

Alexandria Transit Strategic Plan (FY 2025 – FY 2034) **FY 2027 Update Addendum**



*Presented to ATC Board for Consideration of Approval
June 10, 2026*



FY 2027 – FY 2034 Alexandria Transit Strategic Plan (ATSP) Update Addendum

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1.0 Executive Summary

The Alexandria Transit Strategic Plan (ATSP) for FY 2027 is intended to serve as a critical midpoint assessment between long-term policy commitments established in the Alexandria Transit Vision (ATV) and the operational and financial realities facing DASH today. While prior ATSP updates have outlined service improvements and system enhancements consistent with the ATV, year-over-year funding constraints have limited DASH's ability to implement those improvements at the pace originally envisioned. As a result, many initiatives have been deferred rather than delivered—effectively shifting implementation into future years with increasing cost, complexity, and operational risk.

With the ATV scheduled for full vision implementation by 2030, the FY 2027 ATSP represents a narrowing window to translate long-standing planning commitments into actionable outcomes. Continued deferral of service improvements, fleet, facility, and workforce investments compounds challenges over time. Requiring larger, more disruptive interventions later to achieve the same objectives. This dynamic not only increases capital and operating costs but also places additional strain on an already constrained workforce and limits DASH's flexibility to respond to emerging service needs.

This plan therefore places particular emphasis on aligning planning assumptions with realistic funding and staffing capacity. Rather than restating aspirational service expansions that remain unfunded, the FY 2027 ATSP focuses on preserving state of good repair, stabilizing operations, modernizing core systems, and sequencing improvements in a manner that is achievable and sustainable. Technology investments, fleet replacement strategies, and facility planning are evaluated not only for their long-term benefits, but for their ability to reduce future costs and implementation risk if advanced in the near term.

The ATSP is not intended to diminish the goals of the ATV, but to underscore the increasing challenges of achieving those goals through continued delay. Clear direction and sustained investment over the remaining ATV horizon will be necessary to avoid a growing disconnect between adopted policy and deliverable outcomes. This document is intended to support informed Board decision-making by clarifying trade-offs, highlighting the cost of inaction, and identifying the investments required to position DASH for long-term success beyond 2030.

2.0 Prior-Year Actions and Ongoing Initiatives

2.1 Introduction

The FY 2027 ATSP Addendum represents a minor update to the FY 2025 – FY 2034 Alexandria Transit Strategic Plan. This update documents progress since adoption of the FY25 ATSP and the FY26 Addendum as well as describes near-term planning priorities for the upcoming fiscal year. These updates will focus on planned service modifications (Section 3), capital improvement projects (Section 4), and the financial plan (Section 5).

The FY 2027 ATSP Addendum is subject to the same requirements for public outreach and approval by the ATC Board of Directors. A summary of the process and timeline is provided below.

Table 2-1 | FY 2027 ATSP Update Schedule

Timeline	ATSP Action
January	ATSP Draft Developed
February	Draft of ATSP presented the to Board
March	ATSP Outreach Begins
April	ATSP Outreach Concludes; Public Hearing Conducted; City Council Approves Final Budget
May	Board Considers ATSP Adoption
June	Board Considers ATSP Adoption (<i>if needed</i>)
July	Start of the New Fiscal Year

As with prior ATSP updates, the FY 2027 Addendum is subject to public outreach and ATC Board approval. DASH Marketing and Public Engagement staff led a comprehensive outreach program to educate community members and collect feedback on the service changes outlined in the FY 2027 ATSP Addendum. This outreach included website updates, social media engagement, online surveys, bus posters, and community meetings.

All feedback has been compiled and reviewed by staff to inform potential modifications to the final FY 2027 ATSP Addendum. A summary of all outreach and comments received can be found in Appendix A of the final ATSP Addendum for ATC Board review.

2.2 FY26 Progress Snapshot

During FY26, DASH advanced several targeted service and operational improvements as part of the annual ATSP update process, consistent with adopted City of Alexandria FY26 Operating Budget. These actions reflect incremental progress toward the long-term network vision while recognizing ongoing constraints related to resources, fleet availability, and staffing. These advances occurred alongside a set of operational and fiscal challenges that continue to shape the pace and scale of system improvements.

2.3 Context and Operational Challenges

Over the past 5 years, DASH has experienced significant growth in ridership, reaching historic levels while rebounding from the COVID-19 pandemic. While this reflects the success of recent service investments and policy alignment, it has also introduced operational challenges related to maintaining service reliability, managing overcrowding, and providing sufficient frequency within resource constraints.

