

COUNTY OF FREDERICK

Information Technologies (540) 665-5614

MEMORANDUM

To: Board of Supervisors Information Technology Committee

From: Scott Varner, Director of Information Technology and MIS

Subject: BOS IT Committee Agenda

Date: October 16, 2018

The BOS IT Committee meeting will be held in the First Floor Conference Room (Purple Room) at 107 N Kent Street on Thursday, October 18, 2018 at 8:15 a.m.

Action Items

- 1. Request use of PEG funds for Electronic Agenda Management and video streaming of Board Meetings, P. 2.
- The Director of Information Technology and MIS requests a previously unfunded GIS Addressing Technician position be approved to move to the Finance Committee for funding in Fiscal Year 2019. The position was approved in the FY2019 budget, but not funded, P.3-4.

Information Only – P. 5-6

- 1. Department reorganization
- 2. Preliminary discussion on career tracks for IT and MIS personnel
- 3. Cybersecurity initiatives
- 4. Network switch replacement project update
- 5. Public Safety software migration project
- 6. Mobile routers for Public Safety
- 7. Overview of Fiscal Year 2020 Budget and 3-year budget projection
- 8. ITBOS meeting calendar



COUNTY OF FREDERICK

Information Technologies (540) 665-5614

MEMORANDUM

To: Board of Supervisors Information Technology Committee

From: Scott Varner, Director of Information Technology and MIS

Subject: Request to use Peg Funds

Date: October 16, 2018

The Information Technology Department is requesting to use \$45,600 in Peg Funds to pay for professional services and equipment for electronic agenda creation/management and live streaming of County meetings. The system proposed would offer citizens and interested parties digital access to meeting agendas, live webcasting, video recording, and minutes in a central, searchable portal. The current broadcast video server will be replaced due to technical issues and age. The breakdown of costs associated with the project are below.

Т	'otal - \$45,534.80
Nexus Broadcast Video Server	- \$10,000.00
Peak Electronic Agenda Management	- \$11,224.49
• Live streaming and video archiving of meeting	- \$24, 310.31

The Peg Funds are funds derived from our Cable Franchise fees. The use of funds from the PEG Grant are narrow in scope and can only be used for items related to the broadcasting of meetings.

Sincerely,

Scott Varner County of Frederick Director of IT



COUNTY OF FREDERICK

Information Technologies Patrick Fly, GIS Manager pfly@co.frederick.va.us Voice 540.722.8225

<u>M E M O</u>

To: Scott Varner, IT Director

From: Patrick Fly, GIS Manager

Subject: Additional GIS Tech

Date: October 4, 2018

GIS is seeking permission to fill an entry level GIS Technician to help with the increased workload experienced by our current GIS staff and especially our GIS Technician responsible for managing our E-911 system. In 2008 during the recession the GIS lost one full time GIS Technician that has not been replaced. The primary focus of that position was Public Safety, this work was redistributed and picked up by existing staff. As the economy has improved staff has experienced a steady increase in the workload. Staff members that already had a full workload prior to picking up those additional tasks are now overloaded in trying to manage the work.

An area that has been affected by this additional work is our assignment of new addresses. This area of work has been increasing exponentially as the economy has improved. The table below shows request for new addresses from fiscal year 2014 through today. As you can see the number of new addresses requested per fiscal year has almost doubled since 2014.

New Address Requests						
Year:	Total:					
FY 2018	207* (as of 10/1/2018)					
FY 2017	861					
FY 2016	877					
FY 2015	673					
FY 2014	477					

*Indicates a backlog of 153 addresses & road names for 2018

The next two tables show how this trend has continued through the number of plans being reviewed and the number of new road names being approved and added to the County's 911 System.

New Road Name Requests

Plan Reviews

Year:	Total:
FY 2018	31 (as of 10/1/2018)
FY 2017	58
FY 2016	56
FY 2015	39
FY 2014	31

Year:	Total:
FY 2018	9 (as of 10/1/2018)
FY 2017	45
FY 2016	14
FY 2015	5
FY 2014	2

What is not shown in these numbers is the time our GIS Tech spends in the field dealing with Addressing and Road Naming issues. As part of managing the E-911 system the Tech often needs to complete field visits to verify data received and resolve issues or questions they have with the information they receive or about the address issued. Although it is hard to estimate how much time the field work requires we estimate it to be approximately 15% - 20% of their time.

