

ROSEVILLE
REQUEST FOR COUNCIL ACTION

Date: 03/20/17
Item No.: 7.e

Department Approval



City Manager Approval



Item Description: Update on the Information Technology Strategic Plan

BACKGROUND

Over the past several years, the City Council has received a number of information packages and presentations outlining the City's Information Technology function including:

- ❑ October 14, 2013 Council meeting presentation providing an general overview
- ❑ May 22, 2014 Memo providing an updated overview of the IT Function
- ❑ May 27, 2015 Council meeting presentation on the IT Strategic Plan
- ❑ July 9, 2015 Memo providing an updated overview of the IT Function

The purpose of this memo is to provide the Council with an update on the operational changes made in conjunction with the IT Strategic Plan, and to receive guidance on proposed changes moving forward. This update will include a brief review of the Strategic Plan, an overview of the Metro I-Net Business Model, examples of cost savings for Roseville, and, lastly, a discussion of risk-reward considerations.

Strategic Plan Priorities

The IT Strategic Plan established in 2015 identified four primary priorities. The following table provides on update on these priorities.

Strategic Priority	Action Steps Taken
Improve the Organizational Structure of IT	Established IT Support & IT Infrastructure Supervisor Positions; Engaged Departments in IT Planning; Coordinated on-going discussions with Metro I-Net Group
Transform the IT Workforce	Refined on-boarding process; Provided greater emphasis on training, technical certifications and professional development programs; Established clear avenues for promotional opportunities
Establish an Enterprise Architecture (EA) Service Model	Implemented an equitable cost-distribution model for Metro I-Net Group
Empower Technology Users	Established IT Leadership Discussion Group with representation from ALL City departments

While these action steps resulted in a stronger and more resilient IT function, additional actions steps are necessary to continue the improvements outlined in the strategic plan.

The following table identifies the near-term measures discussed with City Department Heads as well as the Metro I-Net Group.

Strategic Priority	Action Steps Pending
Improve the Organizational Structure of IT	Refine Roseville departmental IT Planning process; Discussion on Metro I-Net Advisory Committee
Transform the IT Workforce	Adjust staffing levels to meet operational requirements; Establish new Help Desk (lower level) position
Establish an Enterprise Architecture (EA) Service Model	Publish a service catalog for Roseville users and Metro I-Net Group; Develop a communications technology infrastructure plan
Empower Technology Users	Coordinate computer and software training classes for users; Publish an IT newsletter/blog

The key item in the 2017 action plan is the planned adjustment of IT staffing levels. The additional staffing is necessary to address the continued loss in productivity that results from hardware malfunctions or the interruptions of software applications that are integrated into of our service delivery models. They are also necessary to address the increasing support needs within our public safety areas which continues to place some of the greatest demands on the City's IT support function.

The new positions will not only reduce downtime and improve service levels, they will also allow for more proactive education and training for end-users on the capabilities of citywide technologies. These operational needs have been assigned a high priority in response to discussions with all city departments as well as other Metro I-Net agencies.

Like most initiatives, the next series of action steps will require additional financial resources. Roseville's estimated share of the 2017 staffing adjustments is \$45,000 with these costs funded by wireless tower lease revenue and fiber/internet service revenues. This will NOT require additional tax levy funds to fulfill the 2017 hiring objectives.

Overview of Metro I-Net Business Model

The Metro I-Net regional collaboration began in 1999 and has grown to 43 separate agencies across the north and east metro areas. These agencies collectively fund \$1.8 million annually for IT support, phones, software licensing, and internet access; providing **economies of scale** that few governmental organizations can create on their own. This Collaborative also creates one of the most **expansive and diverse stable of knowledge and technical skills** in the entire region. The fundamental principle of this business model is to **share costs and provide collaboration** among participating agencies.

Roseville's role in the IT Collaborative is the "fiscal and operating agent" for the consortium. Roseville employs all IT staff to manage and support the daily IT functions for the Collaborative. The Collaborative shares all operating expenses and capital equipment purchases.

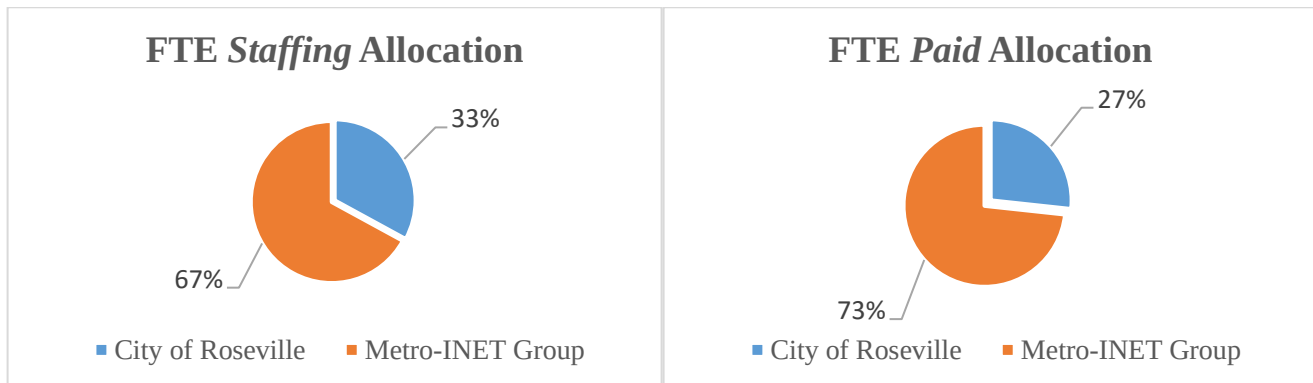
To derive the annual service charges, the cost-distribution model takes into account the number of end users, computers, network devices, enterprise applications and servers and other technology related services operated by each agency. Labor and capital costs recovered through a fixed charge are applied to the supported service units.

The cost distribution model provides the same fixed unit cost regardless of agency size. Larger agencies pay a greater total of the budget because these agencies operate more computing devices than smaller agencies. Overall, the business model provides significant cost savings and increased support for all agencies particularly when compared to what an agency could provide individually to maintain the same level of services and support.

Roseville Cost Savings

As shown in the table and graphs below, Roseville constitutes approximately 33% of FTE costs based on the overall share of supported units; however, Roseville pays for 27% of the FTE costs. Even within the shared service model, this is a savings of approximately \$112,000 in *personnel* costs alone by spreading labor charges across a diverse collective of technology through cost savings.

