

**INFORMATION SYSTEMS MANAGER**

FLSA Status: Exempt  
Union Representation: Nonrepresented

**GENERAL PURPOSE**

To plan, manage, supervise and coordinate information systems or telecommunication systems activities and operations; to ensure all computer or telecommunication systems within area of responsibility provide the required functionality; to manage the budget for assigned area; to serve on a variety of committees involved in strategic planning for the City; to coordinate assigned activities with other City bureaus, divisions and outside agencies; and to provide highly responsible and complex administrative support to higher level management.

**SUPERVISION RECEIVED AND EXERCISED**

Receives administrative direction from higher-level management staff.

Exercises direct supervision over supervisory, professional, technical and clerical staff.

**DISTINGUISHING CHARACTERISTICS**

Positions at this level have independent responsibility for the information systems or telecommunication systems function within a functional area; however, the nature and scope of the information systems or telecommunication systems function within the assigned functional area is less diverse and complex than those assigned to Senior Information Systems Manager positions. This class is distinguished from the Senior Information Systems Manager by the number and nature of the group supervised, and the scope and complexity of operations. In determining the scope and complexity of operations and determining placement of positions within the series, size of budget and impact on organization-wide operations is considered on a relative basis. Advancement to higher levels is based on assuming responsibility for a larger, more complex area.

**EXAMPLES OF WORK**--(Any one position may not include all of the duties listed nor do the listed examples include all tasks which may be found in positions of this class.)

1. Assume full management responsibility for information system or telecommunication services and activities including the overall design, management and evaluation of information systems or telecommunication systems in an assigned functional area; direct the development and administration of policies and procedures for contract administration, maintenance, security and related matters; manage the work of outside consultants including selection, negotiating terms and conditions, and authorizing work and payments; ensure all activities are consistent with City strategic direction and standards.
2. Participate in the development of goals, objectives, policies and priorities for the implementation of appropriate information systems or telecommunication systems; prepare and present strategic plans; ensure that strategic plans are consistent with City plans and policies.
3. Confer with other City bureaus and divisions to analyze business needs; recommend specific hardware and software configurations; assign project staff and serve as project manager.

4. Establish appropriate service and staffing levels; monitor and evaluate the efficiency and effectiveness of service delivery methods and procedures; allocate resources accordingly.
5. Develop, write, issue and evaluate request for proposal documents for the selection of professional service contracts; monitor contracted services for quality and compliance with City standards; approve payments.
6. Coordinate data processing or telecommunication systems with other divisions, external agencies and organizations; set project priorities; negotiate schedules and implementation procedures with internal and external resources.
7. Identify and develop plans for improvement in development, maintenance and support services; review requests for additional data support or telecommunication services and identify impact on current and planned resources; design and maintain systems as required for project management, evaluation, control and documentation.
8. Evaluate and monitor data or telecommunication systems hardware and software in assigned service area; resolve connectivity issues within local and wide area network environments.
9. Direct and coordinate the design, development, acquisition and implementation of computer or telecommunication system hardware, software, and data communications solutions.
10. Select, train, motivate and evaluate assigned personnel; provide or coordinate staff training; work with employees to correct deficiencies; implement discipline and termination procedures.
11. Oversee and participate in the development and administration of the budget for information systems or telecommunication systems; approve the forecast of funds needed for staffing, equipment, materials and supplies; approve expenditures and implement budgetary adjustments as appropriate and necessary.
12. Provide staff assistance to higher level management staff; participate on a variety of boards, commissions and committees; prepare and present staff reports and other necessary correspondence.
13. Attend and participate in professional group meetings; stay abreast of new trends and innovations in the field of information systems or telecommunication systems technology.
14. Perform related duties and responsibilities as required.