Other work done by our GIS Technician includes assisting with Citizen walk-in's requests. These are handled as they arrive. The time taken to handle these requests vary from request to request but on average staff spends about 1.5 hrs. with the citizen in the office. More complicated walk-in requests can take several days to complete.

In additional to the day to day work of the GIS staff, we will be performing a variety of duties to facilitate the move to NextGen 911. This work is mandated by the State and directly affects the County. This project started in August 2018 and requires us to have a 98% match for both streets and addressing between GIS/MSAG/ANI/ALI. Completion of this project must be done 3 months prior to implementation of the NextGen 911. The State has tentatively scheduled the Winchester/Frederick router in late 2019 or 1st quarter 2020. For our GIS data to be ready a full-time staff person must be dedicated to this project. At the present time, we do not have staff available to devote solely to this project without drastically affecting the services provided and our responsiveness to citizens and internal departments.

Overall the existing GIS Technician is currently the busiest technician we have with 207 Helpdesk tickets between July 1st and October 1st, 2018. To help relieve this work load GIS has shifted work, taken on multiple interns, and looked for process automation wherever possible. Ultimately these steps have provided some relief but not enough. That is why we are requesting to fill the GIS Technician position that was lost during the recession. This will allow us to ensure we are continuing to deliver the superior service the citizens of Frederick County have come to expect.

Information

1. Department reorganization

Since our last meeting, the department organization chart has changed slightly. Over the last several years the number of connected devices that the department supports has risen to over 1000 end points. Previously we were staffed with only two PC Technicians to support the hardware and software of all IT customers. The industry standard ranges from 1:25 to 1:100. We took a hard look at our services and current needs and made the decision to not fill a vacant Database Administrator position and instead add a third PC Technician to help balance the workload. The duties of the Database Administrator are being absorbed by the Director and GIS Manager. The updated organization chart is in Appendix A.

2. Career Tracks for IT and MIS Personnel

The Department of Information Technology has increasing competition for our technical staff from the private and public sector. In an effort to address retention and ensure continuity and succession planning, we have developed career tracks for each position in the department. Each position would be given a 1, 2, 3, and senior designation. Each step requires more experience and technical certifications. The next step would be to move forward with discussions with the new HR Director to establish a system to keep our best and brightest.

3. Cybersecurity initiatives

Cybersecurity continues to be one of our biggest challenges. The amount of spam, malware, and network probing has increased dramatically. Below is a list of measures undertaken in the last year to add to our catalog of services.

- Mandatory cybersecurity training
- Email phishing tests
- Advanced Threat Protection for email
- New methodology for combatting viruses
- Disaster recovery planning
- Exploring multi-factor authentication
- Taken a leadership role in establishing a regional cybersecurity group

4. Network Switch Replacement Update

This is the first year of a three-year plan to replace the majority of the County's switching infrastructure. On Saturday, October 20, 2018, staff will begin replacing the core switch stack in the County Data Center. Several switches serving the various departments in the Kent building will also be replaced during this phase of the project. In Fiscal Year 2020,

the next phase will focus on the Public Safety building.

5. Public Safety software migration project

In doing research for a newly requested project for Public Safety, staff discovered that the software platform that runs the virtual environment for Public Safety software was reaching its end-of-life this calendar year and the hardware will be out of warranty in 2019 without the ability to renew it. The IT Department is working with the Public Safety software vendor to schedule the migration and necessary database upgrades.

6. Mobile routers for Public Safety

While working with the Fire and Rescue Department, Information Technology staff discovered issues with the way GPS is being handled for our MCT terminals in Public Safety vehicles. Currently GPS is dependent on the rugged laptops to provide location information for our personnel in the field. Moving Public Safety to mobile routers will greatly improve the reliability of the GPS signal, but will also allow for the increasing amount of technology in Public Safety vehicles that need to connect to the network. The department is seeking to move forward with a pilot testing program to determine the needs and capabilities of the technology available.