At the same time, DASH has continued to maintain forward momentum on the adopted ATV Vision and service profile—positioning transit as a viable lifestyle choice as opposed to being a commuter option. This work has occurred in the context of fiscal constraints at the local level, including plateauing tax revenues, which require careful balancing of service aspirations with long-term financial sustainability.

DASH has also faced increasing costs associated with service delivery. Labor, equipment, fuel and parts costs have continued to rise, and availability challenges have affected procurement and maintenance timelines. These factors have contributed to upward pressure on the cost of service delivery and require ongoing monitoring and adaptation.

As DASH advances its transition to a zero-emission fleet, workforce development and training have emerged as key challenges. DASH must ensure staff are equipped to maintain both the conventional fleet and a rapidly expanding zero-emission fleet. These challenges are compounded by a rapidly consolidating OEM market and limited training and technical support opportunities, particularly for emerging technologies.

Finally, shifts in administrative priorities and funding opportunities at the federal, state, and local levels require the agency to remain flexible and responsive. DASH continues to refine its goals and implementation strategies to align local needs and vision with evolving state and federal funding opportunities, ensuring resources are leveraged as effectively as possible.

2.4 Labor Contract Negotiations

During FY26, DASH also completed labor contract negotiations with the operator workforce, resulting in one year extension of the existing contract, with a 5% wage adjustment. These funds were allocated in accordance with negotiated agreements, which diminished planned efforts to improve service reliability. While these negotiations were critical to maintaining workforce stability and supporting operational capacity, they further constrained the agency's ability to implement service changes beyond those funded through the adopted FY26 budget. It is important to note that this one-year contract extension is unconventional and will put the DASH back at the negotiation table to have a full renewal completed by the end of FY27. It is anticipated that the cost of labor will rise because of this subsequent renegotiation, which will need to be accounted for starting with the FY28 budget.

2.5 Service Updates and Reliability Improvements

In August 2025, DASH implemented a series of service updates informed by performance data, rider feedback, public feedback, and system needs. These enhancements were funded through the City's FY26 budget and regional grant programs and are designed to improve reliability, frequency, and ease of use for riders.

Key changes included:

System-wide schedule optimization

This improvement included timetable adjustments on several routes to improve on-time performance and create clearer weekday versus weekend schedules.

Frequency improvements

Line 32 — increased midday and evening frequency to approximately every 30 minutes between Van Dorn Metro and Landmark Transit Center.

Line 34 — expanded weekend frequency from hourly to every 30 minutes.

Line 35 — additional evening trips and peak-direction service increases supported by NVTC Commuter Choice funding.

These targeted enhancements align with short-term priorities in the Alexandria Transit Vision Plan and Alexandria Transit Strategic Plan, supporting more consistent and predictable service.

2.6 Amenity and Stop Improvements

Alongside service adjustments, DASH and the City advanced investments in bus stop amenities and system infrastructure to improve safety and accessibility:

- Piloting solar-powered lighting at select stops to enhance rider safety.
- Initiating a bus stop rebalancing study along key corridors to evaluate stop spacing, usage, and reliability opportunities.
- Advancing King Street Bus Operations Study – Phase Two, examining options like boarding platforms and curb space prioritization to improve corridor performance.

2.7 Capital and Facility Progress

DASH and the City worked jointly on major service infrastructure projects such as the Phase One opening of the West Alexandria Transit Center. This facility represents the evolution of the former Landmark Transit Center, a major transfer hub for DASH and WMATA buses on the west side of the city, and a gateway to Alexandria's West End. DASH and WMATA transitioned service into phase one of this facility in the Fall of 2025. Work is continuing to transform this facility into a fully built transfer center, with full passenger amenities such as shelters. Additionally, DASH and City staff are working to implement the region's first On-Route Electric Bus Opportunity center at this site, funded by Community Project Funding sponsored by Congressman Beyer.

2.8 Fare-Free Policy Evaluation

In parallel with service planning, DASH continued its fare-free program funded through FY26. FY27 represents the first full fiscal year where the fare free program is fully funded by the City, as required by the

TRIP grant which funded the initial 3 years of the program. The DASH fare free framework requires an annual report of the effectiveness of the program. This is provided in Appendix B, which documents the impacts on ridership, customer access, operational efficiency, and revenue tradeoffs. Importantly, the analysis also demonstrates that reintroducing fares would entail additional capital, operating, and administrative costs associated with fare collection equipment, technology systems, cash handling, and security—costs that would offset a substantial portion of anticipated fare revenue. As a result, the evaluation reinforces that fare-free service is not only a policy choice grounded in access and equity considerations, but also one with meaningful operational and financial implications. These findings are intended to inform future fare and service discussions without implying a funded continuation of the fare-free program.