	FTE Staffing Allocation		FTE Paid Allocation	
City of Roseville	5.6	33%	\$ 481,039	27%
Metro-INET Group	11.4	67%	\$ 1,319,861	73%
Total FTE (2016)	17		\$ 1,800,900	



The cost summary above illustrates Roseville's participation in the shared cost model. The cost value is proven by comparing the Collaborative against a standalone Roseville IT Division funded 100% by the City. However to begin an analysis, a fundamental question needs to be asked, "If Roseville operated its own IT Division, how many employees does it need?"

To approximate the service levels that Roseville employees currently have, Roseville would require 7 FTE to manage and support today's employees and required technology. Based on current salaries and benefits for the following positions, Roseville's labor cost would be \$798,700 in 2017.

Total FTE Required: 7	2017 Salary and Benefits
IT Division Manager	\$ 142,100
Systems Engineer/Supervisor	\$ 131,200
Network Systems Engineer	\$ 115,400
Server Support Specialist	\$ 109,700
Server Support Specialist	\$ 109,700
Computer Support Specialist	\$ 95,300
Computer Support Specialist	\$ 95,300
Total Compensation	\$ 798,700
Average FTE Compensation	\$ 114,100

91

92 In this costing scenario, Roseville has effectively reduced its operating costs by \$317,661 if comparing a
93 Roseville-only IT Division against the city's share of the labor cost in the Metro-INET Collaborative.
94 But what needs to be further considered is that the shared service model also provides an additional 10.0
95 FTE to supplement the daily support of the City's technology needs at no cost to Roseville. This
96 additional workforce also provide the 24x7x365 support coverage needed to respond to critical outages
97 and expanded support of remote and mobile computer users.

98

99 As detailed in the previous sections, Roseville realized significant labor cost reductions and increased IT
100 support levels through participation the Metro I-Net Collaborative. However, beyond personnel costs,
101 other savings result from this partnership. A few examples include a reduction in Telephony charges
102 (\$75,000), Laserfiche (\$17,000), Facility Wi-Fi (\$6,000), Internet Access (\$12,000) and further
103 reductions available due to volume discounts for software and hardware purchases. Overall, the City
104 realizes an additional \$150,000 per year in reduced capital costs.

105

106 **Risk-Reward Considerations**

107 In its role as the sole employer of IT staffing resources, it could suggest that Roseville bears a
108 disproportionate share of the on-going employment burden if one or more agencies withdrew their
109 funding. This risk is mitigated through an annual review and adjustment of service fees charged to the
110 other agencies. The service contracts are not a fixed rate with a built-in inflationary adjustment like other
111 long-term contracts might provide. If, for example, an agency left and withdrew \$100,000 in funding,
112 adjustments to the cost distribution model covers this deficit. If work force reduction were required to
113 offset a significant operating shortfall, any short-term unemployment payments are shared amongst the
114 remaining agencies as part of their annual service charges. Adjustments through attrition are a
115 consideration to adapt to changes in support needs for the Metro-INET group.

116

117 A secondary consideration is potential changes in the physical space needs of the Roseville IT division.
118 Office space at Roseville City Hall provides work areas for 10 FTE. This space is sufficient for current
119 and future staffing levels. Other agencies provide office space for IT staff scheduled at that location. A
120 potential risk is the event of a complete, or nearly complete, disbandment of the network collaboration.
121 This would require a workforce reduction creating excess office space. However, it is realistic to expect
122 that the city's overall office space needs will grow as it looks to employ cost-saving measures such as
123 job-sharing and temporary staffing.

124

125

126 **Final Comments**

127 The Metro I-Net Group has held several discussions about improving IT Support capabilities by adding
128 three lower-level Computer Support/Help Desk positions. Each Metro I-Net member authorized
129 additional spending in their 2017 budgets to address the pending action steps shown above.

130
131 The Council is asked to consider authorizing staff to add these three new positions to the IT Division to
132 fulfill the request from our partnering agencies as outlined in the IT Strategic Plan.

133 **POLICY OBJECTIVE**

134 Joint cooperative ventures are consistent with past practices as well as the goals and strategies outlined
135 in previous visioning and goal-setting processes. The IT Strategic Plan continues these collaborative
136 strategies to providing programs and services.

137 **FINANCIAL IMPACTS**

138 The cost of implementing the next phase of the IT Strategic Plan is \$45,000 to be funded by wireless
139 tower lease and fiber/internet service revenues.

140 **STAFF RECOMMENDATION**

141 Staff recommends that the Council consider hiring three additional IT Staff positions as outlined above.

142 **REQUESTED COUNCIL ACTION**

143 Staff is seeking guidance from the City Council on implementing the next phase of the IT Strategic Plan
144 including the hiring of three additional IT Staff members at a cost of \$45,000.

145

146

Prepared by: Chris Miller, Finance Director
Attachments: A: Information Technology Strategic Plan

Information Technology Division Strategic Plan 2015–2018

The City of Roseville IT Division Strategic Plan

Terre Heiser
Information Technology Manager
May 27, 2015

Table of Contents

Executive Summary _____	3
Mission Statement _____	3
Vision _____	4
Values _____	4
Overview of the Information Technology Division _____	5
Strategic Priorities and Goals _____	6
Action Plan Summary _____	7
Action Plan Detail _____	9
Appendix A: SWOT Analysis (2015) _____	24
Appendix B: Key Technology Drivers and Accomplishments _____	26
Appendix C: Job Class Descriptions _____	30

Executive Summary

The 2015-2018 Strategic Plan for the Information Technology Division has been developed in accordance with the Division's overall mission and long-term vision. Within this framework, the Division has established goals and priorities that will guide the allocation of resources and operational decisions of the Division.

Mission Statement

The Information Technology Division's mission is:

To provide and promote an information technology service and support organization, in partnership with willing public entities, enabling the creation, management and dissemination of technology as well as providing effective shared IT solutions delivered as Common Good Services.

This mission reflects the Division's, and its employee's, commitment to serving as a central IT Services and Operations Department for all agencies that collectively participate in technology cost sharing initiatives.

Common Good Services

As information technology and related services become increasingly important and predominate in local government across the state of Minnesota, public sector employees require and expect IT tools, services and solutions to be delivered to them. This technology ubiquity illustrates the extraordinary role IT plays not only for the City of Roseville but throughout the consortium and its community members.

Common Good Services are those basic information technology services that most members would agree are critical to conducting business. Currently the Roseville IT Division provides an assemblage of Common Good IT services to thirty-seven public agencies located in the northeast Twin Cities Metropolitan area.