7. Fiscal Year 2020 Overview

Please find a preliminary budget overview for Fiscal Year 2020 in appendix B. Please be advised that this is an early draft of the budget. Our complete budget book will be sent to committee members as soon as it is ready.

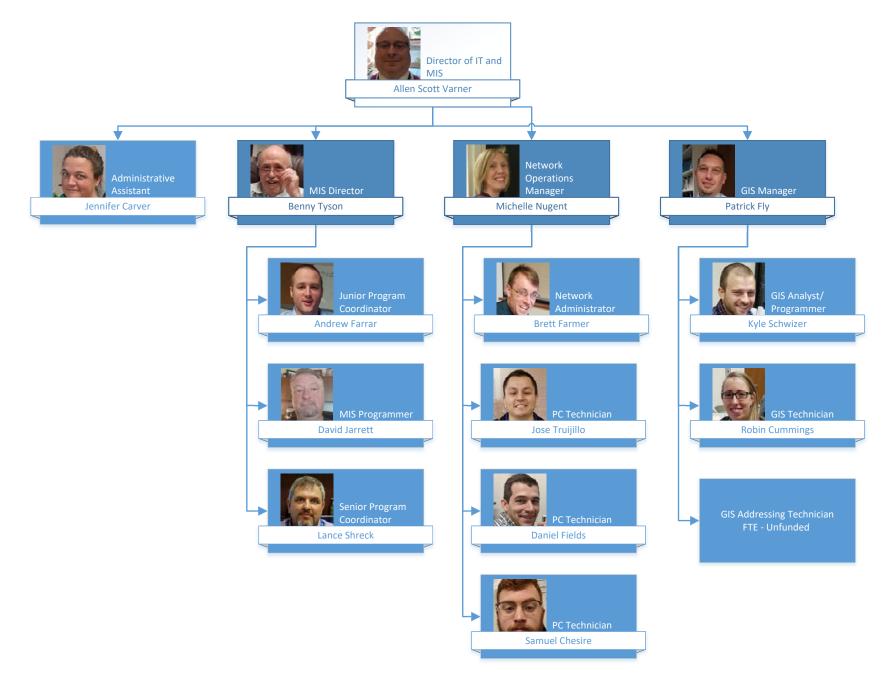
8. ITBOS Meeting Calendar

The Director of Information Technology would like to request that the ITBOS Committee schedule a standing quarterly meeting for the Committee. If no items exist for a meeting, the meeting can be canceled accordingly. Suggested meeting dates are below.

- February 6, 2019, at 8:15 a.m.
- May 1, 2019, at 8:15 a.m.
- August 7, 2019, at 8:15 a.m.
- November 6, 2019, at 8:15 a.m.

