IT Plan
### IT Plan

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#### Financial Systems

- **Business Tax System/Reciprocity Contractor System**: $375,000
- **Employee Pension Administration System**: $50,000
- **Enterprise Resource Planning System**: $60,000
- **Personal Property Tax System**: $60,000
- **Phone, Web, Portable Device Payment Portals**: $200,000
- **Real Estate Assessment System (CAMA)**: $15,000
- **Real Estate Account Receivable System**: $0
- **Database Infrastructure**: $552,000
- **Enterprise Data Storage Infrastructure**: $200,000
- **Enterprise Service Catalog**: $40,000
- **Information Technology Equipment Replacement**: $530,000
- **Information Technology Lump Sum Funding**: $0
- **LAN/WAN Infrastructure**: $748,000
- **Network Security**: $280,000
- **Network Server Infrastructure**: $400,000
- **Remote Access**: $90,000
- **Voice Over Internet Protocol (VoIP)**: $100,000
- **Application Portfolio Management**: $100,000
- **Enterprise Maintenance Mgmt System**: $40,000
- **FI/Audit System Replacement**: $70,000
- **HIPAA & Related Health Information Technologies**: $25,000
- **Library Public Access Computers and Print Mgmt System**: $0
- **Office of Voter Registrations and Elections Equipment Replacement**: $100,000
- **Recreation Database System**: $10,000
- **Other System Development Projects Total**: $345,000
- **Customer Relationship Management System**: $500,000
- **Electronic Government/Web Page**: $50,000
- **Public Access Development Total**: $550,000
- **Public Safety Systems**: $682,000
- **Computer Aided Dispatch (CAD) System Replacement**: $250,000
- **Courtroom Trial Presentation Technology**: $0
- **Electronic Citations Implementation**: $420,000
- **Radio System Upgrade**: $1,565,000
- **Public Safety Systems Total**: $2,917,000
- **Grand Total**: $8,097,000

**Note:** Projects with $0 total funding are active capital projects funded in prior CIP's that do not require additional resources.
**Document Imaging**

**Document Subsection:** Document Management  
**Managing Department:** Department of Code Administration  
**Primary Strategic Theme:** Theme 3: Well-Managed Government  
**Project Location:** Citywide  
**Project Category:** IT Plan  
**Estimate Useful Life:** 6 - 10 Years

**Changes from Prior Year CIP**

Planned FY 2020 funding was reduced by $90,000 to offset increases to the IT Equipment Replacement, Upgrade Work Station Operating Systems, and Customer Relationship Management System projects. This project is sufficiently funded to meet project’s core needs through FY2020.

**Project Description & Justification**

Funds are used to support continual improvements and new development to document imaging technologies that support the City’s core business applications. This project provides funding for hardware, software, licensing, upgrades, and professional services related to document imaging initiatives. The introduction of new enterprise applications has increased departmental interest in document imaging software and interfaces to line-of-business applications.

In FY 2019, the City migrated to an enterprise licensing model, which keeps the system viable and supports the product lifecycle. The upgrade affords better capabilities to integrate with the City’s new Permitting system.

**External or Internal Adopted Plan or Recommendation**

N/A

**Additional Operating Impacts**

No additional operating impacts identified at this time.
BUSINESS TAX SYSTEM

DOCUMENT SUBSECTION: Financial Systems
MANAGING DEPARTMENT: Department of Finance
PRIMARY STRATEGIC THEME: Theme 3: Well-Managed

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: 6 - 10 Years

PROJECT DESCRIPTION & JUSTIFICATION

In calendar years 2010 and 2011, the Finance Department implemented a new business tax system. The system seamlessly integrates the accounts receivable processes and business licenses, business personal property taxes, and other business-related taxes. In FY 2019, funding was used to perform a necessary system upgrade. In addition, new initiatives such as an online business tax portal will be implemented. This will provide taxpayers a modern, online business tax payment experience, including online filing and payment features.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION
N/A

ADDITIONAL OPERATING IMPACTS
No additional operating budget impacts identified at this time.

CHANGES FROM PRIOR YEAR CIP
No changes from previous CIP.
EMPLOYEE PENSION ADMINISTRATION SYSTEM

DOCUMENT SUBSECTION: Financial Systems
MANAGING DEPARTMENT: Department of Finance
PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: 6 - 10 Years

PROJECT DESCRIPTION & JUSTIFICATION

This project provides funds to acquire and implement an Employee Pension Administration System to support the City's responsibilities for retirement plan administration. Currently, the City uses an outside contractor to provide all plan administration services for the Supplemental Retirement Plan. Jurisdictions larger than the City typically perform this function internally while those smaller than Alexandria outsource the function to contractors. Staff is studying whether bringing plan administration services in-house would provide cost or performance efficiencies. If the City ultimately decides to manage this in-house, a software system will be required. This project supports the Finance Department's strategic plans for long-term financial stability of the City.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

No changes from previous CIP.

ADDITIONAL OPERATING IMPACTS

No additional operating budget impacts identified at this time.
**EXTERNAL RESOURCE PLANNING SYSTEM**

**DOCUMENT SUBSECTION:** Financial Systems

**MANAGING DEPARTMENT:** Department of Finance

**PROJECT LOCATION:** Citywide

**REPORTING AREA:** Citywide

**PROJECT CATEGORY:** IT Plan

**PRIMARY STRATEGIC THEME:** Theme 3: Well-Managed Government

**ESTIMATE USEFUL LIFE:** Varies

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**PROJECT DESCRIPTION & JUSTIFICATION**

In 2013-2014 the City implemented an Enterprise Resource Planning (ERP) software suite to improve the automation and support for a range of administrative and management applications. City staff have completed the implementation of the following modules: General Ledger, Accounts Payable, Purchasing, Budgeting, core Human Resources modules, Fixed Assets, and Payroll. Funds were used in FY 2019 to implement Bids and Contracts and Vendor Self-Service as well as to procure Cashiering and Accounts Receivables modules. Project funds will be used to complete several ancillary functions for this system, procure additional modules and implement application interfaces as applicable. Additional funding requests will occur in the out years to sustain and expand this system as needed.

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**EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION**

N/A

**ADDITIONAL OPERATING IMPACTS**

No additional operating impacts identified at this time.

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**CHANGES FROM PRIOR YEAR CIP**

Planned FY 2020 funding was reduced by $40,000.

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**Enterprise Resource Planning System**

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**Changes from Prior Year CIP**

Planned FY 2020 funding was reduced by $40,000.

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**PROJECT DESCRIPTION & JUSTIFICATION**

In 2013-2014 the City implemented an Enterprise Resource Planning (ERP) software suite to improve the automation and support for a range of administrative and management applications. City staff have completed the implementation of the following modules: General Ledger, Accounts Payable, Purchasing, Budgeting, core Human Resources modules, Fixed Assets, and Payroll. Funds were used in FY 2019 to implement Bids and Contracts and Vendor Self-Service as well as to procure Cashiering and Accounts Receivables modules. Project funds will be used to complete several ancillary functions for this system, procure additional modules and implement application interfaces as applicable. Additional funding requests will occur in the out years to sustain and expand this system as needed.

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**EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION**

N/A

**ADDITIONAL OPERATING IMPACTS**

No additional operating impacts identified at this time.

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**Enterprise Resource Planning System**

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**Changes from Prior Year CIP**

Planned FY 2020 funding was reduced by $40,000.

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**PROJECT DESCRIPTION & JUSTIFICATION**

In 2013-2014 the City implemented an Enterprise Resource Planning (ERP) software suite to improve the automation and support for a range of administrative and management applications. City staff have completed the implementation of the following modules: General Ledger, Accounts Payable, Purchasing, Budgeting, core Human Resources modules, Fixed Assets, and Payroll. Funds were used in FY 2019 to implement Bids and Contracts and Vendor Self-Service as well as to procure Cashiering and Accounts Receivables modules. Project funds will be used to complete several ancillary functions for this system, procure additional modules and implement application interfaces as applicable. Additional funding requests will occur in the out years to sustain and expand this system as needed.