IT COMMON GOOD SERVICES AND SUPPORT

- Multi-layer IT support
- Active Directory Authenticated Services
- Centralized Data Centers
- Storage Area Network
- IP Telephony
- Wireless LAN Infrastructure
- Mobile Data Access
- Hardware purchasing/renewal
- Anti-virus
- Exchange email and calendar
- Records Management

Vision

- To advance the expectation that new technologies are incumbent to our success
- To support entrepreneurial ideas and initiative that enhance taxpayer value

All areas of a city's mission — public safety, infrastructure, parks and recreation, transportation, water and sewer utilities, information technology, human capital and management — require a resilient, agile and sustainable IT infrastructure with advanced technologies for the city to achieve its mission. This Strategic Plan lays the groundwork for enabling a portfolio of IT services and support within a highly capable Enterprise Architecture (EA), delivering reliable and effective technology solutions needed to fulfill the civic responsibilities of its participants. To achieve this, the City will need a flexible and secure IT infrastructure. To administer the enterprise, the City requires capable engineering and management of IT resources with common, standardized, shared IT services.

In support of the Division's mission, the IT Division developed vision statements to guide long term planning efforts and to identify new areas of opportunity. This vision is complemented by core values commonly expected of public entities and these values are incorporated into the day-to-day activities of the IT Division and in employee expectations. These values are designed to foster a work environment and culture that is committed to excellence.

Values

- To maintain a professional work environment at all times
- To encourage accountability and responsibility among all employees by rewarding honesty and acknowledging personal improvement
- To instill a culture based on ethical decisions and actions

Overview of the Information Technology Division

The Information Technology (IT) Division is one of three operating divisions within the broader Finance Department. The Department also includes the Finance & Accounting and License Center divisions.

The IT function of the city was established under the Finance department in the late 70's when the only computer technology centered on a mainframe financial software program provided over telephone lines from LOGIS, a public IT service consortium now located in Golden Valley. In 1986 the city transitioned to local server based application and ended its relationship with LOGIS. The Finance Director oversaw the daily IT operations and computer needs for the Finance Department and established the first components of the city network. Most departments, including police and administration, used computers primarily for word processing while other departments created their own autonomous networks, disconnected from other department networks. By 1996 the city had 4 independent networks without any centralized or coordinated management or operations. This changed in 1997 with the adoption of city-wide email that required the establishment of single, unified network.

The IT function transitioned to an operating division of the Finance Department in 1999 with the assignment of two full-time employees to support 95 computer/email users, 75 computers and 4 servers.

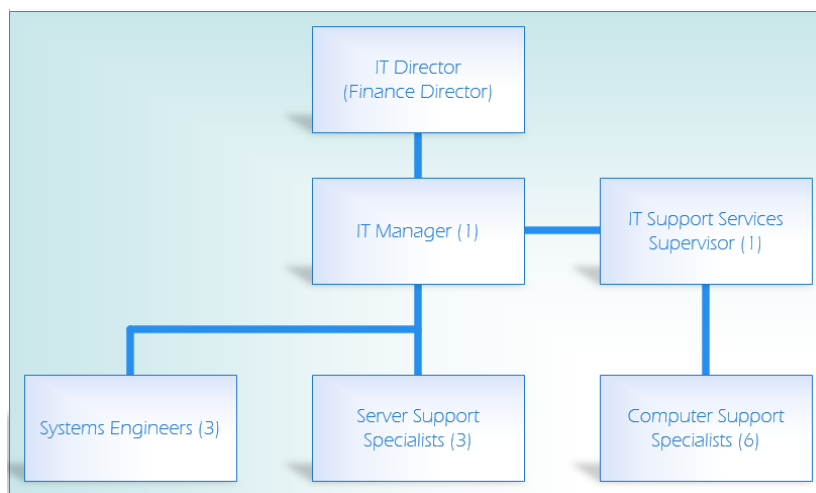
Today the IT Division is the central resource for providing computers, telephone service, Internet, wireless, and a myriad of data and application services to the city. In addition to the city of Roseville, the Division provides IT services to 38 public entities through a series of intergovernmental shared service agreements. The Division actively supports the network infrastructure, hardware, software and all peripheral systems that includes:

- 1,313 PC's including desktops, notebooks and tablets
- 400 network and desktop printers
- 200 physical and virtual servers
- 1,739 User profiles
- 188 Site locations
- 535 Network access devices (switches, firewalls and wireless)
- 35 Enterprise applications
- 100 Desktop applications
- 1,500 IP telephones
- 150 IP security cameras

Information Technology Division Strategic Plan: 2016-2018

The IT Division is currently led by one full-time IT Manager reporting to the Finance Director and oversees the management and coordination of all day-to-day IT operations. The Division has one full-time Support Services supervisor, reporting to the Division Manager, that oversees the IT Help Desk and supervises the computer support specialist positions. In addition to the manager and supervisor, the Division consists of twelve (12) full-time positions.

The IT Division current organizational structure is depicted below.



Strategic Priorities and Goals

The IT Division's strategic priorities have been established with input from IT service stakeholders. Input was gathered through meetings held over the past year on IT related issues. Feedback from the user community was provided through frequent surveys.

The IT strategic priorities described in the following table address the key areas of focus and change needed to realize the IT vision outlined in the previous section.

Priority 1: Improve the Organizational Structure of IT

Priority 2: Transform the IT Workforce

Priority 3: Establish an Enterprise Architecture (EA) Service Model

Priority 4: Empower Technology Users

Information Technology Division Strategic Plan: 2016-2018

ACTION PLAN SUMMARY

Strategic Priority 1: Improve the Organizational Structure of IT		
Goal	Action Steps	Target Commencement Date
1. Align IT Management Structure to fulfill key components of the Strategic Plan	• Creation of the Information Technology Department • Establish Operating Divisions of the IT Department • Adjust Job Titles and Descriptions for Existing Managerial and Supervisor Staff	• January 2016 • January 2016 • December 2015
2. Engage departments to participate in IT strategic planning and operations	• Establish Agency IT Steering Committee	• March 2016
3. Strengthen relationships with Joint Powers partners.	• Establish a Management/Advisory Board	• July 2016
Strategic Priority 2: Transform the IT Workforce		
Goal	Action Steps	Target Commencement Date
1. Efficient allocation of staff resources and to align skillsets with work assignments.	• Establish IT Staffing Ratio Targets • Establish multi-tier job classification and pay grade scale • Adjust staffing levels to meet operational requirements	• September 2015 • January 2016
2. Grow employees through training and development	• Develop, fund and implement a structured certificate-based training programs	• January 2017
Strategic Priority 3: Establish an Enterprise Architecture (EA) Service Model		
Goal	Action Steps	Target Commencement Date
1. Expansion and maintenance of an agile and secure infrastructure	• Develop Communication Infrastructure Strategic Plan	• July 2015
2. Develop an equitable cost distribution model across multiple departments and organizations	• Define 'Common Goods' Services • Publish Service Catalog	• April 2016 • April 2017

Information Technology Division Strategic Plan: 2016-2018

Strategic Priority 4: Empower Technology Users		
Goal	Action Steps	Target Commencement Date
1. Engage users of technology	• Establish IT Leadership Groups • Publish ITLG Newsletter	• July 2015
2. Improve the use of technology	• Organize training classes for users • Conduct training programs	• January 2016

ACTION PLAN DETAIL

Strategic Priority 1: Align the Organizational Structure of IT	
Objective 1:	Action Steps
Management of Information Technology	• Creation of the Information Technology Department • Establish Operating Divisions of the IT Department • Adjust Job Titles and Descriptions for Existing Managerial and Supervisor Staff

Operational Needs

The IT Division provides services to 38 public entities that collectively serve a population base of nearly 350,000 residents. The combined number of service units (computers, servers, users, software applications, etc...) has created one of the largest networks in the State of Minnesota. Only Minneapolis and St. Paul operate larger municipal networks.