Appendix A

Frederick County IT Current Org Chart



Appendix B

	Department of Informatin Technol	Dept Request	Dept Request
		FY2019	FY2020
012200 -000-000	INFORMATION TECHNOLOGY	112013	112020
012200-1000-000-000	PERSONNEL SERVICES		
012200-1001-000-001	MIS DIRECTOR		
012200-1001-000-002	DEP.DIR.OF MANAGEMENT INFO SYS		
012200-1001-000-003	DIRECTOR	134,957	
012200-1001-000-003	PC TECHNICIAN	39,000	
012200-1001-000-021	WEB MANAGER	39,000	
012200-1001-000-022	NETWORK OPERATIONS SUPERVISOR	81,807	
012200-1001-000-023	GIS ANALYST PROGRAMMER	60,604	
012200-1001-000-024	NETWORK ADMINISTRATOR		
		76,275	
012200-1001-000-026	PC TECHNICIAN	42,000	
012200-1001-000-027		35,000	
012200-1001-000-032		49,421	
012200-1001-000-054	GIS ANALYST		
012200-1001-000-055	DEPUTY GIS MANAGER	84,484	
012200-1001-000-056	IT ANALYST/PROGRAMMER		
012200-1001-000-057	GIS TECHNICIAN	46,358	
	GIS TECHNICIAN	38,000	
012200-1001-000-058	BUSINESS ANALYST		
012200-1005-000-000	OVERTIME		
012200-1009-000-000	MERIT RESERVE		
	PERSONAL SERVICE	687,906	
012200-2000-000-000			
012200-2001-000-000	F. I. C. A.	52,191	
012200-2002-000-000	RETIREMENT - V. S. R. S.	63,287	
012200-2005-000-000	HOSPITAL/MEDICAL PLANS	144,680	
012200-2006-000-000	GROUP INSURANCE	9,012	
012200-2008-000-000	SHORT & LONG TERM DISABILITY	1,200	
012200-2011-000-000	WORKER'S COMPENSATION - COMMO	5,285	
012200-2013-000-000	EDUCATION - TUITION ASSISTANCE	3,150	3,150
012200-2013-000-001	EDUCATION/TUITION - NETWORK	0,100	0,100
012200-2013-000-002	EDUCATION/TUITION-GIS		
012200-2013-000-002	EDUCATION/TUITION-NETWORK		
012200-2013-000-003	FRINGE BENEFITS	278,805	
012200-3000-000-000	CONTRACTUAL SERVICES	270,003	
012200-3002-000-000	PROFESSIONAL SERVICES-OTHER	02.000	04.000
012200-3002-000-000		92,000	94,000
	PROFESSIONAL SVCSMIS		
012200-3004-000-000	REPAIR & MAINT VEHICLE		
012200-3004-000-001	REPAIR & MAINT MIS EQUIP.		
012200-3004-000-002	REPAIR & MAINTENANCE-GIS EQUIP		
012200-3004-000-003	REPAIR & MAINTNETWORK EQUIP		
012200-3004-000-004	REPAIR & MAINT NETWORK EQUI		
012200-3005-000-000	MAINTENANCE SERVICE CONTRACTS	267,003	302,800
012200-3005-000-001	MAINT. SERVICE CONTRACTS-MIS		
012200-3005-000-002	MAINTENANCE SERVICE CONTRACTS-		
012200-3006-000-000	PRINTING/BINDING		
012200-3006-000-002	PRINTING/BINDING-GIS		
012200-3007-000-000	ADVERTISING		
012200-3007-000-001	ADVERTISING-MIS		
012200-3010-000-000	OTHER CONTRACTUAL SERVICES	160,000	173,057
	PURCHASED SERVICES	519,003	569,857
012200-4000-000-000	INTERNAL SERVICES		
012200-4003-000-001	CENTRAL STORES-COPIES-MIS		
012200-4003-000-002	CENTRAL STORES - GASOLINE	350	350
	INTERNAL SERVICES	350	350
012200-5200-000-000	COMMUNICATION		
012200-5204-000-000	POSTAGE AND TELEPHONE	10,188	10,188
012200-5299-000-000	INTERNET ACCESS	59,476	60,066
		55,470	00,000

012200-5306-000-000	SURETY Beparement of Informatin Technolog	v Budget FY2090	100
012200-5400-000-000	MATERIALS'AND SUPPLIES	, 0	
012200-5401-000-000	OFFICE SUPPLIES	15,000	12,950
012200-5401-000-001	OFFICE SUPPLIES-MIS		
012200-5401-000-002	OFFICE SUPPLIES-GIS	3,360	3,360
012200-5401-000-003	OFFICE SUPPLIES - NETWORK	1,000	1,000
012200-5401-000-004	OFFICE SUPPLIES - REFRESH PROG	224,308	177,301
012200-5411-000-000	BOOKS AND SUBSCRIPTIONS	250	250
012200-5411-000-001	BOOKS & SUBSCRIPTIONS - MIS		
012200-5411-000-002	BOOKS & SUBSCRIPTIONS - GIS	250	250
012200-5411-000-003	BOOKS & SUBSCRIPTIONS-NETWORK		
012200-5413-000-000	OTHER OPERATING SUPPLIES		
012200-5413-000-001	OTHER OPERATING SUPPLIES-MIS		
012200-5413-000-002	OTHER OPERATING SUPPLIES-GIS		
012200-5413-000-003	OTHER OPERATING SUPPLIES-NETWO	4,000	1,900
012200-5506-000-000	TRAVEL	28,790	19,514
012200-5506-000-001	TRAVEL - MIS		
012200-5506-000-002	TRAVEL - GIS		
012200-5506-000-003	TRAVEL - NETWORK		
012200-5800-000-000	MISCELLANEOUS		
012200-5801-000-000	DUES AND ASSOC. MEMBERSHIPS	1,750	1,550
012200-5801-000-002	DUES & ASSOC. MEMBERSHIPS-GIS		
	OTHER CHARGES	348,472	288,429
012200-8002-000-000	FURNITURE AND FIXTURES		
012200-8005-000-000	MOTOR VEHICLES AND EQUIPMENT		
012200-8007-000-000	INTEGRATED TECH. EQUIP.		
012200-8007-000-001	INTEGRATED TECH. EQUIPMIS		
012200-8007-000-002	INTEGRATED TECH. EQUIPGIS	15,000	15,000
012200-8007-000-003	INTEG.TECH.EQUIPNETWORK	163,000	200,000
	CAPITAL OUTLAY	178,000	215,000
012200-9001-000-000	LEASE/RENT OF EQUIPMENT	107,794	107,794
012200-9001-000-001	LEASE/RENT OF EQUIPMIS		
	OTHER USES OF FUNDS	107,794	107,794
	TOTAL DEPARTMENT	2,120,330	1,181,430