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**EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION**

N/A

**ADDITIONAL OPERATING IMPACTS**

No additional operating impacts identified at this time.
PERSONAL PROPERTY (VEHICLE/ CAR) TAX SYSTEM

DOCUMENT SUBSECTION: Financial Systems
MANAGING DEPARTMENT: Department of Finance
PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: 6 - 10 Years

PROJECT DESCRIPTION & JUSTIFICATION

In the 1990s, ITS staff developed the City’s personal property tax system as a stand-alone software application for the administration of all vehicle taxes. Since then, ITS and Finance staff have reprogrammed and modified it over the years, as necessary. Nearing its fourth decade of service, the personal property tax system needs to be retired. This project will enable the City to identify and install a modern replacement.

During FY 2019, staff explored a few viable solutions to replace the current system. These product reviews provided insights into the current practices and processes available in more modern systems. This analysis will continue in FY 2020, to determine the most ideal timeline, costs, solution, and methodology for making a decision regarding the path forward. Budgeted funding will be used to implement a more modern system.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating budget impacts identified at this time.
**PORTABLE DEVICE (PHONE, WEB) REPORTING/PAYMENT PORTALS**

**DOCUMENT SUBSECTION:** Financial Systems  
**MANAGING DEPARTMENT:** Department of Finance  
**PROJECT LOCATION:** Citywide  
**REPORTING AREA:** Citywide  
**PRIMARY STRATEGIC THEME:** Theme 3: Well-Managed Government  
**PROJECT CATEGORY:** IT Plan  
**ESTIMATE USEFUL LIFE:** 6 - 10 Years

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**Phone, Web, Portable Device Payment Portals**

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**EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION**

Finance Department Work Plan

**ADDITIONAL OPERATING IMPACTS**

No additional operating budget impacts identified at this time.

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**CHANGES FROM PRIOR YEAR CIP**

No changes from previous CIP.

**PROJECT DESCRIPTION & JUSTIFICATION**

This project provides funding to implement improvements to the City’s online payment and account maintenance portal, including providing compatibility with mobile devices such as smart phones and tablets. In FY 2016, the City rolled out the ability for taxpayers to make personal property (car tax) payments online. In FY 2017, the City implemented online real estate tax payments. In FY 2019 and 2020, the City will enable taxpayers to create and maintain online accounts that they may access with a user name and password. This will allow taxpayers to view their billing and payment history, schedule payments, and receive electronic notifications.
REAL ESTATE ACCOUNTS RECEIVABLE SYSTEM

DOCUMENT SUBSECTION: Financial Systems
MANAGING DEPARTMENT: Department of Finance
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government
ESTIMATE USEFUL LIFE: 6 - 10 Years

No changes from previous CIP.

PROJECT DESCRIPTION & JUSTIFICATION

This project supports the replacement of the City's Real Estate Accounts Receivable System (REARS), the system that generates the City's real estate tax bills. In FY 2017, ITS and Finance staff successfully migrated to a new system and retired the legacy system. The Finance Department first utilized the new system to successfully complete the tax year 2017 first-half and second-half real estate tax billings. The funding in the out years is for the eventual anticipated replacement system.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION
Finance Department Work Plan

ADDITIONAL OPERATING IMPACTS
No additional operating budget impacts identified at this time.
REAL ESTATE ASSESSMENT SYSTEM (CAMA)

DOCUMENT SUBSECTION: Financial Systems
MANAGING DEPARTMENT: Department of Finance
PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: 0 - 5 Years

CHANGES FROM PRIOR YEAR CIP
No changes from previous CIP.

PROJECT DESCRIPTION & JUSTIFICATION
This project funds improvements to the City's computer assisted mass appraisal (CAMA) system, which Finance staff uses to complete annual assessments of all real property in the City. The real estate accounts receivable system (REARS) is reliant upon property valuations data from the CAMA system. Both data sets are then used to generate the real estate tax bills. A critical system upgrade to CAMA is currently underway and will continue through the fall of 2019. This upgrade will retire outdated servers, move all data to a modern database, and implement a new browser-based user interface. The upgrade will extend the useful life of the CAMA system significantly and may eliminate the need for a full system replacement in the near term, currently funded in FY 2021.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION
N/A

ADDITIONAL OPERATING IMPACTS
No additional operating budget impacts identified at this time.
GIS DEVELOPMENT

DOCUMENT SUBSECTION: Geographic Information Systems
MANAGING DEPARTMENT: Information Technology Services Department
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: Varies

CHANGES FROM PRIOR YEAR CIP

No changes from previous CIP.

PROJECT DESCRIPTION & JUSTIFICATION

The City's Geographic Information System (GIS) is the primary source of information on hundreds of layers of spatial data (streets, parks, parcels, population, etc.). This project funds resources to collect, distribute, access and analyze this data. GIS data allows the City to better inform staff, decision makers and the public on many aspects of City operations. GIS provides this information through applications that address an extensive array of business needs. GIS capital funds are primarily used for GIS hardware and software and the biennial collection of base mapping data.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating budget impacts identified at this time.
CONNECTIVITY INITIATIVES

DOCUMENT SUBSECTION: Network Services
MANAGING DEPARTMENT: Information Technology Services Department
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: N/A

PROJECT DESCRIPTION & JUSTIFICATION
This project reflects annual expenditures to Comcast for the monthly support of the City and ACPS institutional network. All remaining Comcast revenues have been programmed as funding for other eligible projects within the IT Plan.

Changes from Prior Year CIP
No changes from previous CIP.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION
N/A

ADDITIONAL OPERATING IMPACTS
No additional operating budget impacts identified at this time.
DATABASE INFRASTRUCTURE

Document Subsection: Network Services
Managing Department: Information Technology Services Department
Primary Strategic Theme: Theme 3: Well-Managed Government

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: Varies

CHANGES FROM PRIOR YEAR CIP
Planned FY 2020 funding was reduced by $10,000 to offset increases to the IT Equipment Replacement, Upgrade Work Station Operating Systems, and Customer Relationship Management System projects. This project is sufficiently funded to meet project’s core needs through FY 2020.

PROJECT DESCRIPTION & JUSTIFICATION
This project provides for new and replacement database infrastructure hardware, software, licensing, upgrades, and tools. This project provides funding to periodically (every 3-5 years) refresh the database technologies and stay current with the manufacturer’s lifecycle. In addition to core database technologies, this project also provides for new web reporting services and improvements to existing web reporting portals. This project will occasionally fund the acquisition of new database hardware, infrastructure, and services when new needs arise from City staff. Additionally, this project is used to evaluate the latest database technologies and tools, and provides for consulting services to properly maintain and enhance the City's data infrastructure. Funds in FY 2020 are for database licensing tools and professional services needed to keep the current software lifecycle and for continual improvements to the database infrastructure.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION
N/A

ADDITIONAL OPERATING IMPACTS
No additional operating impacts identified at this time.

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Approved FY 2020 - FY 2029 Capital Improvement Program
City of Alexandria, VA

Page 17.13
**Enterprise Camera System**

**Document Subsection:** Network Services

**Managing Department:** Information Technology Services Department

**Primary Strategic Theme:** Theme 4: Safe & Resilient Community

**Project Location:** Citywide

**Reporting Area:** Citywide

**Project Category:** IT Plan

**Estimate Useful Life:** TBD

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**Changes from Prior Year CIP**

Funding in the amount of $165,000 added for FY 2020.