The SWOT analysis revealed that the current operating division, established under the Finance Department, limits the ability for the current IT management staff to effectively contribute to formulating strategic goals for the IT service organization and its service partners. Key responsibilities that would otherwise be undertaken by a Chief Information Officer (CIO) or an IT Director, are carried out by the city Finance Director, a position that is also responsible for directing the daily work activities of the Finance Department. The IT Division now has more employees than the parent Finance Department making it difficult for the Director to provide management support to the IT Division.

The 2015 Strategic Plan seeks to improve the management structure of IT through the establishment of the IT Department and to create operating divisions within the new department to further guide the components of the IT strategic and execute annual operating plans.

Action Step 1: Establish the Information Technology Department**Action Step 2: Establish Operating Divisions of the Information Technology Department**

To further define the roles and responsibilities of the IT Department and to establish a mid-level management structure two operating divisions would be created: IT Operations and IT Services.

Action Step 3: Adjust Job Titles and Descriptions for Existing Managerial and Supervisor Staff

The only immediate staffing change would be to realign three key positions to fill the management roles of the newly created department and divisions. Internal shifts of current lead positions to the new management positions and modest pay grade changes will greatly minimize the cost to implement the new management structure.

- **Information Technology Department Director**

This would be a title and pay grade change of the existing IT Manager position.

Current	Proposed
Title: IT Manager	Title: IT Director
Pay Grade: 16 (Exempt)	Pay Grade: 18 (Exempt)
Range (2015): \$42.91 - \$51.70	Range (2015): \$48.21 - \$58.08
Pay Rate (2015): \$51.70 (Step G)	Pay Rate (2015): \$52.85 (Step C)
Annual Base: \$107,536	Annual Base: \$109,928

- **Network Operations Division Manager**

This would be a title and pay grade change of the existing senior Network Systems Engineer position.

Current	Proposed
Title: Network Systems Engineer	Title: Network Operations Manager
Pay Grade: 13 (Exempt)	Pay Grade: 16 (Exempt)
Range (2015): \$34.39 - \$41.43	Range (2015): \$42.91 - \$51.70
Pay Rate (2015): \$41.43 (Step G)	Pay Rate (2015): \$47.04 (Step C)
Annual Base: \$86,174	Annual Base: \$97,857

- **IT Support Services Division Manager**

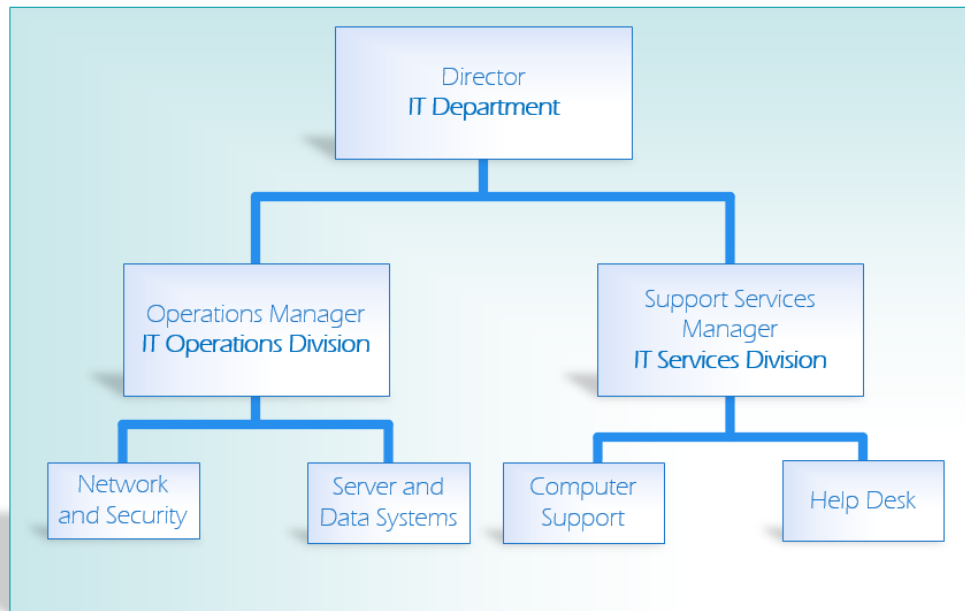
This would be a title and pay grade change of the existing IT Support Supervisor position.

Current	Proposed
Title: IT Support Supervisor	Title: Support Services Division Manager
Pay Grade: 14 (Exempt)	Pay Grade: 15 (Exempt)
Range (2015): \$37.48 - \$45.16	Range (2015): \$40.11 - \$48.32

Information Technology Division Strategic Plan: 2016-2018

Pay Rate (2015): \$42.45 (Step D)	Pay Rate (2015): \$43.97 (Step C)
Annual Base: \$88,296	Annual Base: \$91,457

Revised Organizational Structure – Information Technology Department



Short Term Budget Impact: The 2016 budget impact is an increase of \$17,236 in base salary using the proposed pay grades and rate steps.

Budget Note: Roseville contributes approximately 22% of IT staffing labor costs based on the current level of participation in the cost sharing programs. The net increase for the described pay grade adjustments for Roseville is \$3,791 in the 2016 budget.