2.9 Looking Forward

FY26 progress establishes a pragmatic foundation for FY27, prioritizing service reliability and operational quality within existing fiscal and workforce constraints. These efforts reflect DASH’s continued commitment to aligning short-term operational realities with the long-term strategic vision outlined in the FY25 ATSP.

DASH continues to monitor and adjust service levels in response to operational realities, funding availability, and rider demand. While previous plans initially anticipated significant increases in service, budget constraints have required a more limited approach. The charts below summarize historical service, planned levels, projected service, and the FY27 budgeted baseline for platform hours (Figure 1) and platform miles (Figure 2). This provides a clear view of the scope of operations and how planned improvements compare with current expectations and budgeted service.

Figure 1 – Platform Miles as Planned versus Reality

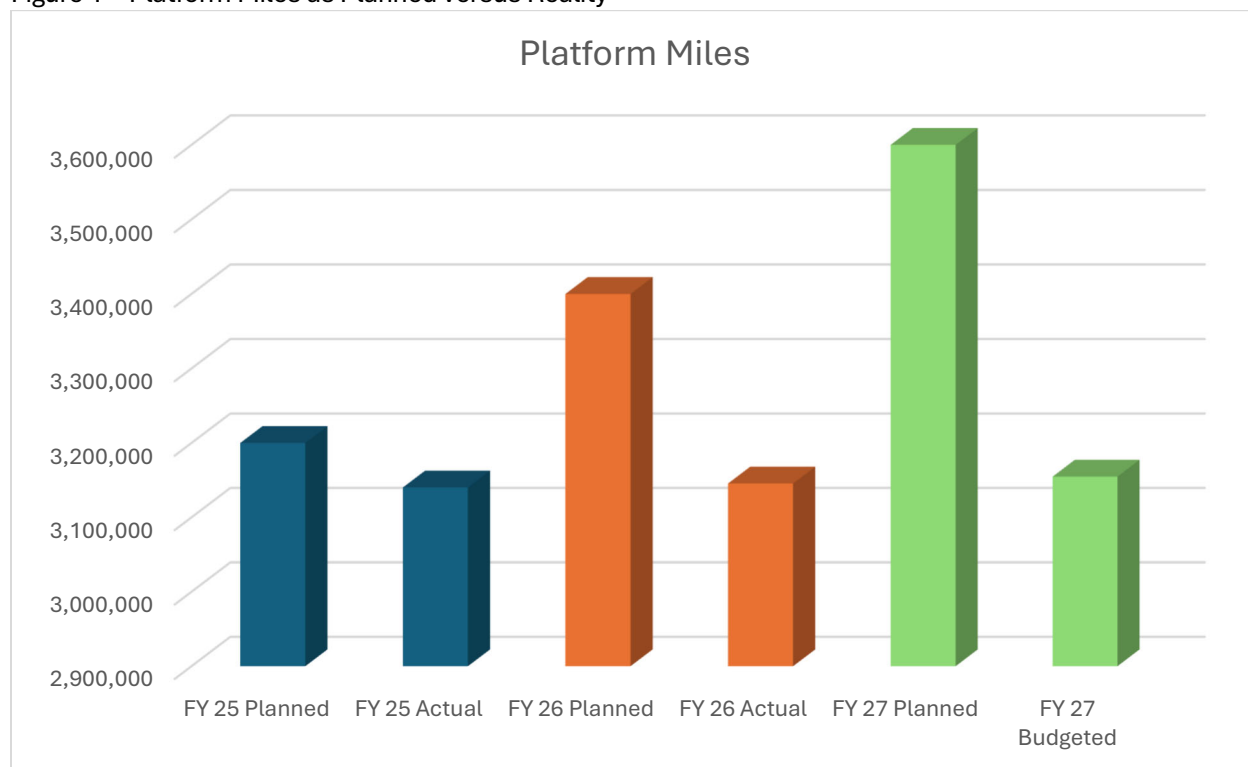
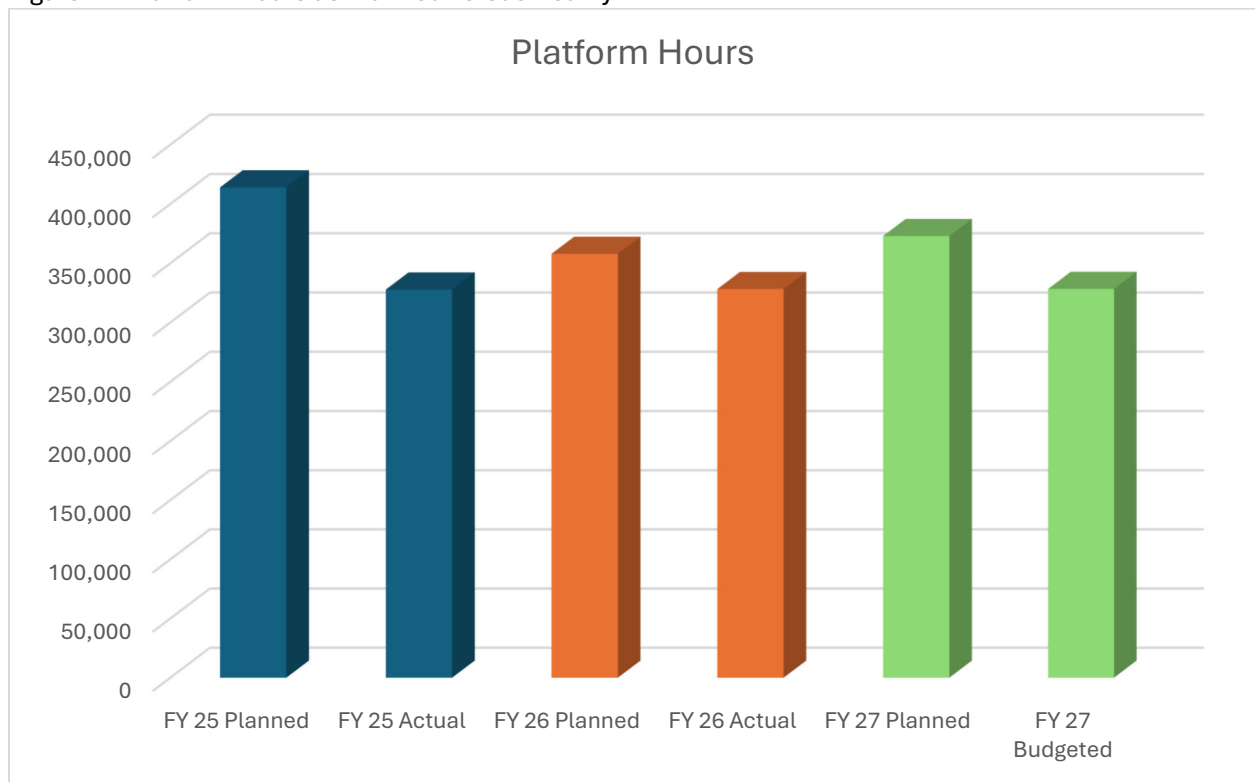