**Project Description & Justification**

This project funds a survey of the City's existing camera systems that have been installed around the City over the years. The goal is to identify if it is suitable to consolidate multiple stand-alone camera systems into a standardized city-wide enterprise system. City staff are considering the feasibility of a system that will utilize the City's I-Net to securely transmit video.

In addition, a masterplan will be created in FY 2020 to identify the current state of the various camera security system deployments throughout the City and to map an integrated and complimentary digital camera solution. This will inform the strategic direction and investments to be made in the outyears.

In FY 2020, funding in the amount of $40,000 will be used to procure exterior cameras at Beatley Central Library to maintain a safe and secure technological environment for both staff and users.

**External or Internal Adopted Plan or Recommendation**

N/A

**Additional Operating Impacts**

No additional operating budget impacts identified at this time.
Enterprise Collaboration

Document Subsection: Network Services
Managing Department: Information Technology Services Department
Primary Strategic Theme: Theme 3: Well-Managed Government

Project Location: Citywide
Reporting Area: Citywide
Project Category: IT Plan
Estimate Useful Life: 6 - 10 Years

Changes from Prior Year CIP
No changes from previous CIP.

Project Description & Justification
This project funds the roll-out of new features for the City's enterprise content collaboration platform, as well as to adhere to the system manufacturer’s lifecycle. This is a web-based collaboration platform that integrates with the City’s email, desktop productivity tools, messaging, and cloud-based storage functions. The approved funding supports the cost of migration of personal file shares to cloud-based storage; the roll-out and training associated with mobility and work from anywhere initiatives, including native apps on mobile devices; the training and promotional costs of driving end-user adoption of cloud computing; and the implementation of content management features, such as retention policies, classification for search, and cloud security tools. Funds will be used to provide staff augmentation related to communication and collaboration needs of the City’s various user departments.

External or Internal Adopted Plan or Recommendation
N/A

Additional Operating Impacts
No additional operating budget impacts identified at this time.
**Enterprise Data Storage Infrastructure**

**Document Subsection:** Network Services
**Managing Department:** Information Technology Services Department

**Project Location:** Citywide
**Reporting Area:** Citywide

**Primary Strategic Theme:** Theme 3: Well-Managed Government
**Project Category:** IT Plan
**Estimate Useful Life:** Varies

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<td>300,000</td>
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<td>450,000</td>
<td>3,125,000</td>
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</table>

**Changes from Prior Year CIP**

No changes from previous CIP.

**Project Description & Justification**

As the City continues to "go green" and digitize documents across the enterprise, the data storage requirements continue to increase which requires additional storage capacity and proper hardware/software to perform data backups. This project provides funding to maintain and upgrade the backend data storage required for the virtual infrastructure and the enterprise backups. This project includes Storage Area Network (SAN) hardware, software licensing, and enterprise backup hardware. The SANs that are deployed throughout the enterprise provide improved disk utilization and data management. This project provides funding to perform SAN upgrades to include adding needed storage capacity while maintaining optimal performance.

**External or Internal Adopted Plan or Recommendation**

N/A

**Additional Operating Impacts**

No additional operating budget impacts identified at this time.
ENTERPRISE SERVICE CATALOG

DOCUMENT SUBSECTION: Network Services
MANAGING DEPARTMENT: Information Technology Services Department
PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: 6 - 10 Years

PROJECT DESCRIPTION & JUSTIFICATION
Funding will be used to support the technical service desk operations which includes incident, request, and change management directly related to technical support services for City staff. Additional future features include electronic workflows and automated email approvals. Overall IT efficiency is gained by leveraging this system to automate repetitive tasks and it serves as a central repository for IT service catalog items. Planned funding will be used to implement features and capabilities which includes asset and inventory management to best support and safeguard overall device management.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION
N/A

ADDITIONAL OPERATING IMPACTS
The current service offering is hosted in the cloud and the annual maintenance costs are dictated by the vendor’s price per license and the number of modules purchased.
INFORMATION TECHNOLOGY EQUIPMENT REPLACEMENT

DOCUMENT SUBSECTION: Network Services
MANAGING DEPARTMENT: Information Technology Services Department
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government

PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: 6 - 10 Years

Planned FY 2020 funding was increased by $130,000.

PROJECT DESCRIPTION & JUSTIFICATION
The City needs hardware that meets modern technology standards and application requirements. Funds in this project are used to procure new City platform technologies (laptops, desktops, and related components or companion products). This project also provides for the labor costs of deploying the new computers at offices throughout the City. The IT Equipment Replacement project ensures that City staff have appropriate platform technologies and resources necessary to perform core job functions, and that the City's physical IT equipment is replaced on an appropriate schedule to minimize downtime and requests for service. The project’s goal is to provide appropriate hardware and companion products to support the City's workforce in their day-to-day job functions.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION
N/A

ADDITIONAL OPERATING IMPACTS
No additional operating budget impacts identified at this time.
INFORMATION TECHNOLOGY LUMP SUM FUNDING

**DOCUMENT SUBSECTION:** Network Services

**MANAGING DEPARTMENT:** Information Technology Services Department

**PROJECT LOCATION:** Citywide

**REPORTING AREA:** Citywide

**PRIMARY STRATEGIC THEME:** Theme 3: Well-Managed Government

**ESTIMATE USEFUL LIFE:** Varies

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**CHANGES FROM PRIOR YEAR CIP**

No changes from previous CIP.

**PROJECT DESCRIPTION & JUSTIFICATION**

This project reserves IT project future funding in FY 2021–FY 2029 for use on to-be-determined information technology projects.

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**EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION**

N/A

**ADDITIONAL OPERATING IMPACTS**

No additional operating budget impacts identified at this time.
IT ENTERPRISE MANAGEMENT SYSTEM

DOCUMENT SUBSECTION: Network Services
MANAGING DEPARTMENT: Information Technology Services Department

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government

PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: Varies

PROJECT DESCRIPTION & JUSTIFICATION
The IT Enterprise Management System project continues to support the proper lifecycle management of enterprise software installed on information technology equipment. This project provides funding to automate operating system deployment, software deployment, and automated software patching services. ITS deployed this tool to streamline and standardize the deployment of desktop and server software packages. This allows the City to efficiently stay current with the software manufacturer's lifecycle and/or address potential vulnerabilities.

CHANGES FROM PRIOR YEAR CIP
No changes from previous CIP.

PROJECT DESCRIPTION & JUSTIFICATION
The IT Enterprise Management System project continues to support the proper lifecycle management of enterprise software installed on information technology equipment. This project provides funding to automate operating system deployment, software deployment, and automated software patching services. ITS deployed this tool to streamline and standardize the deployment of desktop and server software packages. This allows the City to efficiently stay current with the software manufacturer's lifecycle and/or address potential vulnerabilities.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION
N/A

ADDITIONAL OPERATING IMPACTS
No additional operating budget impacts identified at this time.
LAN DEVELOPMENT

DOCUMENT SUBSECTION: Network Services
MANAGING DEPARTMENT: Information Technology Services Department
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: Varies

PROJECT DESCRIPTION & JUSTIFICATION

This project maintains or upgrades the local area network (LAN) infrastructure in City government buildings including: data cabling, demarcation boxes, racks, and cabinets. This project ensures that current data runs and new data connections associated with office moves and renovations will consistently provide staff sufficient data speeds, based on the latest network technologies deployed in the City. This project also funds upgrades to the physical spaces (network closets) where the LAN infrastructure resides to ensure that they are adequately cooled, lighted, and secured. The condition of the physical space is critical to the optimal performance of network equipment connecting to the City’s I-Net. On an on-going basis, ITS ensures the quality of the local area network is consistent with I-Net by continuously performing required cable drop maintenance, installation of new or replacement network drops, and other related equipment replacements or upgrades.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating budget impacts identified at this time.

