BROADBAND COMMUNICATIONS LINK

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: 4600 - 5700 Eisenhower Ave
REPORTING AREA: Eisenhower West
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Broadband Communications Link

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 2026 - FY 2035
Expenditure Budget	**1,067,969**	**1,067,969**	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
Cash Capital	49,227	49,227	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	1,000,000	1,000,000	-	-	-	-	-	-	-	-	-	-	-
TIP	18,742	18,742	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**1,067,969**	**1,067,969**	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

The Eisenhower Broadband Communications Link project designs and constructs the expansion of the Smart Mobility fiber optic communications (broadband) network onto Eisenhower Avenue, between Van Dorn Street and Clermont Avenue. This will allow the City to better synchronize traffic signals along Eisenhower Avenue, install traffic surveillance cameras, and provide the platform to install future smart technology.

With the proposed development in the Eisenhower West area, smart traffic signals will better manage the vehicles on this roadway. This project aims to mitigate the impacts of proposed development along Eisenhower Avenue by laying the groundwork with fiber optic cable and surveillance cameras to support for real time traffic monitoring and a communications network that will connect the new and existing traffic signals to provide synchronization along this corridor.

This project will build onto the infrastructure installed with the ongoing ITS Integration projects. Design was completed in 2023 and construction is anticipated to begin in 2025.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

DASH TECHNOLOGIES

DOCUMENT SUBSECTION:	Smart Mobility	PROJECT LOCATION:	Citywide
MANAGING DEPARTMENT:	Department of Transportation and Environmental Services	REPORTING AREA:	Citywide
		PROJECT CATEGORY:	3
		ESTIMATE USEFUL LIFE:	16 - 20 Years

DASH Technologies

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 2026 - FY 2035
Expenditure Budget	**4,151,028**	**1,135,886**	**1,665,142**	**150,000**	**150,000**	**150,000**	**150,000**	**150,000**	**150,000**	**150,000**	**150,000**	**150,000**	**3,015,142**
Financing Plan													
CMAQ/RSTP	1,515,142	-	1,515,142	-	-	-	-	-	-	-	-	-	1,515,142
GO Bonds	134,688	134,688	-	-	-	-	-	-	-	-	-	-	-
NVTA 30% Funds	1,545,453	45,453	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	1,500,000
NVTA 70% Funds	150,000	150,000	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	805,745	805,745	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants (Unsecured)	-	-	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**4,151,028**	**1,135,886**	**1,665,142**	**150,000**	**150,000**	**150,000**	**150,000**	**150,000**	**150,000**	**150,000**	**150,000**	**150,000**	**3,015,142**
Operating Impact	1,360,500	-	-	133,900	137,900	142,100	146,300	150,700	155,200	159,800	164,600	170,000	1,360,500

CHANGES FROM PRIOR YEAR CIP

Grant funding totaling $1 million moved forward from FY 2030 to FY 2026. Removed unsecured grant funding designations and aligned FY 2026 grant with Virginia Department of Transportation (VDOT) awards.

PROJECT DESCRIPTION & JUSTIFICATION

This project funds DASH technology initiatives which provide better operational data to both customers and planners. This project allows DASH to operate more efficiently and help to improve the overall DASH customer experience. Past initiatives that have been funded by this project include Automated Passenger Counters (APC's), real-time passenger information upgrades, upgraded Scheduling Software and Operations Management platforms. These projects have improved operational efficiencies, reduced manual processes for operations staff, provide better ridership data, and improved passenger experience.

In FY 2026, DASH is pursuing a CAD/AVL (Computer-Aided Dispatch/Automated Vehicle Locator) System Replacement project that will improve its ability to manage daily service demands, effectively deal with major service disruptions, track operating statistics, and provide better real-time information and service alerts to customers. The current CAD/AVL System was procured in 2015 and has reached the end of its useful 10-year life, per industry guidance. This project will allow DASH to explore new, state-of-the-art, cloud-based CAD/AVL platforms, which can be integrated with other existing DASH technologies.

