CLASS TITLE: **WAN ENGINEER**

BASIC FUNCTION:

Under the direction of the Assistant Director, Information Technology, oversee, coordinate and provide support for KCCD's wide area network (WAN) infrastructure including hardware and software such as routers, switches and network management applications. In addition, provide leadership in the ongoing assessment and modification of KCCD's WAN architecture to meet KCCD's Academic and Administrative operational needs.

REPRESENTATIVE DUTIES:

Oversee, coordinate and provide support for KCCD's WAN infrastructure that connects all Kern Community College District sites. *E*

Oversee, coordinate and provide support for backend Video infrastructure including video bridges and scheduling systems in support of KCCD's Instructional and Administrative Video Conferencing services. *E*

Oversee, coordinate, provide support for and advise on Data-Center/IDF power and environmental monitoring systems. *E*

Utilize appropriate network management tools for WAN monitoring, troubleshooting, traffic prioritization, usage reporting and capacity planning purposes. *E*

Coordinate the development of backup and disaster recovery plans for KCCD's WAN and Video infrastructure. *E*

Work with partner agencies, such as the Kern County Superintendent of Schools, in the support of KCCD's WAN. *E*

Work with college and district IT staff to troubleshoot and resolve networking problems in a timely manner. *E*

Coordinate and oversee vendor activities and relationships related to the implementation and ongoing support of KCCD's WAN and backend Video infrastructure. *E*

Develop and maintain documentation for KCCD's WAN and backend Video infrastructure. *E*

Develop long-term strategies for meeting KCCD's future WAN and backend Video infrastructure needs. *E*

Develop, coordinate and deliver WAN related training to other IT staff members for the purposes of backup. *E*

Assist in the renewal and tracking of equipment and software maintenance contracts for KCCD's WAN and backend Video infrastructure. *E*

Assist in the coordination and tracking of Carrier based services such as long distance, PRI and leased-line circuits. *E*

Serve as a backup on as needed basis in the support of KCCD's network, video and telephone systems. *E*

Keep current with the latest developments in WAN and Video related technologies. *E*

Prepare cost estimates and justifications for budget recommendations related to WAN and backend Video infrastructure improvements. *E*

Participate in the development and maintenance of a budget to support KCCD's WAN infrastructure. *E*

Document assignment status as required; apprise management of problems or unexpected resource requirements. *E*

Perform related duties as assigned.

KNOWLEDGE AND ABILITIES:

KNOWLEDGE OF:
WAN performance monitoring, capacity planning and methodologies
Installation, configuration and management of WAN communications infrastructure including routers, switches, DSU/CSUs and other related infrastructure
Network management industry best practices
Cisco routing platforms and related operating/management software such as CISCO IOS
WAN routing protocols such as OSPF, BGP, EIGRP, etc…
WAN traffic prioritization and management concepts such as QOS, bandwidth shaping and bandwidth compression and bandwidth acceleration
Video bridging and scheduling technologies (i.e., Polycom RMX/SE200 systems)
UPS, Generator and Data-Center/IDF power support and management principles
Active Directory, Netbios-NetBui, Ethernet, ATM and TCP/IP
Operating systems such as Microsoft Windows XP and Windows 2003/2008 server
Common Data Network and Video troubleshooting and problem resolution
Data and Telephone cabling standards, methods and procedures
Telecommunications Transports: T-1, Frame-Relay, DS3, OC3, PRI, BRI, DOD, DID, 1MB
Carrier based network technologies such as MPLS
Principles and techniques of effective project management
Budgeting procedures and techniques

ABILITY TO:
Plan, organize, coordinate and implement WAN related projects
Manage a wide array of WAN infrastructure
Coordinate and oversee the support of backend video infrastructure
Effectively interact and negotiate with vendors
Effectively prioritize and execute projects
Effectively participate in working groups or committees
Prepare and follow work plans and time lines for projects and proposed systems
Learn new skills and adapt to changes in technology
Continuously update personal knowledge of industry-leading WAN and video technology
Communicate effectively both orally and in writing
Budget management principles
Establish and maintain cooperative and effective working relationships with others

EDUCATION AND EXPERIENCE:

Any combination equivalent to: Associate's degree and four years of increasingly responsible experience in the management of WAN and backend Video infrastructure including a minimum of 3 years direct experience managing and supporting a multi-site Cisco based WAN.

OR

High school diploma, GED or equivalent certificate of competency and 6 years of work experience such as described in the representative duties section of the specification including a minimum of 3 years direct experience managing and supporting a multi-site Cisco based WAN.
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OR

A Bachelor's degree in a related field of study and 2 years of work experience such as described in the representative duties section of the specification including a minimum of 3 years direct experience managing and supporting a multi-site Cisco based WAN.
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WORKING CONDITIONS:

ENVIRONMENT:
Office environment.
Driving a vehicle to conduct work

PHYSICAL DEMANDS:

Incorporated within one or more of the previously mentioned essential functions of this job description are essential physical requirements. The chart below indicates the percentage of time spent on each of the following essential physical requirements.

1. Seldom = Less than 25 percent
2. Occasional = 25-50 percent

3. Often = 51-75 percent
4. Very Frequent = 76 percent and above

<u>4</u> a. Ability to work at a desk, conference table or in meetings of various configurations.
<u>2</u> b. Ability to stand for extended periods of time.
<u>4</u> c. Ability to sit for extended periods of time.
<u>4</u> d. Ability to see for purposes of reading printed matter.
<u>2</u> e. Ability to hear and understand speech at normal levels.
<u>4</u> f. Ability to communicate so others will be able to clearly understand a normal conversation.
<u>2</u> g. Ability to bend and twist.
<u>2</u> h. Ability to lift 25 lbs.
<u>2</u> i. Ability to carry 25 lbs.
<u>4</u> j. Ability to operate office equipment, computer or related peripherals.
<u>3</u> k. Ability to reach in all directions.

This job description is intended to describe the general nature and level of work being performed. It is not intended to be construed as an exhaustive list of all responsibilities, duties and skills required of individuals so classified.