DEPARTMENT CODE:	12200						
EXPENDITURE LINE ITEM	Class Name	Description	Degree Type	Amount	Amount		
012200-2013-000-000	ECON 600 - Managerial Economics	Course is designed to use economic analysis to enhance business decision-making within private businesses, not-for-profit institutions, and public agencies. Economic concepts covered include demand analysis, production and cost analysis, linear programming applications, pricing policies and regulation.	MBA - IT	\$1,050.00	\$ 1,050.00		
012200-2013-000-000	BUSN 625 - Applied Decision Making	This course investigates the advanced analysis methods and techniques used to solve modern business problems. The course emphasizes the most successful methods from business statistics, production and operations management, management science, and operations research fields of study. Students will be required to synthesize material from several major fields of study in order to apply it in this course. The capabilities of Microsoft Office will be used extensively throughout the course to illustrate the application of these methods and techniques to the analysis and solution of modern business problems. The course will first investigate the types of problems faced by businesses in the both the production and service areas. Methods of analysis will be investigated to solve these type problems including probability concepts and their applications, statistical quality control, process design, forecasting, inventory control, waiting line models, transportation and assignment methods, decision analysis, and simulation modeling.	MBA - IT	\$1,050.00	\$ 1,050.00		
		This course is a culmination of the business functions to incorporate them into a coherent, profitable, sustainable business strategy. This course includes strategy information, decisions, and techniques of					
012200-2013-000-000	Busn 620 - Strategic Management	industry leaders.	MBA - IT	\$1,050.00	\$ 1,050.00		
			Total	\$3,150.00	\$ 3,150.00		

DEPARTMENT CODE:	12200						
EXPENDITURE LINE ITEM	Vendor Name	Product Description	Renewal Date	Renewal Frequency	FY2019	FY2020	Notes
012200-3002-000-000	Pictometry	GIS Oblique Imagery		Annual Payment # 1	\$79,000.00	\$79,000.00	Payment # 1 for 2019 Flight
012200-3002-000-000		Engineer Services for network design for Public Safety Core and Remote Site Topography		1 Time	\$15,000	\$15,000.00	
				Total	\$94,000.00	\$94,000.00	