DASH has been proactive in piloting technology through grant opportunities. NVTA 30% funding to provide the local match for these grants has been included annually for these grant opportunities.

This project is being coordinated with the City's Smart Mobility Program and other transit and street technology enhancement projects.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Smart Mobility Program, Alexandria Transit Vision Plan, Alexandria Mobility Plan

ADDITIONAL OPERATING IMPACTS

Annual fee for licensing and support of data systems implemented by this project.

INTELLIGENT TRANSPORTATION SYSTEMS (ITS) INTEGRATION

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Intelligent Transportation Systems (ITS) Integration													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 2026 - FY 2035
Expenditure Budget	**13,986,414**	**13,986,414**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Financing Plan													
Cash Capital	344,803	344,803	-	-	-	-	-	-	-	-	-	-	-
CMAQ/RSTP	-	-	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	11,269,081	11,269,081	-	-	-	-	-	-	-	-	-	-	-
TIP	2,372,530	2,372,530	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**13,986,414**	**13,986,414**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Operating Impact	360,000	-	-	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	40,000	360,000

CHANGES FROM PRIOR YEAR CIP

Prior Year funding corrected in FY 2025 to move $6.2 million in grant funds from this project into the Traffic Adaptive Signal Control project.

PROJECT DESCRIPTION & JUSTIFICATION

This project provides funding for the design and installation of upgrades to the City's Smart Mobility initiative, which keeps City streets safe and running smoothly, while also laying the groundwork for emerging technologies that will shape transportation in the future. Completion of this project will replace much of the City's 30-year old traffic signal communications and allow public safety departments to monitor real time conditions on the City's roadway network. TES Staff is working with the ITS Department to coordinate work with the Municipal Fiber Project and combine conduit resources to achieve savings.

This project has four phases that largely focus on the design and installation of the City's fiber optic communications (broadband) network, which is laying cable that allows regional transportation agencies to communicate faster and more efficiently to manage traffic and respond to emergencies. The project also includes the installation of field devices such as traffic cameras, weather stations, and pavement temperature sensors which capture data that can be used to reduce congestion and better manage the City's roadways.

The four phases are as follows:

- Phase I (Complete): Installed a broadband fiber optic communications network, 11 traffic surveillance cameras, and a traffic management center.
- Phase II (Complete): Supplemented the first phase, expanded the broadband network and installed additional traffic surveillance cameras.
- Phase III: This phase includes connecting 50 traffic signals to the fiber optic backbone and running fiber optic cable along parts of Van Dorn Street and the western end of Duke Street. The design for Phase III began in FY 2019 and was completed in FY 2023. Construction began in FY 2024 and is anticipated to be complete in FY 2025.
- Phase IV: This phase will add 10 more traffic surveillance cameras and connect 46 traffic signals to the fiber optic backbone. The design for Phase IV began in FY 2022 and construction is anticipated to begin in in FY 2025. Funding that was previously categorized as "Phase V" was included in Phase IV by the Virginia Department of Transportation (VDOT).

This project is funded through grants managed by VDOT.

VDOT Project IDs: UPCs 106563 (Ph III), 106562 (Ph IV)

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Smart Mobility Framework Document/ Alexandria Mobility Plan

ADDITIONAL OPERATING IMPACTS

Additional equipment and devices will need to be included in operating budget

PARKING TECHNOLOGIES

DOCUMENT SUBSECTION:	Smart Mobility	PROJECT LOCATION:	Citywide
MANAGING DEPARTMENT:	Department of Transportation and Environmental Services	REPORTING AREA:	Citywide
		PROJECT CATEGORY:	3
		ESTIMATE USEFUL LIFE:	6 - 10 Years