## **MINIMUM QUALIFICATIONS**

### **Knowledge of:**

- Principles and practices of electronic data processing or telecommunication systems and their applications to assigned services environment.
- Principles and practices of systems analysis, design and development.
- Principles and practices of project management.
- Data processing or telecommunication systems technology trends, history and applications.
- Principles and practices of program development and administration.
- Methods and techniques of managing on-line computer systems and related data bases.
- Principles and practices of information systems or telecommunication systems project development, administration and management.
- Activities, services and operations of assigned functional area.
- Methods and techniques of evaluating business needs and developing information systems or telecommunication systems solutions.

- Principles and practices of budget preparation and administration.
- Principles of supervision, training and performance evaluation.
- Pertinent Federal, State and local laws, codes and regulations.

**Ability to:**

- Manage and direct a comprehensive data processing or telecommunication systems program for assigned functional area.
- Plan, organize and manage computer or telecommunication systems design and implementation activities.
- Apply complex technical principles and concepts to develop business solutions.
- Participate in the development and administration of goals, objectives and procedures.
- Evaluate and analyze cost benefits of planned systems development projects.
- Analyze and assess programs, policies and operational needs and make appropriate adjustments.
- Identify and respond to organizational issues, concerns and needs.
- Plan, organize, direct and coordinate the work of lower level staff
- Delegate authority and responsibility.
- Select, supervise, train and evaluate staff.
- Research, analyze and evaluate new service delivery methods and techniques.
- Prepare clear and concise administrative and financial reports.
- Prepare and administer program budgets.
- Interpret and apply applicable Federal, State and local policies, laws and regulations.
- Communicate technical information to a wide variety of audiences clearly and concisely, both orally and in writing.
- Establish and maintain effective working relationships with those contacted in the course of work.
- Maintain physical condition appropriate to the performance of assigned duties and responsibilities.

**SPECIALTIES:**

Positions in this class are assigned to one of the following specialties: Enterprise Database Manager (EDAT), WAN (Wide Area Network), Network Manager (NET), Project Management (PROJ), Corporate Applications (CORP) or Generalist (GEN). Positions assigned to the Generalist specialty are defined in the General Purpose and Examples of Work sections of the class specification.

**Classification History:**

Adopted: 12-16-98

Class created as a result of IT Classification and Compensation Study 1997-1998. This class is composed of the following classes:

2550 Information Systems Manager Adopted: 07-01-92  
 Revised: 08-22-97 (Added specialty section to reflect special positions.)

Class created as a result of the Nonrepresented Classification & Compensation Study, 1991-92. This class is composed of positions from the following classes:

0385 Systems Manager Adopted 06-17-80  
 0374 Systems & Programming Manager Revised 09-21-82  
 5388 Fire Information Systems Manager Adopted 10-30-87  
 Revised: 3/17/97 (Addition of GIS Data Architect Specialty)  
 2516 Data Processing Operations Manager Adopted: 09-08-85

Revised: 08-23-00. (Added User System Support Specialty)

Revised: 01-30-01 (Added Data Management/GIS Specialty)

Revised: 10-01-02 (Modified Data Mgt/GIS Specialty and renamed it to Enterprise Database Manager)

Revised: 01-10-03 (Created Budget Software System Manager Specialty)

Revised: 06-02-05 (Added Network Manager Specialty)

Revised: 07-22-05 (Added Wide Area Network Specialty as a result of classification action dated 11/12/99)

Revised: 08-31-05 (Deleted Budget Software System Manager Specialty)

Revised: 04-25-06 (Deleted User System Support Specialty)

Revised: 05-30-08 (Added Project Management Specialty)

Revised: 10-24-08 (Added Corporate Applications Specialty)

June 2009 - Change Job Class number from 7509 to 30001035 (CORP), due to system change.  
June 2009 - Change Job Class number from 7509 to 30000606 (EDAT), due to system change.  
June 2009 - Change Job Class number from 7509 to 30000607 (GEN), due to system change.  
June 2009 - Change Job Class number from 7509 to 30000608 (NET), due to system change.  
June 2009 - Change Job Class number from 7509 to 30001004 (PROJ), due to system change.  
June 2009 - Change Job Class number from 7509 to 30000609 (WAN), due to system change.