Figure 2 – Platform Hours as Planned versus Reality



These figures reflect the balance between maintaining baseline service and pursuing smaller-scale, cost-effective improvements where feasible. Planned platform hours and miles include adjustments for operational efficiency, minor service expansions, and ongoing improvements in scheduling and routing, while budgeted levels represent the baseline service that can be delivered within current fiscal constraints. Additionally, the platform miles and hours for the service improvement to the line 32 are included in the budgeted estimates for FY27.

3.0 Planned Improvements & Modifications for FY27

3.1 Overview Planning Priorities

Consistent with Board direction, DASH's near-term funding priorities remain focused on maintaining existing service levels and preserving the fare-free program. As a result, the timing and scope of service improvements described in this section are subject to availability of additional operating and capital resources. Many of the service improvements identified in the ATSP are contingent on capital investments in fleet, facilities, and technology; delays or reductions in these investments directly affect the pace at which service enhancements can be realized.

In addition to funding limitations, changes in travel behavior since the pandemic continue to affect how service needs are assessed. Many of the ridership, demand, and service impact estimates referenced in DASH planning documents—including those originating from the Alexandria Transit Vision Plan and subsequent ATSP updates—were developed during or shortly after the COVID-19 pandemic, when travel patterns differed significantly from pre-pandemic norms. Periods of sustained remote and hybrid work influenced baseline assumptions related to peak demand, trip frequency, and all-day travel behavior.

More recently, changes in workplace attendance patterns among government workers beginning in 2025 have corresponded with measurable increases in transit ridership, particularly within corridors closely connected to regional employment centers. As a result, earlier estimates may understate future demand relative to current conditions. While the FY27 ATSP continues to rely on these analyses as a consistent planning foundation, DASH recognizes the need to revisit and update key assumptions and modeling inputs as part of a future planning cycle, once travel patterns have further stabilized.