Parking Technologies

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 2026 - FY 2035
Expenditure Budget	**2,062,190**	**2,062,190**	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
State/Federal Grants	2,062,190	2,062,190	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**2,062,190**	**2,062,190**	-	-	-	-	-	-	-	-	-	-	-
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

Parking and curbside management is high priority for the City. By using parking technology, the City can more effectively manage on and off-street parking resources and help provide more information about parking options to the community and visitors. This project provides funding for an analysis of potential parking technologies for the City, development of an implementation plan, and the deployment of new parking technologies. These technologies could include real time parking occupancy systems for on-street spaces and parking garages/lots, and web-based interactive maps, dynamic signage that illustrates real-time parking availability in city-owned garages, and other parking technologies. These technologies will mostly be off-the-shelf solutions requiring minimal design and engineering.

This project was fully funded with CMAQ/RSTP funds each year from FY 2018 – 2023. In FY 2021, the City completed a framework plan for implementation of parking technologies that prioritized specific categories of technologies to purchase and implement. The plan focuses on user experience and payment technologies as well as data collection and management systems.

In FY 2023, the City implemented new technology in City garages that improves the user's experience, including additional pay on foot machines and enhanced payment options to expedite the exit process. In FY 2024, real time signage indicating space availability was added to three of the garages and expanded validation options were made available. Staff also upgraded parking meters in Old Town that had reached the end of their useful life with new meters using updated technology for payment options and enforcement.

In FY 2026, staff will be implementing two new projects with this funding. First, in coordination with Alexandria Police Department, new License Plate Readers (LPRs) will be purchased for the Parking Enforcement unit. This will improve enforcement by using technology that is shared across enforcement officers' equipment. Second, staff will be purchasing software to assist with mapping the City's curbs and associated parking restrictions, and documenting this in a standardized format known as Curb Data Specification (CDS). This data can be shared with third parties, such as rideshare companies, delivery companies, and autonomous vehicles to help facilitate more efficient and compliant use of the City's curb.

Once implemented, these technologies will support economic development by providing more efficient parking strategies for residents, employees, and visitors and will allow the City to manage parking and traffic assets more efficiently.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Alexandria Mobility Plan; T&ES Strategic Plan; Old Town Area Parking Study; Del Ray Parking Study

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

SMART MOBILITY IMPLEMENTATION

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Smart Mobility Implementation													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 2026 - FY 2035
Expenditure Budget	**6,561,869**	**1,275,000**	**4,146,869**	**1,140,000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**5,286,869**
Financing Plan													
CMAQ/RSTP	5,286,869	-	4,146,869	1,140,000	-	-	-	-	-	-	-	-	5,286,869
State/Federal Grants	1,275,000	1,275,000	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**6,561,869**	**1,275,000**	**4,146,869**	**1,140,000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**5,286,869**
Operating Impact	104,300	-	-	10,300	10,600	10,900	11,300	11,600	11,900	12,200	12,600	12,900	104,300

CHANGES FROM PRIOR YEAR CIP

A federal grant for $963,000 from the National Institute of Standards and Technology was added to this project in FY 2025 and is seen under the Prior Appropriations. FY 2026 funds increased by $169,869 and FY 2027 funds increased by $92,000 due to reprogrammed Virgina Department of Transportation (VDOT) funds.

PROJECT DESCRIPTION & JUSTIFICATION

Smart mobility helps the city better manage our transportation network through technology. The goal is to improve the user experience, safety and efficiency of streets, traffic signals, vehicles, parking systems, and other transportation infrastructure, while providing data to improve long-term decision-making about where and what changes to make. In the coming decade, converging innovations and technology are likely to play a transformative role in transportation. This Smart Mobility Implementation project will focus on tools and specifications that enable data exchange between platforms, use cases, and jurisdictions. This data sharing groundwork will activate new levers for the city to manage transportation, including regional traffic planning, connected and autonomous vehicles, and dynamic curb management.