CHANGES FROM PRIOR YEAR CIP

No changes from previous CIP.
LAN/WAN INFRASTRUCTURE

PROJECT DESCRIPTION & JUSTIFICATION

This project enables the City to deliver scalable wired and wireless access to data, voice and video communications on the City's Institutional Network (I-Net). This project funds the replacement and acquisition of networking equipment which includes core switches, edge switches, firewalls, routers, gigabit modules, fiber optic cable, various networking monitoring tools, packet filtering/traffic shaping devices, and professional services. Consulting services are used when making network modifications, which are required for integration of products or services.

Beginning in FY 2018, a wireless engineer is funded from this project to review and architect secure wireless solutions to support mobile initiatives. Wireless access allows the workforce real-time access to information from City issued devices. Guest wireless access allows the public to access mobile content from designated areas within City facilities. In FY 2019, ITS made progress in developing and maturing its wireless infrastructure. ITS established a wireless standards platform, deployed approximately 200 wireless access points across the enterprise, and retired legacy end-of-life access points.

EXTRA COSTS

No changes from previous CIP.

PROJECT DESCRIPTION & JUSTIFICATION

This project enables the City to deliver scalable wired and wireless access to data, voice and video communications on the City's Institutional Network (I-Net). This project funds the replacement and acquisition of networking equipment which includes core switches, edge switches, firewalls, routers, gigabit modules, fiber optic cable, various networking monitoring tools, packet filtering/traffic shaping devices, and professional services. Consulting services are used when making network modifications, which are required for integration of products or services.

Beginning in FY 2018, a wireless engineer is funded from this project to review and architect secure wireless solutions to support mobile initiatives. Wireless access allows the workforce real-time access to information from City issued devices. Guest wireless access allows the public to access mobile content from designated areas within City facilities. In FY 2019, ITS made progress in developing and maturing its wireless infrastructure. ITS established a wireless standards platform, deployed approximately 200 wireless access points across the enterprise, and retired legacy end-of-life access points.
MUNICIPAL FIBER

DOCUMENT SUBSECTION: Network Services
MANAGING DEPARTMENT: Information Technology Services Department
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: 30+ Years

PROJECT DESCRIPTION & JUSTIFICATION

The City currently leases a fiber optic network from Comcast that provides an institutional network (I-Net) connection to all City government facilities which includes Libraries, City government offices, and ACPS educational facilities. A City-owned municipal fiber which will replace the Comcast network and will provide greater and more uniformly available wide area network services to meet current and future projected City service levels. Mandatory, critical City communications are supported over the I-Net: the City’s VoIP telephone system, public safety dispatch systems, e-mail, data network services, Internet, and mission-critical system applications. The City is seeking a technically superior alternative that is financially self-sustaining, both through avoidance of existing costs and (potentially) new revenue streams.

After extensive research and evaluation of technological and market conditions, the City has determined that the construction and operation of its own fiber optic network will lead to long-term savings and increased service capabilities, as well as give the City revenue options with potential private entity leasing agreements. This would enable the private entity to provide high speed internet connections to City businesses and residents, and as such represents an investment in future long-term positive economic development. Once it is built out, a City-owned fiber optic network will connect approximately 91 City government facilities which includes Libraries, City government offices, and Alexandria City Public Schools (ACPS) through approximately 40 miles of fiber optic cable.

Project objectives include the reduction of long-term costs, reduction of the risk of pricing volatility, enhancement of City services and support of economic development. An example is the inclusion of connectivity to key economic development areas such as Potomac Yard. Alternatives are limited and wireless solutions are not sufficient. Approved FY 2018 and FY 2019 funds were used to contract a Municipal Fiber Engineer and to secure professional services to design and implement the Municipal Fiber project.

There are various project dependencies as well as opportunities that could impact the overall design and costs of the municipal fiber network. Factors such as 5G wireless, public-private partnerships, smart mobility and construction site variables are all considerations that could increase costs or alter the design.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

Expected annual operating costs may increase based upon the complexity of the network and technical expertise required to support, secure, and maintain the fiber optic network technology.

Changes from Prior Year CIP

No changes from previous CIP.
PROJECT DESCRIPTION & JUSTIFICATION

The purpose of this project is to fund the implementation of security technologies to protect data confidentiality, integrity, and availability of the City's IT Infrastructure. The City's information security program's function is to proactively identify, assess and implement solutions to address the City's IT vulnerabilities. Evaluating the role of new security technologies and methodologies is a continual process that requires capital investment for hardware, software, and professional services. Funds programmed in the out years of this plan will be used to procure necessary tools, software, and services to better combat threats and improve the City's security posture. Funding planned in FY 2020 will support the implementation of an enterprise security information and event management tool (SIEM). This will provide staff with a high-level view into the City's data and infrastructure, and it will allow the ability to better respond to threats, operational instabilities, and potential security issues across the enterprise.

Additional activities planned for FY 2020 and the out years include implementing components of identity and access management systems, the first of which is multifactor authentication. Multifactor authentication will be a major mitigation against cyber threats. The City also plans to implement a vulnerability management program. This program will also allow the City to prioritize and categorize assets that are critical to business functions and remediate any risks in a more timely manner.
Planned FY 2020 funding was reduced by $100,000 to offset increases to the IT Equipment Replacement, Upgrade Work Station Operating Systems, and Customer Relationship Management System projects. This project is sufficiently funded to meet project’s core needs through FY 2020.

**PROJECT DESCRIPTION & JUSTIFICATION**

This project provides for the phased replacement of the hardware and software required to operate the City’s network server environment in a secure and reliable manner. These requirements include hardware, network software upgrades, client access licenses, virtualization licenses, and network operating system licenses.

**EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION**

N/A

**ADDITIONAL OPERATING IMPACTS**

No additional operating budget impacts identified at this time.
Remote Access

**DOCUMENT SUBSECTION:** Network Services  
**MANAGING DEPARTMENT:** Information Technology Services Department  
**PROJECT LOCATION:** Citywide  
**REPORTING AREA:** Citywide  
**PRIMARY STRATEGIC THEME:** Theme 3: Well-Managed Government  
**PROJECT CATEGORY:** IT Plan  
**ESTIMATE USEFUL LIFE:** Varies

**CHANGES FROM PRIOR YEAR CIP**

Planned FY 2020 funding was reduced by $60,000 to offset increases to the IT Equipment Replacement, Upgrade Work Station Operating Systems, and Customer Relationship Management System projects. This project is sufficiently funded to meet project’s core needs through FY 2020.

**PROJECT DESCRIPTION & JUSTIFICATION**

This project supports employee teleworking initiatives for City staff. Funding is provided to allow secure remote access for employees who telework and employees who work at remote locations. Funds programmed in the out years of this plan will be used to procure new licensing, assess applications compatibility, and procure related hardware devices in order to sustain the remote access infrastructure. In recent fiscal years, various improvements have been made including software upgrades and equipment replacement to enhance the remote worker experience as well as improve security.

**EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION**

N/A

**ADDITIONAL OPERATING IMPACTS**

No additional operating budget impacts identified at this time.
UPGRADE WORK STATION OPERATING SYSTEMS

DOCUMENT SUBSECTION: Network Services
MANAGING DEPARTMENT: Information Technology Services Department

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government

PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: Varies

CHANGES FROM PRIOR YEAR CIP

Planned FY 2020 funding increased by $100,000.