## **30000609 – WIDE AREA NETWORK MANAGER SPECIALTY (WAN)**

Language under development

## **30000606 - ENTERPRISE DATABASE MANAGER SPECIALTY (EDAT)**

### **Summary:**

This single position is responsible for: planning, managing, supervising and coordinating the City's enterprise data management activities and operations including the GIS Hub, enterprise data warehouse, and enterprise data access tool(s); managing all enterprise data models; ensuring the enterprise data management provides the required functionality and is secure, accessible and well documented; participating in the development of a strategic plan for the enterprise data management; coordinating assigned activities with other City bureaus, divisions and outside agencies; and providing highly responsible and complex technical support to higher level management and system users.

### **Examples of Work:**

1. Manages the Information Technology's Data Management Section by overseeing the development and maintenance of the City's enterprise data management including the GIS HUB, enterprise data warehouse, and enterprise data access tool(s).
2. Participates in the development of a strategic plan for the enterprise data management, which meets corporate and customer-specific goals, objectives, policies and priorities.
3. Establishes and implements database maintenance standards and procedures and practices.
4. Oversees the database design, upgrades, security and ongoing research and development for future versions to ensure the City's evolving business needs (e-commerce, e-government) are effectively met.
5. Directly responsible for managing all enterprise data models and ensuring they are maintained to the City standard.
6. Directs data warehousing development efforts; operates, maintains, and administers data warehouse.
7. Develops strategic plans as needed for the development and management of key enterprise data resources
8. Establishes and implements data liaison and partnerships with other key data stewardship functions in the bureau as well as with others in the City and region
9. Ensures that bureau's applications make the most efficient and effective use of data resources
10. Promotes and maintain the integrity and security of City's key data resources
11. Enhances and maximizes the access to data for bureaus and other customers
12. Establishes and maintains service levels with customer groups both within and outside of Information Technology.

### **Knowledge, Skills, and Abilities:**

- Knowledge of enterprise data management, data architecture theory and best practices.
- Knowledge of data modeling techniques, methodologies and use of case tool technology.
- Knowledge of geographic information systems design, spatial database modeling, versioning, theory, and best practices, especially with respect to data design.
- Knowledge of data replication technology, methodologies and best practices.
- Knowledge of data warehousing theory and best practices.
- Knowledge of principles, practices and methods of program, administrative and organizational analysis.
- Knowledge of principles, practices, tools and techniques of program/project planning and management.
- Knowledge of principles and practices of public administration, including human resources management.

- Knowledge of principles, practices and methods of budget development and management.
- Ability to assess customer needs, define requirements, and identify effective solutions to meet the needs.
- Ability to manage highly technical staff, maximizing staff effectiveness and aligning activities with overall organizational goals.
- Ability to effectively manage large and complex projects involving a diverse set of customers with differing business needs.
- Ability to effectively communicate with co-workers and customers, including written communication and speaking in front of large groups.
- Ability to collaboratively identify solutions to technical problems.
- Ability to facilitate, negotiate, build consensus among diverse groups with differing business needs and to implement service level agreements.

### **30000608 - NETWORK MANAGER SPECIALTY (NET)**

#### **Summary:**

The Network Manager directs a team of specialists who are responsible for network and/or server deployment, including engineering design, configuration, testing, implementation to production, and performing the most complex troubleshooting activities. The critical city networks include the primary Ethernet network, the SONET networks, the network tying together the 911 center and its key partner agencies, the City's Internet service connection, the firewalls protecting the City network, and the development of any wide area or local wireless data networks based on the IEEE standards.

Incumbent is expected to have expert skills in network design and methodology and remain current on technological advancements.

#### **Examples of Work:**

1. Keeps maintenance levels current by analyzing network hardware and software needs, recommending solutions, configuring and installing hardware, and other related tasks as needed
2. Manages long-term strategic planning for incorporating new network technology into City operations.
3. Directs acquisition studies and makes recommendations for obtaining appropriate computer and/or network hardware and software components; ensures that components conform to existing corporate standards.
4. Insures compliance with established security standards and best practices.
5. Consults with bureau management, in partnership with Bureau of Technology Services (BTS) staff assigned to assess bureau needs; determines priorities; assesses feasibility; and ensures consistency with Bureau and City requirements, capabilities and standards.
6. Ensures technological solutions, acquisitions, and investments are aligned with City and Bureau goals and objectives.
7. Deploys servers, including complex cluster, Unix and database servers
8. Deployment of Citywide Directory and Identity management infrastructure.