In FY 2024, the I-95 Corridor Improvement Plan allocated program funds to the Northern Virginia District to enhance arterial operations along I-95 parallel facilities. A portion of these funds were awarded to Alexandria for installing new CCTV cameras at key intersections along Duke Street, Van Dorn Street, and Edsall Road. Additionally, Automated Traffic Signal Performance Measures technology will be deployed on Eisenhower Avenue from Stovall Street to Mill Road to optimize signal timing and manage detour traffic from the interstate during incidents. This project was completed in FY 2025.

In FY 2025, the City received a $963,000 federal grant from the National Institute of Standards and Technology to establish the Smart Mobility Lab in partnership with the Virginia Tech Transportation Institute (VTTI). This funding supports an ongoing collaboration with VTTI to install cameras and sensors that collect traffic data for the City, through a data-sharing platform. The Smart Mobility Lab will develop a digital model and dashboards, enabling the City to make informed, data-driven decisions.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Smart Mobility Framework Plan, Alexandria Mobility Plan

ADDITIONAL OPERATING IMPACTS

It is anticipated that many of these services will be cloud based and future operating costs will be in the form of subscription-based services.

SMART ROADWAY MANAGEMENT

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: WEST END
REPORTING AREA: WEST END
PROJECT CATEGORY:
ESTIMATE USEFUL LIFE:

SMART Roadway Management													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 2026 - FY 2035
Expenditure Budget	**900,000**	**-**	**900,000**	-	-	-	-	-	-	-	-	-	**900,000**
Financing Plan													
State/Federal Grants	900,000	-	900,000	-	-	-	-	-	-	-	-	-	900,000
Financing Plan Total	**900,000**	**-**	**900,000**	-	-	-	-	-	-	-	-	-	**900,000**

CHANGES FROM PRIOR YEAR CIP

New project added to FY 2026 - FY 2035 CIP.

PROJECT DESCRIPTION & JUSTIFICATION

The City aims to use cameras and sensors to improve the City's roadways maintenance. This project partners with VTTI to utilize and test "Smart Detection" technology to create real-time inventory of roadway assets and their conditions. This would provide the City real-time information allowing for more proactive and data driven decisions.

In FY 2025, the City was awarded the United States Department of Transportation's (USDOT's) Smart Grant to fund this project to move forward with the stage 1 process, which focuses on the areas of the West End and the Old Town Historic District. Stage 1 will focus on evaluating the accuracy and reliability of different equipment and methods of capturing data and the ability of aforementioned data integrating into the City's platform and operation process.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Smart Mobility Framework

ADDITIONAL OPERATING IMPACTS

No additional operating impacts.

T-INTERSECTIONS INITIATIVES

DOCUMENT SUBSECTION:	Smart Mobility	PROJECT LOCATION: CITY OF ALEXANDRIA	Citywide
MANAGING DEPARTMENT:	Department of Transportation and Environmental Services	REPORTING AREA:	Citywide
		PROJECT CATEGORY:	1
		ESTIMATE USEFUL LIFE:	5-20 Years

T-Intersections Initiatives													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 2026 - FY 2035
Expenditure Budget	**2,029,061**	**2,029,061**	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
State/Federal Grants	2,029,061	2,029,061	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**2,029,061**	**2,029,061**	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

New project added to FY 2026 - FY 2035 CIP. Funding was added in FY 2025 by the Virginia Department of Transportation's (VDOT) Highway Safety Improvement Program (HSIP) grant.

PROJECT DESCRIPTION & JUSTIFICATION

The T-Intersection Safety Enhancements project aims to improve safety at up to 80 T-intersections across the City of Alexandria by introducing a variety of advanced safety features, traffic control technologies, and operational improvements. These upgrades align with the City's commitment to Vision Zero and are designed to reduce crashes, enhance pedestrian safety, and improve overall traffic flow. Intersections with the highest crash risk will be prioritized for treatments.