Information Technology Division Strategic Plan: 2016-2018

Long Term Budget Impact: Management Base Salary Change (Step change and estimated 1% annual COLA)

	2016	2017	2018	2019	2020
Current Total	\$ 282,006	\$ 291,876	\$ 302,092	\$ 312,665	\$ 323,608
Adjusted Total	\$ 299,242	\$ 309,175	\$ 320,556	\$ 331,775	\$ 343,387
Change	\$ 17,236	\$ 17,839	\$ 18,464	\$ 19,110	\$ 19,779
Roseville Total (est.)	\$ 3,791	\$ 3,924	\$ 4,061	\$ 4,204	\$ 4,351

Information Technology Division Strategic Plan: 2016-2018

Strategic Priority 1: Improve the Organizational Structure of IT	
Objective 2:	Action Step
Engage Directors to participate in IT strategic planning and operations	Establish Agency IT Steering Committee

Operational Needs

The SWOT analysis revealed a number of weaknesses in the organizational decision making process that has created severe funding and IT staffing shortfalls resulting in a lack of organization and coordination for IT related projects. Individual departments push for their own IT agenda, many times at the cost of critical projects that benefit the organization as a whole. The continuous add of new technologies without consideration of the associated support costs has created a significant threat to IT operations, leading to unrealistic service expectations amongst users as IT staff become increasingly stretched thin. Insufficient or misaligned staffing levels result in critical tasks not being completed, increases staff turnover as overworked employees seek other employment and contributes to the increased threat of network and information security breaches and data loss. The Strategic Plan seeks to improve these conditions by delegating to Directors and officers the responsibility of guiding and approving IT projects and determine the prioritization of resources.

Action Step: Establishment of the IT Steering Committee

- The steering committee is to be comprised of the director of each city department or a designee approved by the department head and city manager.
- The IT Steering Committee is charged with the following:
 - IT Strategic Planning and Budgeting
 - Project Review
 - Project Prioritization
 - Project Approval
- Meeting agendas are related to the future IT needs of the business.
- IT priorities are established well in advance of the budget cycle.
- Emerging technologies are reviewed and an assessment made of how these benefit the organization.

Short Term Budget Impact: None

Long Term Budget Impact: None

Information Technology Division Strategic Plan: 2016-2018

Strategic Priority 1: Improve the Organizational Structure of IT	
Objective 3:	Action Step
Foster and leverage existing relationships with Joint Powers partners	Establish a Management/Advisory Board

Operational Needs

The SWOT analysis highlights the positive cooperation that exists amongst the public agencies that participate in the shared IT services program (commonly referred to as Metro-INET) provided through the City of Roseville. Most understand and appreciate the value of collaboration and are committed to the success of the program. There are, however, some that feel left out of the overall process for guiding IT not only for their agency but also at the enterprise level. Some agencies perceive the shared services model as more of a customer/vendor relationship. This creates a significant problem when developing an annual budget and work plan. In its current form, the approval process of the IT operating budget is dependent on 38 independent agencies and the 180+ elected individuals that review and approve their individual share of the IT costs. One agency's rejection of their share immediately triggers a recalculation of shared costs. This leads other agencies to pay more if one or more agencies demand to pay less.

The Strategic Plan seeks to improve these conditions by coordinating the IT strategic policies through a collective board or advisory committee. Similar organizations appear in the form of cable commissions, joint fire service districts and LOGIS, an IT services consortium established in 1976 that now serves 30+ government entities.

Action Step: Establish a Management/Advisory Board or Commission

- The board would be comprised of the chief operating official of each participating agency or their designee.
- The board is charged with IT Strategic Planning for the enterprise network and reviewing and adopting the cost allocation for Common Goods Services.

Annual Time Constraint: 120-160 Hours (IT Staff time only)

Short Term Budget Impact: None

Long Term Budget Impact: None

Information Technology Division Strategic Plan: 2016-2018

Strategic Priority 2: Transform the IT Workforce	
Objective	Action Steps
1. Efficient allocation of staff resources and to align skillsets with work assignments.	• Establish IT Staffing Ratio Targets • Establish multi-tier job classification and pay grade scale • Adjust staffing levels to meet operational requirements

Operational Need

The SWOT analysis revealed a significant deficiency in the IT staffing levels when compared to similar sized organizations that support a like number of users, computers and systems. This deficiency has created a less than desirable service level for resolving support requests or completing projects. Additionally a number of critical tasks including data backups, system patches and updates and security auditing go unchecked and incomplete. The current staffing level makes it impossible to consider additional technologies or adapt to changes in technology. The recent deployment of new County-wide dispatch systems in Anoka and Ramsey County created a significant increase in the number of supported systems, resulting in diminished service levels for other programs. To be able to adapt to ever changing technologies and increased service requests, it is essential to maintain a staffing level that can accommodate current and future IT service demands.

The Strategic Plan seeks to adjust staffing levels to meet current support requirements as well as adjusting the pay grades and classes to realize cost efficiencies by aligning skillsets with the annual operating and work plans.

Action Step 1: Establishing IT Staffing Ratio**Comparative Target – IT FTE versus Computer Users**

Entity	IT FTE	Users (est.)	IT FTE Ratio
Washington County	37	1500	1:40
Anoka County	32	1500	1:46
City of St Paul	77	4600	1:59

Information Technology Division Strategic Plan: 2016-2018

City of Bloomington	13	500	1:40
City of Blaine	5	225	1:45
Totals/Average	164	8325	1:50
Metro-INET (Current)	14	1739	1:124
Targeted Ratio	30	1739	1:57

Action Step 2: Establish multi-level job classification system

The current contingency of positions within the IT Division are not aligned with the skillsets, pay scales and work performed. For example, systems engineers that are paid at a much higher rate than others in the Division are frequently called to perform service tasks that could be accomplished by others with a much lower skillset and pay. This is due in large part to a narrow class distribution and insufficient staffing levels. The Division consists of only three skill levels; Computer Support Specialist, Server Support Specialist, and Network Systems Specialist (Systems Engineers). The current minimum requirements for the Computer Support Specialist (lowest class position) includes a 4 year college degree and/or 5 plus years of equivalent work experience. Even at this level, many of the daily work orders like a user password reset or repair of a printer could be performed by individuals with little or no work experience but have an aptitude for computers and related technologies. Creating an entry level class of Help Desk Specialist would provide an excellent opportunity for economically disadvantaged individuals the opportunity to gain valuable work experience and on the job training.

Appendix C: Job Class Descriptions provides the proposed job classes, tier structure and position summaries.

Action Step 3: Adjust staffing levels to meet operational requirements

Recent deployments of new dispatch systems in Anoka and Ramsey County have created a significant increase in the service demands for IT. Public safety operates on a 24X7 basis further increasing these demands. Other technology additions including telecommuting and VPN access, building security, IP video, and water/sewer control, AMR, smartphones, Wi-Fi and building ventilation and lighting controls systems have all contributed to this increase in service demands.

Based on a target rate of 1:50 (IT staff versus IT users) the Strategic Plan identifies 16 new positions that need to be added. The positions and number are provided in the following chart.