PROJECT DESCRIPTION & JUSTIFICATION

This project provides funds to upgrade the operating system on City computer workstations to an appropriate version, as well as to fund required improvements to computer laptops and desktops, peripherals, or other related hardware components as necessary. This project also provides funds for the labor costs of installing the new operating systems and related software components. Additionally, this funding is used to test the viability of newer operating systems, mobile devices (e.g. tablets) and laptop technologies with current City applications and hardware. Testing workstations prior to enterprise implementation is necessary to help ensure efficient roll-out of new technology and minimizes disruptions and application or hardware compatibility issues.

Windows 7 is scheduled to reach end-of-life by January 2020. Project funding will be used to expedite computer and peripheral replacement to meet this deadline, address any challenges, and improve the overall security posture.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

No additional operating budget impacts identified at this time.
**Voice Over Internet Protocol (VoIP)**

**Expenditure Budget**

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**Financing Plan**

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**Financing Plan Total**

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**Additional Operating Impact**

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**Changes from Prior Year CIP**

Planned FY 2020 funding was reduced by $50,000 to offset increases to the IT Equipment Replacement, Upgrade Work Station Operating Systems, and Customer Relationship Management System projects. This project is sufficiently funded to meet project’s core needs through FY 2020.

**Project Description & Justification**

This project provides funds for the continuous improvements to Voice over Internet Protocol (VoIP), the City’s enterprise telephony systems and services. Project funding is used for the City’s telecommunications infrastructure, including software, servers, switches, and handsets. Routine hardware replacement and software upgrades need to be performed to maintain a viable and reliable VoIP infrastructure. ITS has been refining departmental VoIP configurations by deploying new features including voicemail to email and call center reporting enhancements. This enables the City to leverage the next generation capabilities and features to integrate with other City systems and applications.

**External or Internal Adopted Plan or Recommendation**

N/A

**Additional Operating Impacts**

No additional operating budget impacts identified at this time.
ANIMAL SHELTER SERVER REPLACEMENT

PROJECT LOCATION: Animal Shelter : 4101 Eisenhower Ave, Alexandria, VA 22304

MANAGING DEPARTMENT: Department of General Services

REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Theme 4: Safe & Resilient Community

ESTIMATE USEFUL LIFE: 0 - 5 Years

PROJECT DESCRIPTION & JUSTIFICATION

This project replaced end-of-life software and hardware at the Animal Shelter, and updated the operating system to a more recent version. The current servers were at the end of their support life cycle and replacement of end-of-life server software and hardware at the Animal Shelter has been successfully completed.

This replacement project included providing new virtual servers, upgraded databases, and an expansion of wireless services. Staff are now able to perform their work by gaining access to real-time information while in public areas and designated areas around the shelter. Staff are currently evaluating further upgrades to the shelter’s software and hardware environment that are now possible due to the server upgrades.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

No changes from previous CIP.

ADDITIONAL OPERATING IMPACTS

No additional operating budget impacts identified at this time.
APPLICATION PORTFOLIO MANAGEMENT

DOCUMENT SUBSECTION: Other System Development Projects
MANAGING DEPARTMENT: Information Technology Services Department
PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: 6 - 10 Years

APPLICATION PORTFOLIO MANAGEMENT

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FINANCING PLAN

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APPLICATION PORTFOLIO MANAGEMENT

Changes from Prior Year CIP

Planned FY 2020 funding was reduced by $50,000 to offset increases to the IT Equipment Replacement, Upgrade Work Station Operating Systems, and Customer Relationship Management System projects. This project is sufficiently funded to meet project’s core needs through FY 2020.

PROJECT DESCRIPTION & JUSTIFICATION

Application Portfolio Management (APM) provides an enterprise portfolio of application assets. APM is a framework for managing enterprise IT software applications, software based services, software lifecycle, and provides a comprehensive inventory of the City’s software applications and metrics to illustrate the business benefits of each application.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.
**Enterprise Maintenance Mgmt System**

**Document Subsection:** Other System Development Projects  
**Managing Department:** Department of Transportation and Environmental Services  
**Primary Strategic Theme:** Theme 3: Well-Managed Government

**Project Location:** Citywide  
**Reporting Area:** Citywide  
**Project Category:** IT Plan  
**Estimate Useful Life:** 6 - 10 Years

**Expenditure Budget**

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**Changes from Prior Year CIP**
No changes from previous CIP.

**Project Description & Justification**

This project provides for the expansion of the City's enterprise maintenance management system (EMMS) to add additional departments throughout the City. This system is a service request/work order management system used by departments in the day-to-day activities associated with maintaining assets and infrastructure. Improvements to this system will provide full lifecycle management of City-owned assets. The EMMS integrates with the City's GIS system, serving as an asset inventory with location details and it is the foundational system behind the City's current service request system, Call.Click.Connect.

Approved funding in prior years was used to begin a multi-year initiative to implement mobile workforce initiatives in the EMMS. These improvements will allow the City to provide mobile access to business applications by City employees in the field, and provide greater efficiencies in the tracking of labor, materials, equipment, scheduling, and contracting costs for asset maintenance.

**External or Internal Adopted Plan or Recommendation**

N/A

**Additional Operating Impacts**
No additional operating budget impacts identified at this time.
FOIA SYSTEM REPLACEMENT

DOCUMENT SUBSECTION: Other System Development Projects
MANAGING DEPARTMENT: Office of the City Attorney
PRIMARY STRATEGIC THEME: Theme 4: Safe & Resilient Community
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: 0 - 5 Years

PROJECT DESCRIPTION & JUSTIFICATION

The City Attorney's Office receives and processes Freedom of Information Act (FOIA) records requests made to the City. Under the Virginia Freedom of Information Act, the City has five working days to provide responses to requestors. In order to appropriately handle records requests, the office uses a system that tracks requests and communicates with staff when requests have been assigned to their departments. The system is used by the City Attorney's Office and designated department contacts to track the status of the requests, and any responses made to a requestors.

FY 2020 funds will be used to identify and implement either an upgrade of the existing FOIA Tracking System or a replacement system that will meet the business needs of the City Attorney's Office and its customers. A new system would help streamline the response process; thus making the process more efficient by decreasing the response time to citizens and allowing City staff to work more efficiently.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

Annual maintenance fees are estimated at 15% of the total estimated software costs. A vendor has not been selected to replace the current system thus the anticipated maintenance costs are preliminary estimates.
The Department of Community and Human Services adheres to the Health Insurance Portability and Accountability Act (HIPAA) and its established standards and safeguards that protect the confidentiality, integrity, and availability of protected electronic health information. HIPAA regulations impact all of the Department’s functions, processes and systems that store, generate, or report on health information. Prior year funding was used towards security audits, a HIPAA secured document management solution, secure efax and a HIPAA secure printing and scanning solution for the Department.

This project supports a continued self-assessment of current business functions, Health Information Technology infrastructure and use, as well as any provides funding for HIPAA-mandated regulations. Planned funding addresses required updates, data security requirements and hardware needs.
**LIBRARY PUBLIC ACCESS COMPUTERS AND PRINT MGMT SYSTEM**

**DOCUMENT SUBSECTION:** Other System Development Projects  
**MANAGING DEPARTMENT:** Libraries  
**PRIMARY STRATEGIC THEME:** Theme 7: Thriving Children & Youth  
**PROJECT LOCATION:** Citywide  
**REPORTING AREA:** Citywide  
**PROJECT CATEGORY:** IT Plan  
**ESTIMATE USEFUL LIFE:** Varies

**Library Public Access Computers and Print Mgmt System**

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No changes from previous CIP.

**PROJECT DESCRIPTION & JUSTIFICATION**

Alexandria’s libraries maintain an automated system for managing the computers made available to the public. The system manages the waiting lists for computers, monitoring time limits for computer sessions, and also manages customer printing. A new system with enhanced features that accepts credit card payments for print jobs was implemented in April 2017. The upgraded kiosk system has improved service options for Library users, including the ability to print from USB drives. In 2018, a wireless printing component was implemented, allowing users to print from their mobile devices. This updated system also accepts credit card payments using modern chip and pin compatible terminals, resulting in PCI Compliance. The system has also improved the Libraries’ accounting and reporting functions. Library users have responded positively to an updated process that offers additional features and the convenience of credit card payments. Funds are included in FY 2022 to perform a system upgrade or replacement as needed.

**EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION**

Alexandria Library Five-Year Plan

**ADDITIONAL OPERATING IMPACTS**

No additional operating budget impacts identified at this time.
**PROJECT DESCRIPTION & JUSTIFICATION**

The Alexandria Library's self-service equipment (offering options for actions such as borrowing and renewing materials and paying fines and fees) began to be upgraded in FY 2018. The equipment was replaced at the Beatley Central Library with new improved self-service equipment that includes the Payment Card Industry Data Security Standard (PCI) for credit card payments, RFID integration, and higher accuracy.

The new system allows staff to have more flexibility freeing them from clerical duties, allowing them to focus on additional responsibilities such as program planning, passport processing and outreach services. Neighboring library systems, including Arlington, Prince George's, and Baltimore Counties, also report that 80% to 90% of all circulation transactions (checkout, renewals, fine payments) take place using self-service equipment, allowing Library staff to focus on other tasks.

This project is being implemented in two-phases:

- **Phase 1** - Replace existing self-service kiosks with desktop models at the Beatley Central Library and implement RFID tagging for all Library materials. The Library began RFID tagging in FY 2018 and will conclude Phase 1 by early FY 2020.

- **Phase 2** - Replace kiosks at the Barrett, Burke, and Duncan Branch Libraries. The implementation at the Branch Libraries, commenced in FY 2019 and should conclude by early FY 2020.

**EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION**

Alexandria Library Five-Year Plan

**ADDITIONAL OPERATING IMPACTS**

No additional operating impacts identified at this time.
MIGRATION OF INTEGRATED LIBRARY SYSTEM TO SAAS PLATFORM

DOCUMENT SUBSECTION: Other System Development Projects
MANAGING DEPARTMENT: Libraries
PRIMARY STRATEGIC THEME: Theme 7: Thriving Children & Youth

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: Varies

No changes from previous CIP.

PROJECT DESCRIPTION & JUSTIFICATION

The Alexandria Library migrated from an on-premises Integrated Library Management System (ILS) to a “software-as-a-service” (SAAS)-based system. Through an annual SAAS agreement, equipment replacement, maintenance, and upgrading costs are absorbed with the Libraries’ ILS provider. All ILS software and hardware services were migrated to cloud services with the exception of various telephone notification services and 3rd party bank payment systems. By moving to a cloud-based platform, the Library realized many benefits, including:

- Continuous technical support and monitoring; seamless system upgrades with no downtime; remote repairs, replacements and maintenance;
- Secure 24/7 system access and monitoring from any computer/device with online access for/by library staff;
- Creation of more opportunities for enhancing community outreach services; and
- Improved compatibility with Library third party vendor services.

This project is nearly complete with the exception of replacing the Library's remote patron authentication (RPA) server to a cloud based model (SIP server). This server authenticates user accounts, enabling them to access their online accounts (for paying bills, placing holds, etc.) and using the Library’s digital collections (e-books, downloadable content, research portals, etc.).

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Alexandria Library Five-Year Plan

ADDITIONAL OPERATING IMPACTS

No additional operating budget impacts identified at this time.
### Office of Voter Registrations and Elections Equipment Replacement

**Document Subsection:** Other System Development Projects  
**Managing Department:** Voter Registration and Elections  
**Project Location:** Citywide  
**Reporting Area:** Citywide  
**Project Category:** IT Plan  
**Primary Strategic Theme:** Theme 3: Well-Managed Government  
**Estimate Useful Life:** 5-7 years

#### Changes from Prior Year CIP

This is a new project added to the CIP in FY 2020.

#### Project Description & Justification

The City replaced its paper poll books with electronic poll books (EPBs) in FY 2008 through a program administered by the Virginia State Board of Elections (SBE). This program enabled the City to purchase electronic poll books (laptops) and permitted the City to utilize software that was provided by the SBE at no cost. The electronic poll books were replaced in FY 2012 and FY 2013 to minimize delays for voters and provide the capacity required for a Presidential Election. The City currently has 150 electronic poll books, which have been in use since 2012.

The City must replace its current electronic poll book system to stay compliant with State Board of Elections and product lifecycle. City staff plans to conduct a discovery and analysis of EPB vendors during FY 2019. Planned FY 2020 funding will be used to replace the City’s EPBs prior to the November 2020 Presidential Election. Initiating the replacement cycle in FY 2020 will allow the Office of Voter Registration and Elections adequate time to procure a solution and then test the new poll book system before the 2020 General Election.

#### External or Internal Adopted Plan or Recommendation

N/A

#### Additional Operating Impacts

No additional operating impacts identified at this time.
OHA RECORDS MANAGEMENT SYSTEM REPLACEMENT

DOCUMENT SUBSECTION: Other System Development Projects
MANAGING DEPARTMENT: Office of Historic Alexandria
PRIMARY STRATEGIC THEME: Theme 5: Flourishing Arts, Culture & Recreation
PROJECT LOCATION: 801 South Payne Street
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: 6 - 10 Years

No changes from previous CIP.

PROJECT DESCRIPTION & JUSTIFICATION

This project funds the upgrade of the Office of Historic Alexandria's Records Management System. This software is used for tracking the large collections of City records and making them available to both City employees and the public, in accordance with all applicable state and local regulations governing the management of City records. The upgraded records management software is essential to providing business process efficiency while ensuring regulatory compliance.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Office of Historic Alexandria Departmental Five-Year Strategic Plan, FY 2012-2016, currently undergoing revision.

ADDITIONAL OPERATING IMPACTS

The additional operating impacts were based on a quote provided by the vendor. The out year operational impacts were determined by adding about a 3% increase per year for the life of the system.

<table>
<thead>
<tr>
<th>A (B + M) Total Budget &amp; Financing</th>
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<tr>
<td>Additional Operating Impact</td>
<td>46,000 46,000 46,000 46,000 46,000</td>
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</table>
PERMIT PROCESSING

PROJECT LOCATION: Citywide

MANAGING DEPARTMENT: Department of Code Administration

REPORTING AREA: Citywide

PROJECT CATEGORY: IT Plan

ESTIMATE USEFUL LIFE: 11 - 15 Years

PROJECT DESCRIPTION & JUSTIFICATION

This project funds the replacement of the City's primary building-related permit system, which supports the administration of the City's land development process and is used by multiple agencies including Code Administration, Transportation & Environmental Services, Planning & Zoning, Fire, Office of Historic Alexandria, Finance, and the Health Department. The City has begun the implementation of the new system. Permit processes include the administration of commercial and residential permits for building and trade work, fire prevention, outdoor dining, elevators, noise permits, and the residential rental inspections program. The permitting system also supports administrative and City ordinance processes such as site plans, developmental special use permits (DSUP), special use permits (SUP), board of architectural review cases (BAR), Board of Zoning Appeal cases (BZA), certificates of occupancy (CO), code modifications, vacant building registrations, unfit properties, hauling, reserved parking, and complaint processes regarding maintenance of existing structures, civil penalties, fire inspections, tenant/landlord complaints, SUP and BAR violations.

The City identified technical requirements and after completing a formal solicitation process for a suitable solution provider the contract was awarded. The legacy software will be replaced, and the new system will help provide up-to-date technology to address the City's current challenges of providing online permit processing, online payments, and online plan review. The project is currently in the implementation stage, and it is anticipated that the new system will go-live during calendar year 2020.