The project will include:

- Signage and Turning Restrictions:
  - Installation of new, retro-reflective signage to guide drivers and reduce confusion with increased visibility.
  - Implementation of turning restrictions where needed to minimize conflict points and improve safety.
- Traffic Signal Upgrades:
  - Installation of high-visibility signal backplates to enhance signal visibility.
  - Addition of leading pedestrian intervals (LPIs) at warranted locations to give pedestrians a head start when crossing.
  - Signal timing and operational adjustments to optimize traffic flow and improve safety.
- Enhanced Detection and Monitoring:
  - Installation of advanced traffic detection devices to improve signal responsiveness and intersection safety
  - Deployment of enhanced performance measurement tools for better traffic management and predictive analytics.
- Pedestrian and Accessibility Improvements:
  - Installation of audible push buttons to improve accessibility for visually impaired pedestrians.
  - Application of high-visibility crosswalk markings to increase pedestrian visibility and safety.

VDOT Project ID: UPC 125421

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Alexandria Mobility Plan, Smart Mobility Framemwork, Vision Zero Action Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts.

TRAFFIC ADAPTIVE SIGNAL CONTROL

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Traffic Adaptive Signal Control													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 2026 - FY 2035
Expenditure Budget	**16,001,147**	**16,001,147**	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
State/Federal Grants	16,001,147	16,001,147	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**16,001,147**	**16,001,147**	-	-	-	-	-	-	-	-	-	-	-
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Prior Year funding was adjusted to align grant funding with this work. Smart Scale funding was added in a Supplemental Appropriation Ordinance and $6.2 million was broken out from the Intelligent Transportation Systems (ITS) Integration project.

PROJECT DESCRIPTION & JUSTIFICATION

This project is funded through the Virginia Department of Transportation (VDOT) Smart Scale Program. This two-phase project will install new traffic control software, hardware, and detection systems to monitor and guide traffic in real-time. This project funds the design and installation of traffic adaptive signal control systems, which allows the City's traffic signals to adjust in real-time to changing traffic, helping to eliminate delays and reduce the incentive to cut through neighborhoods. Where possible, the adaptive signal equipment will also provide data to support other smart intersection efforts like near miss detection and origin-destination analysis.

Traffic Adaptive Signal Control is a key project in the Smart Mobility program. Traffic navigation apps have rendered traditional time of day traffic signal control less effective. Navigation apps alter traffic behavior on a daily basis depending on regional traffic conditions. This project will utilize many of the features installed by previous Smart Mobility projects as well as seek to integrate with navigation apps and other data sources.

- Phase I: Phase I of this project will install a new server with a traffic signal management and adaptive system. Adaptive control will be implemented on both Van Dorn St and Duke Street. This work will involve installing vehicle detection as well as smart traffic signal controllers along the adaptive corridors. Design began in FY 2021, and construction is anticipated to begin in FY 2025.

- Phase II: This phase will expand adaptive control to other areas of the City as well as install communications infrastructure to traffic signals that are currently not served by fiber optic communications cable. As with Phase I, detection and smart traffic signal controllers will be installed along adaptive corridors. Phase II is currently planned for implementation along Route 1. Construction is expected to begin in 2026, with project completion in 2028.

VDOT Project ID: Phase I, UPC 109307, and Phase II, UPC 111657

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Smart Mobility Framework Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

TRAFFIC CONTROL UPGRADE

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 1
ESTIMATE USEFUL LIFE: Varies

Traffic Control Upgrade													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 2026 - FY 2035
Expenditure Budget	**3,864,400**	**915,800**	**-**	**215,000**	**221,400**	**228,200**	**235,100**	**242,200**	**491,700**	**500,000**	**500,000**	**315,000**	**2,948,600**
Financing Plan													
Cash Capital	3,814,400	865,800	-	215,000	221,400	228,200	235,100	242,200	491,700	500,000	500,000	315,000	2,948,600
Private Capital Contributions	50,000	50,000	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**3,864,400**	**915,800**	**-**	**215,000**	**221,400**	**228,200**	**235,100**	**242,200**	**491,700**	**500,000**	**500,000**	**315,000**	**2,948,600**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding planned for FY 2026 was reduced by $202,800 as part of CIP reductions/reprioritizations to support other critical capital needs. Sufficient funding, along with prior year balances, remains in this project to support immediate term needs.

