; installing, configuring, troubleshooting, repairing, maintaining, upgrading, monitoring, testing, and evaluating Wi-Fi networks and performance.
- Ability to - organize and prioritize tasks; analyze problems and develop effective solutions; analyze, comprehend, and apply administrative, departmental, and City policies, procedures, and regulations; communicate effectively, both orally and in writing; establish and maintain effective working relationships with supervisors, fellow employees, contractors, and the public.

**Education/Training:** Any combination of education and/or experience that has provided the knowledge, skills, and abilities necessary for acceptable job performance as determined by the City. Example combination includes, but is not limited to a Bachelor of Science degree from an accredited college or university, in computer science, information technology, electrical engineering, or a closely related field and five years of professional experience in installing, configuring, troubleshooting, repairing, maintaining, monitoring, testing, and evaluating enterprise-level networks with substantial Wi-Fi (802.11) experience.

**Special Conditions & Requirements:** The physical ability to lift computer equipment up to 20 pounds, physically perform sedentary light work involving moving from one area to another, sufficient hand/eye coordination to perform repetitive movements such as typing and extensive exposure to video display terminal/computers.

**License & Certificates:** A valid California Class "C" driver's license or equivalent at time of appointment; Cisco Certified Network Associate (CCNA) at time of application.

#### SUPPLEMENTAL INFORMATION

**Desirable Qualifications:** Professional certifications: Cisco Certified Network Professional (CCNP), Cisco Certified Security Professional (CCSP), Cisco Certified Voice Professional (CCVP), Certified Wireless Network Administrator (CWNA).