#### **Knowledge of:**

- Expertise in server and/or networking operating systems, configuration, with knowledge of Cisco IOS and at least one variety of Unix, Open VMS, Windows.
- Key elements of secure computing.
- Project management, change management, and quality assurance methodologies and processes.
- Enterprise architecture principles, methodologies and tools.
- Principles, methodologies and techniques of large-scale transaction systems, data storage and data

warehousing, including Relational Database Management Software (RDMS) (e.g.: Oracle, SQL Server)

- Internet, Intranet services and protocols including web, e-mail exchanges.
- Network administration methods and techniques including network monitoring, maintenance and management, network protocols and topologies (e.g.: Ethernet, Frame Relay, SONET), and network elements (bridges, switches, routers).
- Network security methodologies, tools and techniques including firewalls, secure tunneling protocols, encryption, authentication, and authorization
- Network services and protocols (e.g.: TCP/IP, NetBEUI, NetBIOS, Telnet, SMTP, etc.)
- Storage and back-up methodologies including storage area networks, disk and tape based back-up methods, and replication approaches and technologies.
- Trouble ticketing and tracking methodologies and software; methods, techniques, technology trends and best practices of knowledge management, help desk management, call routing, request posting methodologies, self-service implementation.
- Customer Relationships Management (CRM) techniques, methods and approaches, including needs assessment, satisfaction evaluation, escalation procedures and performance metrics.
- Emerging information technology and architectures, including Web-based services, e-business and e-commerce.
- Practices of human resources management and performance evaluation including the development and monitoring of work performance standards.
- Municipal budget development and management.
- Public administration principles, policies and practices.
- Local governmental organization, inter-relationships, and operating procedures.

**Ability to:**

- Plan, assign, supervise and coordinate the work of subordinates including selection, training, performance evaluation, and supervision of staff.
- Develop high performance teams and manage technical staff maximizing staff effectiveness and aligning activities with overall organizational goals.
- Plan, coordinate, manage and evaluate complex work programs involving many diverse elements, interests and key stakeholders.
- Establish goals and objectives and develop comprehensive plans.
- Communicate, negotiate and obtain agreement on controversial and/or complex issues.
- Communicate complex technical and financial issues clearly and concisely, both orally and in writing to a varied audience.
- Develop and monitor performance indicators and measures of program effectiveness.
- Operate within a rapidly changing environment with broad policy goals as guidance.
- Establish and maintain effective working relationships with subordinates, public and private officials, other governmental agencies, community groups and the general public, and within a diverse, team oriented work environment.
- Analyze, develop, and implement administrative and technical policies and goals.
- Evaluate cost and resource information and make administrative decisions.
- Use independent judgment on issues that are complex and require evaluation and interpretation.
- Define, analyze and solve problems requiring creativity and flexibility.
- Prioritize activities and projects.
- Effectively manage change, including new technologies, procedures, policies and standards.
- Properly handle sensitive and confidential information.

## **30001004 – PROJECT MANAGEMENT SPECIALTY (PROJ)**

### **Summary:**

Under general direction from the Chief Technology Officer, the Information Systems Project Management Office Manager is responsible for the development and management of the Bureau of Technology Services (BTS) Project Management Office (PMO), which provides project management services for all divisions of BTS.

The Information Systems PMO Manager establishes common BTS project management processes and provides training to build project management competencies; through reporting staff, provides project management for assigned projects; and tracks and reports performance metrics on projects managed through the PMO. Work requires project management expertise to establish bureau wide project management standards and processes and to provide effective project management for PMO-managed projects.