PROJECT DESCRIPTION & JUSTIFICATION

The Traffic Control Upgrade project funds ongoing capital maintenance, upgrades, support and required hardware associated with implementation of the City's Smart Mobility initiative, to keep those assets in a good state of repair. It is also a strategic project to ensure that our assets are versatile and capable of supporting future technology deployments.

The project supports necessary technology upgrades and software/system support contracts associated with the City's traffic surveillance cameras, broadband fiber optic communications network and hardware/systems in the management center. Additionally, this project provides funding for emergency repairs and replacement in cases of equipment failure of the existing traffic control system.

In FY 2026 this project will provide the annual support contracts for the City's Uninterrupted Power Supply (UPS), and support the traffic signal control system, video management system, and a new redundant edge switch. In addition, deployment of cellular communications to out laying traffic signals where it is not cost effective to connect with fiber optic cable may be installed if funding is available.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Alexandria Mobility Plan, Smart Mobility Framework

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

TRAFFIC MANAGEMENT CENTER

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: 2900 Business Center Dr
REPORTING AREA: Citywide
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Traffic Management Center													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 2026 - FY 2035
Expenditure Budget	**1,320,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**1,200,000**
Financing Plan													
Cash Capital	1,320,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	120,000	1,200,000
Financing Plan Total	**1,320,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**120,000**	**1,200,000**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2035.

PROJECT DESCRIPTION & JUSTIFICATION

This project provides funding for the sustained operation of the City's Traffic Management Center (TMC). The TMC is used as the Departmental Operations Center (DOC) during weather and traffic events. The TMC/DOC will be critical to support signal management as the Smart Mobility program deploys more technology and links to the infrastructure installed through the Intelligent Transportation Systems (ITS) project. The TMC will also play a key role in data collection for traffic studies and traffic prediction as well as collaboration with surrounding agencies, such as VDOT, Arlington, and Washington D.C. As Alexandria adapts to new and unexpected forms of travel on city roads, the TMC will enable staff to leverage data to increase safety, accessibility, and efficiency.

This project funds the modernization and expansion of Alexandria's TMC, originally established in 2009. Building upon previous Intelligent Transportation Systems (ITS) integration phases, which included a video wall displaying 27 CCTV cameras via fiber and legacy copper communications, this project will significantly enhance the TMC's capabilities. Future ITS phases will expand communication infrastructure, add cameras, and upgrade video wall displays.

The modernized TMC will evolve into a collaborative fusion, control, and communication center, serving as a hub for real-time and historical data from various sources, including traffic and pedestrian signals, weather stations, traffic surveillance cameras, and other intelligent sensors. This enhanced TMC will improve incident response, facilitate information sharing with stakeholders, and support future technologies such as connected and autonomous vehicle data integration and advanced traffic management systems.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Smart Mobility Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

TRANSIT SIGNAL PRIORITY

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Transit Signal Priority

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 2026 - FY 2035
Expenditure Budget	**3,365,491**	**3,365,491**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Financing Plan													
NVTA 30% Funds	60,000	60,000	-	-	-	-	-	-	-	-	-	-	-
NVTA 70% Funds	1,195,491	1,195,491	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	2,110,000	2,110,000	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants (Smartscale)	-	-	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	**3,365,491**	**3,365,491**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Operating Impact	162,000	-	-	14,000	15,000	16,000	17,000	18,000	19,000	20,000	21,000	22,000	162,000

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

This project will install Transit Signal Priority (TSP) on priority transit corridors throughout the City. TSP allows buses to request priority at intersections, thereby reducing wait time for passengers. This also allows transit vehicles to bypass congestion and offer more reliable services, making transit faster, easier and more appealing as a travel option. An additional benefit of installing TSP infrastructure is that emergency vehicles can utilize this equipment to request preemption at intersections. Technology is being installed in emergency vehicles to allow them to respond to emergencies with less delays by utilizing the installed TSP.