			Deneuval		Г			
EXPENDITURE LINE ITEM	Vendor Name	Product Description	Renewal Date	Renewal Frequency	FY2019	FY2020	New	Ad
		PSB Whole Battery						
012200-3005-000-000	Emerson	Backup System		Annual	\$10,553.06	\$10,553.06	N	
								The incr
		SmartNet for Cisco						switche
	DISYS Solutions	Infrastructure	7/11/18	Annual	\$42,837.57	\$59,163.90	N	SmartNe
012200-3005-000-000	Bridge Communications	Phone Switchboard	8/8/18	Annual	\$800.00	\$800.00		
012200-3005-000-000	Singlewire	Phone Paging	7/30/18	Annual	\$3,465.00	\$3,638.25		
012200-3005-000-000	Samanage	IT Help Desk		Annual	\$16,887.50	\$15,909.83	N	
								Projecte
012200-3005-000-000	Sophos	Anti-virus/web filtering	7/5/18	Annual	\$25,437.25	\$26,709.11	N	increase
								Projecte
012200-3005-000-000	At Comm	Phone Reporting	8/23/18	Annual	\$3,383.00	\$3,552.15	N	increase
								Projecte
012200-3005-000-000	WebEx	Web Conferencing	8/21/18	Annual	\$468.00	\$491.40		increase
012200-3005-000-000	Teamwork	Online Collaboration	7/18/18	Annual	\$759.00	\$759.00		_
012200-3005-000-000	Konica Minolta DSI Support - \$80	IT Copier		Monthly	\$960.00	\$960.00	N	_
		Remote Account						
012200-3005-000-000	ZOHO ADSelfService	Changes	9/26/18	Annual	\$1,795.00	\$1,795.00		
012200-3005-000-000	Hootsuite			Monthly	\$119.88	\$119.88	N	
					4			Projecte
012200-3005-000-000	Dell EDA Pro Support	Service Tag: DFHJCY1	11/7/18	Annual	\$596.36	\$626.18	N	increase
	- <i>u</i>	Service Tag: 53XSVN1			40,000,000			Projecte
	Dell	APPASSURE2	12/20/17	Annual	\$2,230.00	\$2,341.50		increase
012200-3005-000-000	DOT.GOV.GOV Domains	frederickcountyva.gov	3/21/19	Annual	\$400.00	\$400.00	N	
040000 0005 000 000		Backup and recovery for		A I	¢500.00	<u> </u>		
012200-3005-000-000	Symantec	physical servers	4/7/17	Annual	\$600.00	\$940.08	N	Mainter
		Mahila davias						
012200 2005 000 000		Mobile device	4/04/46	Annual	¢450.00	¢450.00	NI	
012200-3005-000-000	JAMF Correct	management software VMWare licensing	4/21/16	Annual	\$450.00	\$450.00		
012200-3005-000-000	Carasoft	Rapid Recovery Software	5/20/16	Annual	\$17,594.00	\$17,436.00	IN	Drojecto
012200-3005-000-000	Dell via Quest		5/31/17	Annual	62 196 FC	62 24E 90	N	Projecte
012200-3005-000-000		for Servers	5/31/17	Annual	\$3,186.56	\$3,345.89	IN	increase
012200-3005-000-00	KnowB4 Platinum	Sequentur		Annual	\$11,411.40	¢11 001 07		Projecte
012200-3003-000-00		Sequentur Service Tag: FJ5CF42		Annual	\$11,411.40	\$11,981.97		increase Projecte
012200-3005-000-000	Dell	STORAGE2012	6/5/2018	Annual	\$1,321.61	\$1,387.69	N	
012200-3003-000-000	Dell	STURAGEZUIZ	0/3/2018	Alliudi	\$1,521.01	\$1,507.05		increase
		Remote desktop						
012200-3005-000-000	Pomgar	management software	6/30/2016	Annual	\$9,900.00	\$9,900.00	NI	
012200-3003-000-000	Bomgar		0/30/2010	Annual	\$9,900.00	\$9,900.00		Projecte
012200-3005-000-000	Vision Government Services	County Website Support		Annual	\$8,000.00	\$8,400.00	N	increase
012200-3003-000-000	vision dovernment services	County website support		Annual	\$8,000.00	30,400.00		Increase
								increase
								contract
								contract moving