Information Technology Division Strategic Plan: 2016-2018

		Strategic Plan	Current 2015	Add 2016	Add 2017	Add 2018	Add 2019	Total
CLASS 1 Help Desk	IT Help Desk I	1	0	1	0	0	0	1
	IT Help Desk II	2	0	0	1	1	0	2
	IT Help Desk III	1	0	0	0	1	0	1
CLASS 2 Computer Support	Computer Support Specialist I	2	0	2	0	0	0	2
	Computer Support Specialist II	6	6	0	0	0	0	6
	Computer Support Specialist III	3	0	1	2	0	0	3
CLASS 3 Server Support	Server Specialist I	2	0	1	1	0	0	2
	Server Specialist II	4	3	0	0	1	0	4
	Server Specialist III	1	0	1	0	0	0	1
CLASS 4 Network Systems Support	Network Systems Engineer I	1	0	1	0	0	0	1
	Network Systems Engineer II	2	2	0	0	0	0	2
	Network Systems Engineer III	1	0	0	0	1	0	1
CLASS 5 Management	Administrative Office Assistant	1	0	0	1	0	0	1
	IT Support Services Mgr.	1	1	0	0	0	0	1
	Network Operations Manager	1	1	0	0	0	0	1
	Information Technology Director	1	1	0	0	0	0	1
		30	14	7	5	4	0	30

Budget Impact (Roseville): 2016 - \$108,542
 2017 - \$ 70,718
 2018 - \$ 63,218

Information Technology Division Strategic Plan: 2016-2018

Strategic Priority 2: Transform the IT Workforce	
Objective	Action Steps
2. Grow employees through training and development	• Develop, fund and implement a structured certificate-based training programs

Operational Need

Training programs help employees strengthen the skills one needs to perform their job. This is increasingly important in IT where systems change frequently. The past 10 years have seen 5 different desktop operating systems. And new applications are being released on an annual basis. A training and development program can bring employees to a higher level so they all have similar skills and knowledge. This helps reduce dependencies on individuals in a work team and creates an overall knowledgeable staff who can work independently without constant help and supervision from others. Continuous training also keeps IT staff knowledgeable on current technologies and prepares them to adapt to changes. Competent and trained employees helps insure the IT Department remains a technology leader. A structured training and development program ensures that employees are understanding of basic policies and procedures within the department.

Action Step 1: Develop, fund and implement a structured certificate-based training programs

Short Term Budget Impact: \$50,000 – 2016 Budget (Increase of \$45,000)

Long Term Budget Impact: Allocate \$2,500 per year for each employee. Annually adjusted based on number of employees and projected training programs in budget year.

Information Technology Division Strategic Plan: 2016-2018

Strategic Priority 3: Establish an Enterprise Architecture (EA) Service Model		
Objective	Action Steps	Target Commencement Date
1. Expansion and maintenance of an agile and secure infrastructure	Develop Communication Infrastructure Strategic Plan	In Progress

Operational Need

The physical network connections that constitute Metro-INET is a mix of different systems including municipal fiber optics, leased dark fiber optics, data circuits over telephone lines, VPN over Internet, point-to-point wireless and lastly, Comcast I-NET (Institutional Network).

Municipal or Public Fiber	Leased Fiber	Comcast I-NET	VPN	Radio/Wireless	Frame Relay (Circuit)
103	4	30	28	19	1

Comcast I-NET is a provision of local cable franchise agreements with most of the municipal entities in the consortium and the free use of these connections is subject to the terms of the agreement. Many of the agreements will expire in the next 12-36 months and the inclusion on the INET in future renewals is not guaranteed.

The majority of the I-NET connected facilities are city halls and fire stations. For some sites, VPN connections are an option absent I-NET but for others it will be necessary to obtain higher bandwidth services that provide a greater degree of security and reliability than available VPN over Internet technologies. Determining the appropriate service to support current and future data connectivity needs varies by site and would be reviewed through the development of a communications infrastructure strategic plan.

Action Step 1: Develop Communications Infrastructure Strategic Plan

Time Constraint: 120-160 Hours (Various Staff)

Short Term Budget Impact: None

Long Term Budget Impact: None

Strategic Priority 3: Establish an Enterprise Architecture (EA) Service Model		
Objective	Action Steps	Target Commencement Date
2. Develop an equitable cost distribution model across multiple departments and organizations	• Define 'Common Goods' Services • Publish Service Catalog	• April 2016 • April 2017

Operational Need

"Common Good Services" refers to a set of non-specialized IT services that all IT customers reasonably expect to be "always on" and readily available. Services like network and Internet access, Wi-Fi, email, file and print services and functioning computers are beneficial for nearly all members of the consortium. The services are not, and do not need to be, specialized for a particular department or agency. These core services can be delivered efficiently through a central services entity.

Other IT services exist that are unique to a single entity or department. Custom software applications, database programs, secure mobile VPN and other currently supported programs can consume an inordinate amount of IT labor that impacts the shared labor pool. This creates a disparity between what agencies contribute to the shared IT service pool and what they receive in return.

The Strategic Plan seeks to develop an equitable cost distribution model that defines core Common Goods that are shared equally by all members and to further distinguish those services that incur additional and separate costs.

Action Step 1: Define 'Common Goods' Services

Common Goods would consist of a list of services provided at a fixed cost as part of the annual service shared service charge.

Action Step 2: Publish Services Catalog

A supplemental service catalog would consist of services available at additional costs and provided through the IT Department or referred to an external contractor.

Information Technology Division Strategic Plan: 2016-2018

Strategic Priority 4: Empower Technology Users	
Objective 1:	Action Steps
Technology User Engagement	• Establish IT Leadership Groups • Publish ITLG Newsletter

Operational Need

IT service surveys indicate a lapse in communication between IT providers and IT users on projects, programs, and policies that affect users. The Strategic Plan seeks to address this issue by engaging users of technology at all levels so they might have a better understanding of the operational processes of IT and to seek input on finding solutions that could mitigate these weaknesses and threats.

Action Step 1: Development of the Information Technology Leadership Group

It is envisioned that the ITLG would consist of one lead from each city department. Smaller agencies with few employees would be invited to become a member of a larger regional group. It is expected that there will be perhaps 7-10 regional groups to accommodate the 26 agencies that comprise the core Metro-INET security domain.

The role of the Information Technology Leadership Group (ITLG) would be to;

- Assist in the dissemination of information relating to IT services and IT Strategy to the user communities (departments).
- Advise on changing user needs, to inform the planning and development of IT services, standards and policies
- Provide an end users' point of view on IT policy and the provision of IT services to departments
- Updating users of recent and upcoming developments, projects and services
- Consider IT matters raised by department employees which may refer relevant business from time to time
- Share information on best practice, IT facilities, developments, plans and projects

Action Step 2: Publish ITLG Newsletter

Through the participation and contribution of users in the ITLG, the information provided to the group would be disseminated to the global user community through an electronic newsletter published after each meeting. The information and content would be consistent with the items

discussed by the ITLG. The formulation and distribution of the newsletter could also originate from members of the user group.

