

## 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 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	Total FY 2024 - FY 2033
<b>Expenditure Budget</b>	<b>1,067,969</b>	<b>1,067,969</b>	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
Cash Capital	49,227	49,227	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	1,000,000	1,000,000	-	-	-	-	-	-	-	-	-	-	-
TIP	18,742	18,742	-	-	-	-	-	-	-	-	-	-	-
<b>Financing Plan Total</b>	<b>1,067,969</b>	<b>1,067,969</b>	-	-	-	-	-	-	-	-	-	-	-

### 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 be needed to manage the anticipated increase in traffic volume. 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 ITS Integration project, which has already begun. Design will be completed in the spring of 2023 with construction beginning in FY 2024.

#### 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  
 MANAGING DEPARTMENT: Department of Transportation and Environmental Services

PROJECT LOCATION: Citywide  
 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 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	Total FY 2024 - FY 2033
<b>Expenditure Budget</b>	<b>3,429,045</b>	<b>550,000</b>	<b>255,745</b>	-	<b>2,623,300</b>	-	-	-	-	-	-	-	<b>2,879,045</b>
Financing Plan													
CMAQ/RSTP	605,745	350,000	255,745	-	-	-	-	-	-	-	-	-	255,745
State/Federal Grants	200,000	200,000	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants (Unsecured)	2,623,300	-	-	-	2,623,300	-	-	-	-	-	-	-	2,623,300
<b>Financing Plan Total</b>	<b>3,429,045</b>	<b>550,000</b>	<b>255,745</b>	-	<b>2,623,300</b>	-	-	-	-	-	-	-	<b>2,879,045</b>
Operating Impact	1,155,900	-	-	-	130,000	133,900	137,900	142,100	146,300	150,700	155,200	159,800	1,155,900

### CHANGES FROM PRIOR YEAR CIP

Funding schedule updated to reflect latest grant schedule for project.

### PROJECT DESCRIPTION & JUSTIFICATION

This project will fund DASH technology initiatives which will provide better operational data to both customers and planners. This project will also allow DASH to operate more efficiently and help to improve the overall DASH customer experience.

Phase I of this project funded the purchase of automated passenger counters (APC's), which greatly improve the quality of ridership reporting and any service planning decisions that result from that data, particularly in light of a fare free system that no longer has the ability to use SmarTrip card or fare box data. This initiative was completed in FY 2023. In previous years, the project also included improved real-time prediction software that feeds to customers via digital bus information stop signs, DASH Tracker, WMATA's BusETA, and third-party apps.

In FY 2023, DASH began to upgrade it's scheduling software, which will make DASH's scheduling, runcutting and rostering capabilities much more efficient. It will also allow DASH to conduct scenario planning in a web-based, real-time environment that quickly shows the potential impacts of complex proposed changes. Moreover, this upgrade will provide a module for Daily Operations Management, which will allow the Operations team to manage staffing, fleet and payroll-related actions in a simpler, web-based interface for easier coordination and tracking.

For FY 2024, DASH is pursuing additional technological enhancements, including a business analytics platform that will give DASH much more insight into on-time performance, running times and bus speeds. Additional future projects may include: real-time bus capacity information for customers, onboard passenger information displays, replacement/expansion of real-time information displays at stops, smart charge management systems for new electric buses, and the replacement/upgrade of the existing DASH CAD/AVL (Computer-Aided Dispatch/Automated Vehicle Locator) system, which is expected to reach the end of its useful life in the next three years.

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 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	Total FY 2024 - FY 2033
<b>Expenditure Budget</b>	<b>20,629,640</b>	<b>17,644,240</b>	<b>600,000</b>	<b>2,385,400</b>	-	-	-	-	-	-	-	-	<b>2,985,400</b>
Financing Plan													
Cash Capital	37,629	37,629	-	-	-	-	-	-	-	-	-	-	-
CMAQ/RSTP	3,720,589	735,189	600,000	2,385,400	-	-	-	-	-	-	-	-	2,985,400
State/Federal Grants	14,498,892	14,498,892	-	-	-	-	-	-	-	-	-	-	-
TIP	2,372,530	2,372,530	-	-	-	-	-	-	-	-	-	-	-
<b>Financing Plan Total</b>	<b>20,629,640</b>	<b>17,644,240</b>	<b>600,000</b>	<b>2,385,400</b>	-	-	-	-	-	-	-	-	<b>2,985,400</b>

### CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

### 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 five 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 five 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.
- The design for Phase III began in FY 2019. 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. Funding from this grant will also provide staff support for this project and coordinate with the ITS Department regarding technology aspects of this project. Construction for this phase was advertised and the bids came in at nearly double the available funding due to current the high inflation rate. The scope was reduced and the construction phase will be re advertised in the winter of 2023. Construction is anticipated to begin in FY 2024. The design for Phase IV began in FY 2022 and construction is scheduled to begin in FY 2024. This phase will add 10 more traffic surveillance cameras and connect 46 traffic signals to the fiber optic backbone.
- The funding for Phase V becomes available in FY 2025 and design will begin at that time. Phase V will focus mainly on installing a fiber optic backbone to the Mount Vernon Avenue corridor and connecting approximately 20 traffic signals to the fiber optic backbone and installation of approximately 5 traffic surveillance cameras. This project may be constructed in coordination with the Municipal Fiber project to reduce costs and limit disturbance to the community.

### EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

### ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

## PARKING 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: 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 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	Total FY 2024 - FY 2033
<b>Expenditure Budget</b>	<b>2,062,190</b>	<b>2,062,190</b>	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
CMAQ/RSTP	873,629	873,629	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	1,188,561	1,188,561	-	-	-	-	-	-	-	-	-	-	-
<b>Financing Plan Total</b>	<b>2,062,190</b>	<b>2,062,190</b>	-	-	-	-	-	-	-	-	-	-	-

### 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 efficiently 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 is 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, including prioritizing specific categories of technologies to purchase and implement. The City will focus on user experience and payment technologies as well as data collection and management systems.

Procurement of short-term parking technology installations began in FY 2022 and will continue each year thereafter as funding is available. In FY 2023, staff implemented new technology in City garages that improves the user’s experience, including real time signage indicating space availability, online parking maps, expanded validation options, and enhanced payment options. Staff also began upgrading 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 2024, staff will continue reviewing new and available parking technologies that could be implemented to help manage on and off-street parking, including additional options to improve parking information, new enforcement technologies, and enhance data analysis tools for policy making.

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 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	Total FY 2024 - FY 2033
<b>Expenditure Budget</b>	<b>4,501,400</b>	<b>312,000</b>	-	-	<b>3,306,400</b>	<b>883,000</b>	-	-	-	-	-	-	<b>4,189,400</b>
Financing Plan													
CMAQ/RSTP	4,189,400				3,306,400	883,000							4,189,400
State/Federal Grants	312,000	312,000											
<b>Financing Plan Total</b>	<b>4,501,400</b>	<b>312,000</b>	-	-	<b>3,306,400</b>	<b>883,000</b>	-	-	-	-	-	-	<b>4,189,400</b>
Operating Impact	88,800				10,000	10,300	10,600	10,900	11,300	11,600	11,900	12,200	88,800

### CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

### PROJECT DESCRIPTION & JUSTIFICATION

Smart mobility improves transportation 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.

The Smart Mobility Implementation Project is funded by CMAQ/RSTP dollars beginning in FY 2026. These funds will be used to implement projects outlined in the Smart Mobility Framework Plan which is being updated in FY 2023 and will help to prioritize projects for implementation.

### EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

### 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.

## 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 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	Total FY 2024 - FY 2033
<b>Expenditure Budget</b>	<b>7,675,900</b>	<b>7,675,900</b>	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
State/Federal Grants	4,722,900	4,722,900	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants (Smartscale)	2,953,000	2,953,000	-	-	-	-	-	-	-	-	-	-	-
<b>Financing Plan Total</b>	<b>7,675,900</b>	<b>7,675,900</b>	-	-	-	-	-	-	-	-	-	-	-
Operating Impact	253,978		-	25,000	25,750	26,523	27,318	28,138	28,982	29,851	30,747	31,669	253,978

### CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

### PROJECT DESCRIPTION & JUSTIFICATION

This two-phase project will install new control software, hardware, and traffic sensors to monitor traffic in real-time. It also funds the design and installation of traffic adaptive signal control systems. This project will allow 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. Traffic adaptive signal control is a traffic management strategy in which traffic signals automatically adjust operations to adapt to changes in traffic. These changes are based on real-time traffic demand. This allows traffic signals to adjust to actual traffic demand and flow rather than variables that are less effective predictors, and continuously synchronize with each other to optimize traffic flow throughout a network to better manage traffic flow on the City's roadways.

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 obsolete. Navigation apps alter traffic behavior on a daily basis depending on regional traffic conditions. Traffic Adaptive Control will help take the City into the future. 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 as well as incorporate artificial intelligence.

- Phase I began in FY 2021 and will be finalized in July 2023. Construction is scheduled to start in January 2024 and project completion is anticipated to be in August 2025. 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.
- Phase II design is scheduled to begin in January 2024. Construction is expected to begin in January 2026, with project completion in August 2028. This phase will expand adaptive control to other areas of the City as well as install DSL communications to support Ethernet communications 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.

#### EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Smart Mobility Framework Plan

#### ADDITIONAL OPERATING IMPACTS

A software support/maintenance agreement will be needed to maintain this asset.