Additional Information

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<u>012200-3005-000-000</u>	Unity - LaserFiche	Document Management	11/20/18	Annual	\$39,882.00	\$45,000.00	N	Includes mainter adding 3 necessa pf 10/13
012200-3005-000-000	SQL Server	SQL Server Standard Edition (per core license)	TBD	Annual		\$11,500.00	Y	Softwai Servers EOL.
012200-3005-000-000	Dropbox	File Sharing application	10/1/18	Annual	\$99.00	\$99.00	N	
012200-3005-000-000	Adobe Creative Cloud for Teams	To improve GIS Maps	7/1/2019	Annual	\$2,520.00	\$2,520.00	N	
012200-3005-000-000 Total	Pictometry	Pictometry Connect	7/1/2018	Annual	\$4,950.00 \$262,928.11	\$5,000.00 \$302,779.89	N	Projecto increase

des an expected increase in tenance cost of \$10,000 for ng 30 DSS staff members and ssary scanning components. /12/18 vare Upgrade for Database ers. Current version reaching

cted maintenance Cost ased by 5%

DEPARTMENT CODE:	1220	D			
EXPENDITURE LINE ITEM	Type of Service	Name of Provider	Frequency of Payment	FY2019	FY2020
012200-3010-000-000	Microsoft Office 365 Subscription	Planet Technology	Annual	\$ 160,000.00	\$ 161,694.72
012200-3010-000-000	Visio Licenses	Microsoft	Annual		\$ 360.00
012200-3010-000-000	E3 Ecryption Licenses	Planet Technology	Annual	\$ 1,002.00	\$ 1,002.00
012200-3010-000-000	Evolve	Planet Technology	Annual		\$ 10,000.00
			Total	\$ 161,002.00	\$ 173,056.72

DEPARTMENT CODE:	12200						
EXPENDITURE LINE ITEM	Type of Service	Name of Provider	Frequency of Payment	Ar	nount	FY2019	FY2020
012200-5204-000-000	Telephone	Verizon	monthly	\$	55.00	\$ 660.00	\$ 660.00
012200-5204-000-000	Telephone	Comcast	monthly	\$	55.00	\$ 660.00	\$ 660.00
012200-5204-000-000	Wireless	Verizon	monthly	\$	724.00	\$ 8,688.00	\$ 8,688.00
012200-5204-000-000	Postage	USPS	monthly	\$	15.00	\$ 180.00	\$ 180.00
				Total		\$ 10,188.00	\$ 10,188.00

DEPARTMENT CODE:	12200						
EXPENDITURE LINE ITEM	Type of Service	Name of Provider	Frequency of Payment	Amount	FY2019	FY2020	Notes
012200-5299-000-000	Metro E 300 MG Pipe	Comcast	monthly	\$ 2,300.00	\$27,600.00	\$27,600.00	
012200-5299-000-000	Metro Ethernet Internet	Comcast	monthly	\$ 73.00	\$876.00	\$876.00	
012200-5299-000-000	Comcast 10GB Link Between Buildings	Comcast			\$11,800.00	\$12,390.00	5% Increase for Year 5
012200-5299-000-000	**Cradle Point Router						
012200-5299-000-000	PSB Internet Connection	Comcast	Monthly	\$ 1,600.00	\$19,200.00	\$19,200.00	
				Total	\$59,476.00	\$60,066.00	

DEPARTMENT CODE:	12200						
EXPENDITURE LINE ITEM	Product	FY2019			FY2020		
012200-5401-000-000	Stock Paper	\$	200.00	\$	200.00		
012200-5401-000-000	Pens, pencils, tape, calendars, water service	\$	700.00	\$	700.00		
012200-5401-000-000	Copier Toner	\$	200.00	\$	200.00		
012200-5401-000-000	Mailing Supplies	\$	200.00	\$	200.00		
012200-5401-000-000	Licensing	\$	5,000.00	\$	5,000.00		
012200-5401-000-000	Help Desk Cell Phone	\$	500.00	\$	-		
012200-5401-000-000	Help Desk Laptop	\$	1,500.00	\$	-		
012200-5401-000-000	Scanner, Copier, Label Maker	\$	4,900.00	\$	4,900.00		
012200-5401-000-000	Monitors, Keyboards, Mice	\$	1,500.00	\$	1,500.00		
012200-5401-000-000	Misc	\$	250.00	\$	250.00		
		\$	14,950.00	\$	12,950.00		

DEPARTMENT CODE:	12200		
EXPENDITURE LINE ITEM	Product	FY2019	FY2020
012200-5401-000-002	Ink for Large Format Printer	\$ 2,000.00	\$ 2,000.00
012200-5401-000-002	Paper for Large Format Printer	\$ 1,360.00	\$ 1,360.00
		\$ 3,360.00	\$ 3,360.00