3.2 Planned Service Changes

Planned service changes for FY27 emphasize operational efficiency, capacity management, and reliability, in addition to a service improvement on the line 32.

Line 32 Service Improvement

DASH will increase Line 32 (King St. Metro – West Alexandria Transit Center) frequency to 30-minute service seven days per week using supplemental funding. This improvement brings Line 32 into alignment with DASH's minimum service standards for local routes and represents a meaningful step toward improving network consistency. Line 32 currently demonstrates solid productivity, and increasing frequency is expected to enhance its attractiveness to riders by reducing wait times and improving schedule flexibility. As a result, DASH anticipates this change will support continued ridership growth while improving overall access and reliability along the corridor.

Running Time Adjustments

DASH plans to optimize running times on Lines 30, 31, 35, and 36 to better reflect actual travel conditions, including traffic patterns, dwell times, and recovery needs. These adjustments are expected to improve on-time performance, reduce bus bunching, and enhance schedule reliability system-wide. By making better use of existing resources and avoiding unnecessary delays, running time optimization can also

reduce overtime and fuel costs, achieving measurable efficiency gains without additional operating expenditures.

Capacity Improvements Using New Articulated Buses

To address crowding along high-demand corridors, DASH has deployed new articulated buses funded by Commuter Choice on Line 35 to address overcrowding issues and to expand capacity. Additional articulated buses are being planned through various projects to further grow the articulated fleet in the upcoming years. These higher-capacity vehicles allow more passengers per trip, reducing the frequency of trips required to meet demand while maintaining comfort and safety. System-wide, this approach mitigates peak-period congestion and improves rider experience, all while maximizing the utility of the existing fleet and avoiding additional operating costs.

Work Quality Assignments for Operators

DASH is refining operator work assignments, including improved alignment of relief points, duty scheduling, and sequence optimization. By reducing inefficiencies in operator shifts, this initiative supports more reliable service across all routes and enhances employee satisfaction and retention. Better work assignments can also decrease unnecessary overtime and minimize missed trips due to scheduling conflicts, producing system-wide operational and financial benefits without requiring new funding.

Better Use of Existing Data to Shape Future Decisions

DASH will expand the use of operational, ridership, and real-time data to inform near-term planning and decision-making. By analyzing boarding patterns, crowding, on-time performance, and other key metrics, the agency can identify targeted opportunities for improvements that benefit the entire system. Proactive use of data enables more efficient resource allocation, reduces waste, and supports cost-effective decision-making—ensuring that every dollar of existing funding delivers maximum service impact.

3.3 Supporting Facilities and Passenger Assets

Bus Stop Consolidations & Improvements

In parallel with service planning, DASH continues to work closely with City of Alexandria T&ES staff to improve the passenger waiting environment at bus stops across the city, with a focus on safety, accessibility, and reliability. During FY27, these efforts include advancing bus stop amenity installations, evaluating stop spacing and performance along key corridors, and implementing targeted infrastructure improvements to support more efficient operations. Together, these initiatives are intended to enhance the customer experience while supporting systemwide service reliability.

Specific improvements underway or planned include the installation of solar-powered lighting at select bus stops to enhance rider safety, continued deployment of shelters, benches, and lean rails as funding and site conditions allow, and ongoing parking space adjustments to improve bus access. DASH and the City are also advancing corridor-level initiatives, including a bus stop rebalancing study to evaluate stop spacing, usage, and reliability opportunities, and Phase Two of the King Street Bus Operations Study, which is examining curb space prioritization and boarding platform concepts in Old Town.

Bus bulb-outs and modular curb extensions remain a key strategy in constrained environments such as Old Town, where they allow for accessible stops and improved amenities while minimizing impacts to on-street parking. Building on the bus stop consolidation implemented on King Street in February 2025, the City continues to advance additional stop improvements along the corridor as funding, procurement, and installation resources are finalized. DASH will continue coordinating with City staff to align these improvements with service needs.

In addition, the City of Alexandria is pursuing state funding through the Virginia Department of Rail and Public Transportation to support bus stop improvement projects citywide, including through DRPT capital assistance programs. These efforts will complement local investments and support the continued enhancement of DASH's passenger facilities over the FY27 planning horizon.