### **Examples of Work:**

1. Manages a team of staff providing project management services on BTS projects assigned to the Project Management Office (PMO); develops performance objectives and performance measures to monitor PMO and individual staff effectiveness.
2. Monitors the status of team deliverables and provides coaching to staff as needed to ensure projects stay on track and to reduce the potential for issues related to project quality, cost and schedule.
3. Tracks and reports performance metrics on the effectiveness of projects managed through the Project Management Office.
4. Develops and implements a common set of project management processes, procedures and reusable templates to support a consistent approach to project management services within the PMO and bureau-wide; updates and revises processes as needed to incorporate evolving industry standards and best practices.
5. Works with BTS managers to effectively implement consistent processes into the organization.
6. Facilitates effective project team communication by implementing common processes, deliverables and terminology.
7. Implements systems and tools to track the status and health of all projects and to provide visibility to management and customers.
8. Develops and implements a common document repository so that prior successful project management deliverables can be reused by similar projects.
9. Provides training (internal or through vendors) to build core competencies in the PMO team and bureau-wide.
10. Works with customers to build partnerships to enhance the delivery and value of information technology.
11. Serves as the overall advocate and champion for project management practices throughout the organizations.



12. As PMO Manager, works with PMO staff to assemble project teams; facilitate meetings; coordinate the work of multiple teams and committees; conduct management reviews of progress of project against time lines, goals and budgets; develop project reports and related materials; prepares staff reports and presentations; communicate project objectives, progress and issues to bureau managers, Council, and external stakeholders.
13. Serves as an expert resource; provides technical assistance to staff.
14. Performs other special assignment work as required.

**Knowledge of:**

- Principles and practices of computerized systems analysis, design and development.
- Contract management practices, standards, processes and requirements.
- Principles and practices of information systems or telecommunication systems project management, development and administration.
- Methods and techniques of evaluating business needs and developing information system solutions.

**Ability to:**

- Plan, organize and manage a bureau-wide information technology project management office including establish standards and developing and managing project management
- Assess customer and business needs.
- Coordinate and direct a variety of committees and work groups, maximizing staff effectiveness and aligning activities with overall project goals.
- Establish and maintain effective working relationships with co-workers, customers, vendors, management, Council and external stakeholders and others contacted in course of work
- Communicate with co-workers, managers, vendors, Council and external stakeholders including written communication, leading and facilitating task force committees, and making presentations in management meetings and Council.
- Collaboratively identify technical problems and solutions.
- Negotiate and manage consulting contracts.
- Identify and respond to organizational issues, concerns and needs.
- Use project management tools and techniques to ensure projects are completed on time and budget.
- Understand, interpret, explain and apply City, state, and federal policy, law, regulation and court decisions applicable to areas of responsibility to a wide variety of audiences.
- Establish and enforce technological standards.
- Present proposals and recommendations clearly and logically.
- Represent the City effectively in meetings on a variety of technology issues.
- Prepare clear, concise and comprehensive correspondence, reports, studies and other written materials appropriate to both technical and non-technical audiences.
- Exercise sound, expert independent judgment within general policy guidelines.
- Exercise tact and diplomacy in dealing with sensitive, complex and confidential issues and situations
- Establish and maintain effective working relationships with all levels of City management, other governmental officials, consultants, vendors, employees, the public and others encountered in the course of work.
- Manage staff including assigning and reviewing their work.

## **30001035 - CORPORATE APPLICATIONS SPECIALTY**

### **Summary:**

The Corporate Applications Manager is responsible for managing, coordinating and participating in development and maintenance of corporate applications to meet citywide needs. An incumbent is expected to have expert skills in application development methodology and remain up-to-date on application and technological advancements in order to develop, plan, implement, and maintain new applications and technological solutions for the city. Assignments require the use of independent judgment on issues that are complex, interpretive and evaluative in nature.

The Corporate Applications Manager along with the Vertical Applications Manager has the responsibility for managing the Citywide Applications Evaluation Process and making decisions in conjunction with bureau managers regarding whether new applications are vertical (bureau) based or enterprise (city) based.