## 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 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	Total FY 2024 - FY 2033
<b>Expenditure Budget</b>	<b>3,258,200</b>	<b>713,000</b>	-	<b>202,800</b>	<b>208,800</b>	<b>215,000</b>	<b>221,400</b>	<b>228,200</b>	<b>235,100</b>	<b>242,200</b>	<b>491,700</b>	<b>500,000</b>	<b>2,545,200</b>
Financing Plan													
Cash Capital	3,005,400	663,000	-	-	208,800	215,000	221,400	228,200	235,100	242,200	491,700	500,000	2,342,400
Private Capital Contributions	50,000	50,000	-	-	-	-	-	-	-	-	-	-	-
Use of CIP Designated Fund Balance	202,800	-	-	202,800	-	-	-	-	-	-	-	-	202,800
<b>Financing Plan Total</b>	<b>3,258,200</b>	<b>713,000</b>	-	<b>202,800</b>	<b>208,800</b>	<b>215,000</b>	<b>221,400</b>	<b>228,200</b>	<b>235,100</b>	<b>242,200</b>	<b>491,700</b>	<b>500,000</b>	<b>2,545,200</b>

### CHANGES FROM PRIOR YEAR CIP

Planned funding reduced in FY 2024 due to available balances and current capacity to execute projects. Funding added for FY 2033.

### 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, and state of good repair for City assets.

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 2023 this project provided service and support for the Traffic Management Center's Uninterruptable Power Supply (UPS), provided software support for the City’s traffic signal control system, and coordinated with the Municipal Fiber project to enhance connectivity.

In FY 2024 this project will support the annual support contracts for the City’s 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

N/A

### 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 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	Total FY 2024 - FY 2033
<b>Expenditure Budget</b>	<b>3,365,491</b>	<b>1,255,491</b>	<b>374,000</b>	<b>1,736,000</b>	-	-	-	-	-	-	-	-	<b>2,110,000</b>
Financing Plan													
NVTA 30% Funds	60,000	60,000	-	-	-	-	-	-	-	-	-	-	-
NVTA 70% Funds	1,195,491	1,195,491	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	2,110,000	-	374,000	1,736,000	-	-	-	-	-	-	-	-	2,110,000
<b>Financing Plan Total</b>	<b>3,365,491</b>	<b>1,255,491</b>	<b>374,000</b>	<b>1,736,000</b>	-	-	-	-	-	-	-	-	<b>2,110,000</b>
Operating Impact	144,000	-	-	12,000	13,000	14,000	15,000	16,000	17,000	18,000	19,000	20,000	144,000

### 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 upgrades traffic signals with TSP on corridors throughout the City, and all new buses will be equipped with TSP technology.

TSP has been installed at 56 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, 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, including King Street, Duke Street, Van Dorn Street, Seminary Road and Beauregard Street. This funding also supports installing retrofitted TSP equipment on any remaining DASH buses that are not outfitted with TSP technology.

#### EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Smart Mobility Framework Plan, Alexandria Transit Vision Plan

#### ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.



## 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 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	FY 2033	Total FY 2024 - FY 2033
<b>Expenditure Budget</b>	<b>4,440,412</b>	<b>1,885,612</b>	-	<b>281,500</b>	-	<b>298,500</b>	<b>309,500</b>	<b>316,800</b>	<b>326,300</b>	<b>336,100</b>	<b>336,100</b>	<b>350,000</b>	<b>2,554,800</b>
Financing Plan													
GO Bonds	115,000	115,000	-	-	-	-	-	-	-	-	-	-	-
TIP	4,325,412	1,770,612	-	281,500	-	298,500	309,500	316,800	326,300	336,100	336,100	350,000	2,554,800
<b>Financing Plan Total</b>	<b>4,440,412</b>	<b>1,885,612</b>	-	<b>281,500</b>	-	<b>298,500</b>	<b>309,500</b>	<b>316,800</b>	<b>326,300</b>	<b>336,100</b>	<b>336,100</b>	<b>350,000</b>	<b>2,554,800</b>

### CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2033.

### 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.

Prior year funding has been used to upgrade city parking meter modems from 2G to 3G and then from 3G to 4G to ensure continued operation and reliability as cellular providers phase out 2G and 3G service. It has also been used to collect data and install signal detection, parking technologies, and the City's first pavement sensors to assist in snow removal operations.

Funding has previously been used to deploy pavement sensors, parking garage technology, assess vehicle electrification needs and support data collection efforts that will enable better analysis of traffic trends and real time decision making. Funds were also used to pilot signal detection technology to evaluate various systems. The possibility of connecting some of the City's remote traffic signals to the traffic center using wireless communications was previously evaluated and could be deployed in FY 2024. In FY 2023, additional parking technology was deployed in City owned garages. The City continues to contract with data providers that analyze traffic and parking.

#### EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

#### ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.