PROJECT DESCRIPTION & JUSTIFICATION

No changes from previous CIP.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.
PROJECT MANAGEMENT SOFTWARE

DOCUMENT SUBSECTION: Other System Development Projects
MANAGING DEPARTMENT: Information Technology Services Department
PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: 6 - 10 Years

PROJECT DESCRIPTION & JUSTIFICATION

This project provides funding for enterprise project management (PM) software to track and manage ITS capital improvement projects. The PM tool allows project management staff to track and manage deliverables; project due dates, financial management tracking, risks, and standard reporting options with Gantt chart and bar chart data views. The enterprise project management software was configured to have an interface to the City's Enterprise Resource System to view real-time financial information about the ITS capital improvement projects. It is anticipated that prior year funds from this project will be utilized to obtain professional services that will allow staff to have real-time project budgetary information as well as refinements.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION
N/A

ADDITIONAL OPERATING IMPACTS
No additional operating budget impacts identified at this time.
RECREATION DATABASE SYSTEM

PROJECT LOCATION: Citywide
MANAGING DEPARTMENT: Department of Recreation, Parks, and Cultural Activities
PRIMARY STRATEGIC THEME: Theme 5: Flourishing Arts, Culture & Recreation
ESTIMATE USEFUL LIFE: 6 - 10 Years

PROJECT DESCRIPTION & JUSTIFICATION
This system manages the day-to-day operations of the recreation centers and other ancillary programs administered by the Department of Recreation, Parks, and Cultural Activities. The Recreation Database System is a central citizen/customer database, providing financial and statistical reporting, activity registration, facility reservations, and pass management. A full version upgrade of this system is planned for FY 2020. Funding will be used to perform the upgrade of comprehensive recreation management database software. Activities that will be performed include staff training, data preparation, and professional services needed to develop new configurations and utilize new features.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION
N/A

ADDITIONAL OPERATING IMPACTS
No additional operating budget impacts identified at this time.
CUSTOMER RELATIONSHIP MANAGEMENT SYSTEM

DOCUMENT SUBSECTION: Public Access Development
MANAGING DEPARTMENT: Department of Emergency Communications
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PRIMARY STRATEGIC THEME: Theme 3: Well-Managed Government
ESTIMATE USEFUL LIFE: 6 - 10 Years

PROJECT DESCRIPTION & JUSTIFICATION

The goal of the Customer Relationship Management System (CRM) is to provide central coordination of requests for service from the public and other external stakeholders. In January 2013, the City launched the current application, branded Call.Click.Connect, which was implemented with funding from this project. The CRM included a job order tracking database system – the client software used by City staff to access the database and a portal on the City's website (alexandriava.gov/CallClickConnect) for use by external customers. City staff currently use this system to enter citizen requests made by phone, mail, or in person.

In FY 2018, the Department of Emergency Communications (DEC) created an interdepartmental team, to find a CRM system that would address the City’s desire to have a fully functional 311 system, that has representation from the City Manager's Office, the Department of Information Technology Services, the Office of Communications and Public Information, and the departments with the highest volume of customer requests received from Call.Click.Connect. The CRM system project team determined that procuring a new full-featured and highly capable CRM system is the preferred option to deliver the desired modern ‘311’ system. The team hosted on-site demonstrations and selected a vendor. Planned funding will cover the additional software and implementation services costs to refine, enhance, or modify the CRM platform. There are four initial integrations planned for this system including GIS mapping (Geographical Information System), Permitting (APEX), Enterprise Maintenance Management System, and the City's web site.

CHANGES FROM PRIOR YEAR CIP

Funding in the amount of $500,000 added in FY 2020.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.
**Electronic Government/Web Page**

**Document Subsection:** Public Access Development  
**Managing Department:** Information Technology Services Department  
**Project Location:** Citywide  
**Reporting Area:** Citywide  
**Primary Strategic Theme:** Theme 3: Well-Managed Government  
**Project Category:** IT Plan  
**Estimate Useful Life:** Varies

**Expenditure Budget**

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**Financing Plan**

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**Total Financing Plan**

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**Changes from Prior Year CIP**

No changes from previous CIP.

**Project Description & Justification**

The E-Government project includes enhancements to, and applications for, the City of Alexandria’s public website, [www.alexandriava.gov](http://www.alexandriava.gov), related sites and various technology innovation initiatives in the City to benefit both the general public and City employees. The current major initiative is the replacement of the City’s Content Management System (CMS) which runs both the City’s public facing website and its internal Intranet.

**External or Internal Adopted Plan or Recommendation**

N/A

**Additional Operating Impacts**

No additional operating budget impacts identified at this time.
AJIS ENHANCEMENTS/REPLACEMENT

DOCUMENT SUBSECTION: Public Safety Systems
PROJECT LOCATION: Judges Chamber, 4th Floor Courthouse 520 King St. Alexandria, VA 22314
MANAGING DEPARTMENT: Circuit Court
REPORTING AREA: Citywide
PRIMARY STRATEGIC THEME: Theme 4: Safe & Resilient Community
ESTIMATE USEFUL LIFE: Varies

PROJECT CATEGORY: IT Plan

Funding added in FY 2020 to conduct an analysis of replacement options for the AJIS system.

PROJECT DESCRIPTION & JUSTIFICATION

The Alexandria Justice Information System (AJIS) provides multiple City agencies and the law enforcement community with access to civil, criminal court and inmate management data, mug shots, documents, and reports. Users depend on AJIS to provide mission-critical court and jail management information. AJIS interfaces with other systems to furnish data to other local, regional, and national law enforcement agencies. The AJIS system is critically important to the entire judicial process for the City.

In FY 2019, funding was used to sustain the current system, perform limited modifications, and to rebuild the web portal for security purposes.

The AJIS system is beyond the end of its useful life and needs to be replaced. In FY 2020, staff will define system requirements, analyze available products, and then determine the additional budgetary needs in the upcoming fiscal year to replace AJIS. It is expected that once an option is chosen, then the FY 2020 CIP funding for this project will be substantially increased to a to-be-determined level.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.
COMPUTER AIDED DISPATCH (CAD) SYSTEM REPLACEMENT

DOCUMENT SUBSECTION: Public Safety Systems
MANAGING DEPARTMENT: Department of Emergency Communications
PROJECT LOCATION: Citywide
PROJECT CATEGORY: IT Plan
PRIMARY STRATEGIC THEME: Theme 4: Safe & Resilient Community
ESTIMATE USEFUL LIFE: 11 - 15 Years

PROJECT DESCRIPTION & JUSTIFICATION
This project funds ongoing improvements to the City's state-of-the-art Computer Aided Dispatch (CAD) system that meets the consolidated requirements of the Department of Emergency Communications (DEC), Alexandria Police, Alexandria Fire, and Alexandria Sheriff's Office. This system provides reliable and assured response to the region while performing mission-critical public safety functions.

In FY 2013, the City of Alexandria initiated a project for the design, implementation and support of a Computer Aided Dispatch (CAD) System for Law Enforcement and Fire/EMS with an integrated Mobile Data client (Mobile), Law Enforcement Records Management System (RMS) and Electronic Patient care reporting (ePCR) System. In January 2015, the City successfully deployed several critical components of the system that best met its functional, technical and integration requirements in a cost-effective manner. In April 2017, the Police Records Management (RMS) and Field Based Reporting (FBR) systems went live. The City continues to work with vendors to implement critical system element (for Police RMS, CAD, and Fire/EMS). In FY 2018, the CAD governance committee approved using a portion of the project funds for the Police Department's eCitation pilot. Full implementation of e-Citations is now proposed and funded in FY 2020. The Computer Aided Dispatch (CAD) project will enter the sustainment phase soon, the funds for this project will be used for required software upgrades and related hardware replacements.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION
N/A

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION
N/A

ADDITIONAL OPERATING IMPACTS
No additional operating budget impacts identified at this time.