DEPARTMENT CODE:	1220	00	
EXPENDITURE LINE ITEM	Product		FY2020
012200-5401-000-003	Cat6e Cable	\$	250.00
012200-5401-000-003	Monitor Conversion Dongles	\$	500.00
012200-5401-000-003	Cable Tester	\$	250.00
		\$	1,000.00

DEPARTMENT CODE:	1220	0							
Expenditure Line Item	Department	Cycle Interval	Number of Units	Amount Per Unit	FY2020	Lease Term	Yearly Amount	Finance Charge	Total With Finance Charge
012200-5401-000-004	Sheriff (Field Machine)	3 Year	120	\$ 3,591.92	\$ 91,594.21	5 years	\$ 91,594.21	\$ 26,932.65	\$ 457,971.05
012200-5401-000-004	Fire Marshall (Field Machine)	3 Year	7	\$ 4,728.15	\$ 11,877.87	3 Years	\$ 11,877.87	\$ 2,536.56	\$ 35,633.61
012200-5401-000-004	Business Machines	5 Year	65	\$ 1,135.82	\$ 73,828.30	N/A	N/A	N/A	N/A
				Total	\$ 177,300.38				

DEPARTMENT CODE:	1220	0		
EXPENDITURE LINE ITEM	Product		FY2020	
012200-5413-000-003	Power PDUs for Data Center	\$		400.00
012200-5413-000-003	Cisco 10GB Transceiver Modules	\$	1	,500.00
		\$	1,	,900.00

DEPARTMENT CODE:	1220	00	
EXPENDITURE LINE ITEM Training Course Name		Description	FY2020
012200-5506-000-000	ArcGIS API for JavaScript	Web Development (web based class)	\$ 1,695.00
012200-5506-000-000	Intro to ArcGIS Pro	Data processing automation (web based class)	\$ 1,695.00
012200-5506-000-000	ICND2	Cisco Routing and Switching Advanced	\$ 3,500.00
012200-5506-000-000	ICND2	Cisco Routing and Switching Advanced	\$ 3,500.00
012200-5506-000-000	CICD	Cisco VOIP / CUCM and Unity Connection class	\$ 3,800.00
012200-5506-000-000	CBT Nuggets Subscription - 3 year renew 2021	Training/online classes - 8 licenses	\$ 5,323.63
		Total	\$ 19,513.63

DEPARTMENT CODE:	12200)			
EXPENDITURE LINE ITEM	Staff	Organization	Description	FY2019	FY2020
012200-5801-000-000	Patrick, Kyle, Robin, Derek, Kirstin	VAMLIS	Virginia GIS Professional Group	\$350	\$ 350.00
012200-5801-000-000	Patrick	PMI	Project Management Institute	\$400	\$ 200.00
			GIS Professional Certification,		
012200-5801-000-000	Robin, Kyle	GISP	Exam, and Portfolio Review.	\$1,000	\$ 1,000.00
			Total	\$1,750	\$ 1,550.00

DEPARTMENT CODE:	12200			
EXPENDITURE LINE ITEM	Product	Purpose	FY2019	FY2020
		Drone to integrate into GIS, Public		
012200-8007-000-002	Drone	Works, Public Safety Operations	\$ 15,000.00	\$ 15,000.00
		Total	\$ 15,000.00	\$ 15,000.00

DEPARTMENT CODE:	1220	0		
EXPENDITURE LINE ITEM	Product	Purpose		FY2020
		2nd Year replacement of 3-year switch		
		replacement. This includes the core data		
		center at PSB, network equipment and		
012200-8007-000-003	Switch Replacement - 1st Year	firewalls.	\$	200,000.00
		Total	\$	200,000.00

DEPARTMENT CODE:	12200					
EXPENDITURE LINE ITEM	Type of Service	Name of Provider	Frequency of Payment	Amount	FY2019	FY2020
012200-9001-000-000	Datacenter Refresh 5 Year Lease Agreement	Dell	Annual		107,794.00	\$ 107,794.00
			Total		107,794.00	\$ 107,794.00