The existing DASH bus fleet has been retrofitted with TSP equipment as the City continues to upgrade traffic signals with TSP on corridors throughout the City, and all new buses are equipped with TSP technology.

TSP has been installed at 52 traffic signals within the City. These signals are on major transit corridors including Seminary Road, King Street, Duke Street, Van Dorn Street and Beauregard Street. The City is coordinating TSP implementation with WMATA and DASH and considering future technology to further enhance performance of the transit system.

In future phases of this project, which are funded through the Virginia Department of Transportation (VDOT) Smart Scale Program, TSP will also be installed along the high-capacity transit corridors when those projects are constructed. Future funding is anticipated to be requested to install additional TSP equipment at intersections in key transit corridors across the City. This funding also supports installing retrofitted TSP equipment on any remaining DASH buses that are not outfitted with TSP technology.

VDOT Project ID: UPC 115546

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Smart Mobility Framework Plan, Alexandria Transit Vision Plan

ADDITIONAL OPERATING IMPACTS

Operating costs include annual support fees that must be paid to the vendor for ongoing maintenance/support/licensing for TSP software/hardware on buses and intersections

TRANSPORTATION TECHNOLOGIES

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services
PROJECT LOCATION: Citywide
REPORTING AREA: Citywide
PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Transportation Technologies

	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	FY 2034	FY 2035	Total FY 2026 - FY 2035
Expenditure Budget	**5,171,212**	**2,167,112**	**-**	**298,500**	**309,500**	**316,800**	**326,300**	**336,100**	**336,100**	**350,000**	**360,000**	**370,800**	**3,004,100**
Financing Plan													
Cash Capital	-	-	-	-	-	-	-	-	-	-	-	-	-
GO Bonds	115,000	115,000	-	-	-	-	-	-	-	-	-	-	-
TIP	5,056,212	2,052,112	-	298,500	309,500	316,800	326,300	336,100	336,100	350,000	360,000	370,800	3,004,100
Financing Plan Total	**5,171,212**	**2,167,112**	**-**	**298,500**	**309,500**	**316,800**	**326,300**	**336,100**	**336,100**	**350,000**	**360,000**	**370,800**	**3,004,100**
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2035.

PROJECT DESCRIPTION & JUSTIFICATION

This project funds the deployment of small-scale transportation technology projects to improve efficiency of the transportation infrastructure including parking technology, traffic signals and signs. This technology will improve the reliability and integrity of future transportation studies and informed decision making. These technologies will also contribute to the engineering improvements being implemented as part of the City's Vision Zero and Complete Streets Programs as well as parking technologies to better manage on-street and garage parking.

Funding has previously been used to deploy pavement sensors, parking garage technology, assess vehicle electrification needs and support data collection efforts to better analyze traffic trends and enable real time decision making. Funds were also used to pilot equipment to improve travel efficiency and safety. This equipment includes signal detection technology to evaluate various systems, wireless communication for signals without communication to the Traffic Management Center, and data collection equipment that provides volume and user information.

Additionally, the City partnered with Virginia Tech Transportation Institute (VTTI) to deploy Smart Intersection technologies to aid in understanding the contributing factors of safety issues for Vulnerable Road Users (VRU's) by installing devices at the E. Glebe Road and Potomac Avenue intersection. These devices collect data regarding driver behavior, VRU behavior, risk assessment, travel data and trends. The result of this pilot would be the basis for potential devices used in the City and VTTI partnered Smart Mobility Lab.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.