Annual Time Constraint: 120-160 Hours (IT Staff time only)

Short Term Budget Impact: None

Long Term Budget Impact: None

Information Technology Division Strategic Plan: 2016-2018

Strategic Priority 4: Empower Technology Users	
Objective 2:	Action Steps
Provide Technology User Training	• Organize training classes for users • Conduct in-house training programs • Create online training videos

Operational Need

A recent survey amongst managers and supervisors expressed concerns about employee training for IT. It was felt that the continuous changes in applications and technology in general create inefficiencies in the workplace as users struggle with these new technologies. It had been requested that IT provide a technology review and onboarding for new employees and when significant changes are made that requires a refresh of skills.

The Strategic Plan seeks to improve the use of technology by establishing a training program and new employee onboarding process.

Action Item 1: Organize external training classes for users

Action Item 2: Conduct in-house training programs

Action Item 3: Create online training videos

Annual Time Constraint: 600 Hours per year – in-house training provided by IT Staff.

Short Term Budget Impact: Dependent on cost of external training classes – paid for by requesting department/agency.

Long Term Budget Impact: Dependent on cost of external training classes – paid for by requesting department/agency.

Appendix A: SWOT Analysis (2015)

City of Roseville – Information Technology SWOT Analysis

2015

Strengths •Versatile IT staff (depth and breadth of knowledge) •Positive cooperation amongst multiple municipal agencies •Efficient business model •Responsiveness •Work Ethic •Lean	S	W	Weaknesses •Insufficient staffing level and positions •Decentralized decision making process •Division level structure of IT limits the authority to providing strategy direction for the entire organization •Unsustainable funding model- doesn't reflect the true cost •The goals and objectives of IT are different than that of Finance operations
Opportunities •Collective efficiencies of a centralized network •Cooperation with other regional networks (State, County, LOGIS) •Positive revenue generating services •Project Management Office •Public Safety support services •New Joint Powers Agreements and partners	O	T	Threats •Unrealistic service expectations from departments •Continuous add of technology without adding support staff •Network security •Staff turnover •Absence of feedback from Joint Powers partners •Flat fee structure incentivizes other cities to take advantage of labor •Funding model incentivizes capital over labor savings

The SWOT analysis is a strategic planning tool that connects operational objectives and strategies to actionable tactics (tasks) carried out by employees. SWOT is part of the situation analysis, where the company determines where it stands on four key strategic areas; **strengths, weaknesses, opportunities and threats**, to better determine what changes to make.

Strengths

Strengths describe the core competencies of a business, strategic factors that may make a certain project more likely to succeed and areas where the business may have advantages over other similar businesses.

Weaknesses

Things that can make a certain project less likely to succeed and areas where a company is particularly lacking.

Opportunities

Opportunities are things that have the potential to increase profits, productivity or benefit a business in some other way.

Threats

Threats are the final element of a SWOT analysis; they have the potential to harm a business.

(Source: 4 Elements of SWOT by Gregory Hamel, Demand Media)

SWOT Analysis Summary

For the Roseville IT Division a significant strength is the partnership with other agencies that has led to a very efficient business model that additionally provides a greater depth of IT staff positions than would otherwise be unattainable absent these cost sharing relationships. However many of the stated strengths have created weaknesses within the organization as demands for additional IT services have exceeded the operational limit of the existing staffing levels. With 38 participating agencies, the decision making process, as it relates to operational improvements, staffing and management of IT, is broken. These weakness cumulate into very significant threats to the business model as the current shared cost model has capitalized on equipment capital savings without consideration of the necessary operating costs for the labor required to deliver these shared services in an enterprise network. This can lead to security issues due to insufficient staff to manage the enterprise and can lead to employee burnout due to excessive work schedules without compensation for over-time. Many of these weaknesses and threats are addressed in the Strategic Plan.

Appendix B: Key Technology Drivers and Accomplishments

Key Driver #1: Storage Area Networks

Strategic Priority: Expansion and maintenance of an agile and secure infrastructure

- Rationale
 - Promotes high availability of data
 - Improves data storage management and reduces hardware capitalization costs
 - Enables efficient hardware deployment and utilization
 - Improves data backup efficiency and accessibility
 - Enables server virtualization
- Accomplishments to Date
 - December 2009 – Deployment of HP LeftHand 12TB SAN
 - July 2013 – Deployment of HP P4500 48TB SAN with Maplewood (owner)
 - January 2015 – Deployment of SAN for Exchange 2013 Email System
 - April 2015 – Replacement of original LeftHand SAN
- Recommendations
 - Establish EA operational guidelines for managing storage area network
 - Establish service cost recovery as part of Common Goods Service model
- Short Term and Long Term Moves
 - Add Server Support Specialist role to oversee SAN deployment and provide operational support and maintenance.

Key Driver #2: Server Virtualization

Strategic Priority: Expansion and maintenance of an agile and secure infrastructure

- A. Rationale
 - Improve disaster recovery
 - Faster server provisioning
 - Reduce data center floor space requirements
 - Increase uptime
 - Reduce power consumption
 - Migration step to public cloud hosting facility
- B. Accomplishments to Date
 - May 2010 – Phase 1 - Deployment of Virtual Server Infrastructure
 - Migrate 12 hardware host servers to virtual server platform
 - January 2013 – Phase 2 – Deployment of 3 additional Virtual Server Host computers
 - Virtual replacement of 32 hardware servers
 - August 2014 – Phase 3 – Deployment of 2 Virtual Server Host computers
 - Virtual replacement of 21 hardware servers
 - January 2015 – Phase 4 – Virtualization of Exchange Messaging System

Information Technology Division Strategic Plan: 2016-2018

C. Recommendations

- Establish EA operational guidelines for managing virtual server infrastructure
- Establish service cost recovery as part of Common Goods Service model

D. Short Term and Long Term Moves

- Virtualization of IP Telephony Servers (replace 10 hardware servers)
- Add VMWare Specialist role to oversee virtual server infrastructure and provide operational support and maintenance

Key Driver #3: Virtual Private Network Access**Strategic Priority: Empower Technology Users**A. Rationale

As users demand the ability to work from anywhere and businesses demand protection of corporate digital assets and increased speed of application deployment, the traditional business laptop or PC architecture no longer meets the needs of many organizations. Taking a lead from the consumer world where users are migrating more of their data to the cloud, many businesses are now migrating applications and data from the end-point device, back into the data center where those apps and data are more easily protected.