The Corporate Applications Manager, in conjunction with Bureau of Technology Services (BTS) staff assigned to assess corporate applications needs, will work with multiple bureau managers to determine their application needs and priorities. The incumbent will work with other BTS managers to ensure delivery of corporate services consistent with BTS Service Level Agreements.

### **Examples of Work:**

1. Manages, coordinates and participates in long-term strategic planning for the continual development of corporate applications to support citywide business operations; works with multiple bureau directors and managers and BTS Bureau Business Representatives to develop comprehensive technical corporate applications to address business process improvement, in conjunction with these application.
2. Develops process improvements to implement appropriate application development and project management methodologies to improve the efficiency and effectiveness of the application development process.
3. In conjunction with the BTS staff assigned to assess corporate application needs, provides consultation to multiple bureau heads and managers and determines priorities for and feasibility of implementation and application of technological and data processing applications consistent with Bureau and City requirements, capabilities and standards.
4. Ensures technical solutions, long-term application, data and system architectures and technological investments are aligned with City and bureau goals and objectives.
5. Responsible for citywide GIS management with strong focus on customer business relations, expert service delivery, and education. Manages a staff of GIS Business Architects and programmers that develop and foster corporate business relations to support citywide goals and objectives; manage a variety of GIS projects and define tasks, project scope of works, time lines, deliverables and budgets; develop and support a corporate training program.
6. Directs computer acquisition studies and makes recommendations for obtaining appropriate applications; establishes policies and approves written standards for the justification, development, implementation and operation of application installations; reviews application installations for compliance with established standards.
7. Supervises subordinate management, supervisory, professional and technical application analysis staff assigned to work unit.

### **Knowledge of:**

- Principles, practices and techniques of information technology management as applied to a large data processing service function, including applications architecture, design and development methodology, hardware and software options for business, engineering and operational applications and the cost-benefit of application alternatives.
- Project management tools and techniques, including project cost accounting and project change management and control.
- Systems development, administration and computer operations programs and services for large and complex corporate applications.
- Business process modeling and reengineering relevant to GIS technologies including software and attendant data communications technologies.
- Thorough knowledge of GIS principles, methods and applied concepts.
- Trends in application development as they apply to formulating technological solutions to corporate objectives, bureau objectives and continuous improvement processes.
- Systems integration and optimization design concepts and techniques.
- Customer relationship management and internal consulting concepts and practices.
- Principles, practices, methods and techniques that are applicable to strategic technology planning.
- Laws, regulations and ordinances that are applicable to City acquisition and use of computers.
- Principles and practices of public administration, including budgeting and purchasing.

### **Ability to:**

- Plan, organizes, integrate and manage systems development, administration and computer operations programs and services.
- Analyze client business and technology needs, formulate conceptual frameworks and apply state-of-the-art methods to develop integrated, efficient and cost effective solutions.
- Direct corporate applications staff in the development, modification and implementation of applications using appropriate methods and tools.
- Provide leadership in evaluating complex technology strategies and developing approaches that maximizes return on investment.
- Plan, assign, supervise and coordinate the work of subordinates.
- Identify information management and technology issues and opportunities, analyze problems and alternatives and develop sound conclusions and recommendations.
- Set priorities and allocate resources to meet client needs in a timely, effective manner.
- Exercise project management tools and techniques to ensure projects are completed on time and budget.
- Understand, interpret, explain and apply City, state, and federal policy, law, regulation and court decisions applicable to areas of responsibility.
- Establish and enforce technological standards.
- Present proposals and recommendations clearly and logically.
- Represent the City effectively in meetings on a variety of technology issues.
- Prepare clear, concise and comprehensive correspondence, reports, studies and other written materials appropriate to both technical and non-technical audiences.
- Exercise sound, expert independent judgment within general policy guidelines.
- Exercise tact and diplomacy in dealing with sensitive, complex and confidential issues and situations
- Establish and maintain effective working relationships with all levels of City management, other governmental officials, consultants, vendors, employees, the public and others encountered in the course of work.