NO CHANGES FROM PRIOR YEAR CIP
No changes from previous CIP.

PROJECT DESCRIPTION & JUSTIFICATION
This project funds ongoing improvements to the City's state-of-the-art Computer Aided Dispatch (CAD) system that meets the consolidated requirements of the Department of Emergency Communications (DEC), Alexandria Police, Alexandria Fire, and Alexandria Sheriff's Office. This system provides reliable and assured response to the region while performing mission-critical public safety functions.

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COURTROOM TRIAL PRESENTATION TECHNOLOGY

DOCUMENT SUBSECTION: Public Safety Systems

PROJECT LOCATION: Circuit Court Judges Chambers
Franklin P. Backus Courthouse
520 King Street, 4th Floor
Alexandria, VA 22314

MANAGING DEPARTMENT: Information Technology Services Department

REPORTING AREA: Old Town

PRIMARY STRATEGIC THEME: Theme 4: Safe & Resilient Community

ESTIMATE USEFUL LIFE: Varies

PROJECT CATEGORY: IT Plan

CHANGES FROM PRIOR YEAR CIP

Planned funding in FY 2020 is moved to FY 2021 to best reflect the current project plan for completing the upgrades.

PROJECT DESCRIPTION & JUSTIFICATION

For the past decade, the use of electronic presentation technology in courtrooms has become a widely accepted and successful practice throughout the judicial system, and is currently in use in Fairfax, Arlington and Prince William Counties. The Alexandria Circuit Court has three courtrooms that are used for various court proceedings including jury trials, bench trials, motions, and hearings.

This project provides funding for Courtroom Trial Presentation Technology that will provide citizens, Commonwealth Attorneys, Public Defenders, private attorneys and litigants a modern and convenient way to present evidence during court proceedings. In addition, the courtrooms are utilized by City departments and agencies such as the Court Service Unit for their court-ordered parenting classes (FOCUS); the Alexandria Bar Association for their continuing legal education seminars; and the Sheriff’s Office for their swearing-in ceremonies and occasional training sessions. The upgrades also enable video conferencing technology, which allows witnesses and inmates to testify at trial without being physically present in the courtroom.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

Maintenance costs are anticipated to increase over the system’s useful life for updates, enhancements, and/or on-going maintenance expenses increase due to inflation.
**ELECTRONIC CITATIONS IMPLEMENTATION**

**Document Subsection:** Public Safety Systems  
**Managing Department:** Alexandria Police Department  
**Project Location:** Citywide  
**Reporting Area:** Citywide  
**Project Category:** IT Plan  
**Primary Strategic Theme:** Theme 4: Safe & Resilient Community  
**Estimate Useful Life:** 3 - 4 Years

**PROJECT DESCRIPTION & JUSTIFICATION**

Although the issuance of parking tickets have long been automated, the current Police traffic citation process is largely manual, and paper based. The manual process can result in data entry errors; backlog of data input; and insufficient, untimely analytical abilities. The Alexandria Police Department is conducting a pilot program of 25 police officers for electronic citations. The pilot program involves participation from Police, Courts, and the ITS departments.

The electronic citation program will fully automate the ticketing process from the creation of the ticket to processing within the courts. Planned FY 2020 funds will be used for the implementation costs of electronic citations for an additional 225 users, including the cost of the software licenses, required mobile printers, various accessories, and 20-25 additional handheld devices for the Traffic Safety Section. The majority of the officers will use their already assigned mobile phones to issue tickets. This project’s benefits include reducing the time needed to process citations, statistical information, auto-complete information, and an automated data interface to the Police records management system. This solution will streamline the citations by moving from paper to electronic based processes.

**EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION**

Internally adopted plans include the Data Transparency and Refinement Plan and the Police Department Strategic Plan

**ADDITIONAL OPERATING IMPACTS**

The operating impacts are estimated at $140,000 annually. This amount would cover the software maintenance (estimated $55,000), mobile device management for newly purchased devices (estimated $20,000), and replacement needs/ depreciation of system hardware (handheld devices, mobile printers, charging ports, ticket stock – estimated $65,000).
EMERGENCY 911 PHONE SYSTEM UPGRADE

DOCUMENT SUBSECTION: Public Safety Systems
MANAGING DEPARTMENT: Department of Emergency Communications
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
PRIMARY STRATEGIC THEME: Theme 4: Safe & Resilient Community
ESTIMATE USEFUL LIFE: 0 - 5 Years

PROJECT DESCRIPTION & JUSTIFICATION

The E-911 Phone System is the emergency phone system for the public to request emergency services from the City. This phone system link is vital and must be redundant and available 24/7/365. Updates are required to keep the technology in working order, and to maintain consistency across the region.

This project will allow the City to transition from an analog to a digital NextGen 9-1-1 fully complaint telephone system that will enhance communications with digital devices such as smartphones (text messages, location details, photos, and videos). The NextGen 9-1-1 system will also be interconnected to other local government emergency call centers in the region, thereby enabling better and more real-time data sharing, as well as more coordinated responses to regional incidents and emergencies.

The City entered into a joint procurement solicitation administered by Arlington County for the purpose of combining requirements to increase efficiency, resiliency, and reduce administrative expenses in the acquisition of a shared 9-1-1 call handling system. The Request for Quote (RFQ) was completed and the contract will be awarded in FY 2019. The project is expected to begin implementation in late FY 2019/ early FY 2020.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION
N/A.

ADDITIONAL OPERATING IMPACTS
No additional operating budget impacts identified at this time.
EMS RECORDS MANAGEMENT SYSTEM

DOCUMENT SUBSECTION: Public Safety Systems
MANAGING DEPARTMENT: Fire Department
PRIMARY STRATEGIC THEME: Theme 4: Safe & Resilient Community
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: IT Plan
ESTIMATE USEFUL LIFE: 6 - 10 Years

PROJECT DESCRIPTION & JUSTIFICATION

The City uses the Emergency Medical Records Management System (RMS) to gather data regarding Emergency Medical Services (EMS) responses to medical emergencies. In FY 2017, the EMS was replaced to meet Virginia and federal mandates.

Funding for this project has two purposes: 1) building interfaces between the new RMS system and the other components (training database, live feed to CAD system) and 2) determining other vendors who have a more comprehensive system.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Mandated State of Virginia law changes.

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.
No changes from previous CIP.

**PROJECT DESCRIPTION & JUSTIFICATION**

This project consists of several specific goals spread over multiple fiscal years that are needed to maintain the radio system's current level of reliability, to add features, and to provide sufficient capacity for radio system users. The system is seeing capacity issues as the use by Alexandria City Public Schools (ACPS) has increased substantially. The funding will be used to replace outdated equipment, enhance encryption, network fiber upgrades, and continue to implement radio management best practices.

FY 2019 funding is being used to upgrade the core radio components and the 9-1-1 system recorder. The funds are also being used to replace the backup power supply at the Masonic Temple. Additional activity planned for FY 2019 includes the upgrade of the encryption on the Police Department & Sheriff’s Office radios. The FY 2020 funding will be used to replace the air conditioning units at the Masonic Temple and to do several system upgrades including the reporting capabilities, Fiber Network equipment, radio management system, and the radio site antennas and feedlines. The out year radio hardware replacement strategy will be defined during FY 2021.

Approximately 26% of the City's radio system capacity is used by ACPS. As project planning progresses, a project cost allocation will need to be determined for schools to appropriately reflect their use of- and contribution to- the City's radio system. Consideration of alternative technology using mobile phones rather than expensive single purpose radios is being explored.

**EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION**


**ADDITIONAL OPERATING IMPACTS**

No additional operating impacts identified at this time.