B. Accomplishments to Date

- October 2009 – Initial Deployment of NetMotion VPN Mobility Service for Roseville Police (limited to 25 police cars)
- January 2012 – Deployment of Cisco AnyConnect and extended VPN access to employees issued domain managed notebook computers
- July 2013 – Implement multi-factor authentication using PhoneFactor
- January 2014 – 185 police NetMotion users (20 public safety departments) and 50 AnyConnect users using VPN services

C. Recommendations

- Establish EA operational guidelines for mobility and VPN services
- Establish service cost recovery as part of Common Goods Service model

D. Short Term and Long Term Moves

- Add Mobility/Security Specialist role to oversee remote access and security and provide operational support and maintenance of the systems

Key Driver #4: BYOD – ‘Bring Your Own Device’**Strategic Priority: Empower Technology Users****A. Rationale**

Closely related to virtual desktop deployments, users want to be able to connect from whichever device they choose, without consideration to the client platform. For example, users wish to access line of business Windows applications on iPads or Android tablets. Users want to move between devices, resuming sessions on different devices without missing a beat. Key drivers include:

- Tablets, netbooks, laptops, and smartphones that are becoming increasingly more powerful and less expensive.
- More employees expect ubiquitous communication devices to access information and data.
- Vendor application development is focusing more on portable devices including tablets and smartphones.

B. Accomplishments to Date

- October 2013 – Trial Deployment of 10 Virtual Windows Desktop computers using a VDI appliance. Lack of technical and project management staff resulted in stalled trial

C. Recommendations

- Research VDI/BYOD options for another trial in 2016. Enlist use of consultant to guide project from start to finish.

D. Short Term and Long Term Moves

- Develop and implement BYOD policy and objectives
- Establish BYOD operating platform

Key Driver #4: ‘Internet of Things’**Strategic Priority: Establish an Enterprise Architecture (EA) Service Model****A. Rationale**

The Internet of Things (IoT) is the network of physical objects or "things" embedded with electronics, software and sensors. Each thing is uniquely identifiable and able to interoperate within the existing Internet infrastructure. Energy and infrastructure management, wearable technology, emergency notification systems and environmental monitoring are just a few of the applications and systems that will comprise a portion of the estimated 26-30 billion devices that are expected to be “network aware” by 2020. This creates a number of IT challenges and complexity, speed, and resiliency of the wired and wireless network are likely to intensify.

B. Accomplishments to Date

Already a number of devices not typically considered part of a network now consume a significant amount of IT resources.

- IP Video Security Systems
- Heating and Ventilation Controls

Information Technology Division Strategic Plan: 2016-2018

- LED Lighting Controls
- SmartPhones

C. Recommendations

- To accommodate the expected influx of wireless devices it is necessary to continue to expand and maintain a resilient wireless network infrastructure.

D. Short Term and Long Term Moves

- Develop guidelines for the adoption of new and emerging technologies to insure the required support and funding is available to accommodate these new technologies.

Appendix C: Job Class Descriptions

CLASS 1 - IT Help Desk Specialist is a single class with three salary levels. The level and corresponding pay grade at which assignments are made is at the discretion of the appointing authority providing that minimum qualifications are met.

This position class provides comprehensive first-level phone and in-person support for the efficient resolution of technology problems and requests for end users to troubleshoot, analyze and resolve computer issues of low to moderate scope.

- IT Help Desk Specialist (Level I) is the entry journey level. Under close supervision, incumbents perform a variety of technical operational duties. As experience and knowledge are acquired, incumbents are expected to perform increasingly responsible and difficult assignments.
- IT Help Desk Specialist (Level II) is the full working level in the class, technically proficient in performing their assigned duties at a high level of independence under minimal supervision. Incumbents may train, assign, and monitor work of IT Help Desk Specialist (Level I) trainees.
- IT Help Desk Specialist (Level III) is further distinguished as an IT Help Desk **Lead**.

CLASS 2 – Computer Support Specialist is a single class with three salary levels. The level and corresponding pay grade at which assignments are made is at the discretion of the appointing authority providing that minimum qualifications are met.

This position class provides comprehensive support for client-side software applications and responds to second-level phone requests to resolve computer issues of moderate to high scope.

- Computer Support Specialist (Level I) is the entry journey level. Under close supervision, incumbents perform a variety of technical operational duties. As experience and knowledge are acquired, incumbents are expected to perform increasingly responsible and difficult assignments.
- Computer Support Specialist (Level II) is the full working level in the class, technically proficient in performing their assigned duties at a high level of independence under minimal supervision. Incumbents may train, assign, and monitor work of Computer Support Specialist (Level I) and IT Help Desk Specialists.
- Computer Support Specialist (Level III) is further distinguished as a Computer Support Specialist **Lead**.

CLASS 3 – Server Support Specialist is a single class with three salary levels. The level and corresponding pay grade at which assignments are made is at the discretion of the appointing authority providing that minimum qualifications are met.

This position class provides comprehensive support for network servers, data storage systems, backup and recovery and server-based software applications and responds to third-level phone requests to resolve computer issues of high complexity.

- Server Support Specialist (Level I) is the entry journey level. Under close supervision, incumbents perform a variety of technical operational duties. As experience and knowledge are acquired, incumbents are expected to perform increasingly responsible and difficult assignments.
- Server Support Specialist (Level II) is the full working level in the class, technically proficient in performing their assigned duties at a high level of independence under minimal supervision. Incumbents may train, assign, and monitor work of Server Support Specialist (Level I).
- Server Support Specialist (Level III) is further distinguished as a Server Support Specialist **Supervisor**.

CLASS 4 – Network Systems Support is a single class with three salary levels. The level and corresponding pay grade at which assignments are made is at the discretion of the appointing authority providing that minimum qualifications are met.

This position class provides comprehensive support for the local and wide area network, (LAN/WAN), wireless infrastructure, firewalls, security and the physical network and responds to third-level phone requests to resolve server issues of high complexity.

- Network Systems Engineer (Level I) is the entry journey level. Under close supervision, incumbents perform a variety of technical operational duties. As experience and knowledge are acquired, incumbents are expected to perform increasingly responsible and difficult assignments.
- Network Systems Engineer (Level II) is the full working level in the class, technically proficient in performing their assigned duties at a high level of independence under minimal supervision. Incumbents may train, assign, and monitor work of Class 1, Class 2, and Class 3 positions.
- Network Systems Engineer (Level III) is further distinguished as a Network Systems Support **Supervisor**.

CLASS 5 – Management and Administrative Support is a single class with various pay grades. This class represents the department head, managers and non-technical administrative support personnel.