Transit Center Developments

DASH continues to support the City of Alexandria in advancing strategic transit center investments that strengthen network connectivity, improve passenger experience, and position the system for future service growth. The West Alexandria Transit Center is a major new transit facility delivered through a collaborative effort between the City of Alexandria, DASH, and development partners as part of the broader West End Alexandria redevelopment at the former Landmark Mall site. The six-bay facility is designed to accommodate multiple transit modes, including DASH routes, Metrobus service, and future Bus Rapid Transit (BRT) lines, providing a key transfer point that supports both current operations and the City's long-term mobility goals. Transit service operations transitioned from the former Landmark Mall Transit Center to the new facility beginning November 2, 2025, with temporary shelters in place while permanent amenities are finalized.

Building on this approach to supporting emerging activity centers in the West End, DASH is also collaborating with the City through the Alexandria West planning process on a concept for a future transit center at Southern Towers. Developed with community members and key stakeholders, this facility is intended to support future transit needs in the corridor by improving transfer opportunities, passenger access, and service reliability. The City of Alexandria has secured a signed grant agreement and completed a scope of work for the project's design phase and is preparing to initiate the design process. Advancement of the Southern Towers Transit Center will continue to be coordinated with broader corridor planning efforts and funding availability as the project moves forward.

3.4 Future Initiatives and Priorities

Advancing Priority Service Improvements (Pending Funding)

The Alexandria Transit Vision (ATV) establishes long-term multimodal policy goals through 2030, while DASH's FY25–FY34 ATSP translates those goals into an agency-specific planning and implementation framework aligned with DRPT-required update cycles. The ATSP extends beyond the 2030 ATV horizon to allow for continuity in planning, evaluation, and coordination. These additional years do not establish new policy goals but provide flexibility to reassess implementation strategies as conditions evolve. Progress toward the ATV vision has been incremental and is contingent on the availability of sustainable operating and capital funding.

To ensure continued alignment with ATV objectives, DASH anticipates coordinating with the City in advance of the FY29 minor ATSP update to potentially reevaluate transit planning assumptions and recommendations developed prior to or during the COVID-19 period. This effort will assess more recent travel patterns, funding conditions, and shared City and DASH objectives, providing an opportunity to recalibrate implementation priorities in light of post-pandemic conditions and evolving fiscal realities.

DASH will continue working to implement the recommendations of the Alexandria Transit Vision Plan, including any previously identified “Unfunded ATV Improvements” that could not be implemented in earlier years. These initiatives remain part of the agency’s long-term planning priorities as DASH works toward fully realizing the 2030 ATV Plan, originally approved by the ATC Board of Directors in 2019. Additional information on the Alexandria Transit Vision Plan, including project background, process, outcomes, and the final report, is available at the ATV project website: www.dashbus.com/transitvision.

The following table 3-1 is not intended to be an exhaustive list of all service concepts. Rather, it highlights a focused set of near-term service improvements informed by prior Board direction, followed by a secondary set of planned improvements that DASH would seek to advance once the initial items are addressed. Together, these initiatives represent the next phases of implementation stemming from the Alexandria Transit Vision and subsequent ATSP updates. Implementation will remain contingent on the availability of sustainable operating and capital funding. Longer-term service improvements anticipated in FY28 and beyond are discussed in the section that follows.

Table 3-1 | Planned ATV Improvements

	PROPOSED DASH SERVICE IMPROVEMENTS					DASH Service Planning Decision Framework (1)				
	Priority Order (1 = top priority)	Line #	Areas Served	Proposed Improvement	Net Annual Cost (Approx.)	Ridership	Equity (2)		Impact/Alternatives	Cost Efficiency
						Net Change in Annual Boardings (Projected)	Low Income Residents within 1/4 mile (City Avg = 9%)	Minority Residents within 1/4 mile (City Avg = 51%)	Description of Benefit / Cost of Not Improving	Annual Cost Per Add'l Boarding (Lower = More Cost Efficient)
Prioritized Service Improvements - Seeking Near-Term Funding	1	Line 32	Landmark Mall, Ripley Street, S. Pickett Street, Van Dorn Metro, Eisenhower Valley, Carlyle	Improve midday, evening, and weekend service on Line 32 to operate every 30 minutes, including the reinstatement of 30-minute weekday off-peak service between Landmark Transit Center and Van Dorn Metro and the extension of 30-minute service to the full route.	\$620,000	49,000	9%	54%	Shorter waits for buses along Line 32 route during middays, evenings and weekends.	\$12.65
	2	Line 31	NVCC, King Street, Old Town	Extend off-peak/weekend short trips from King Street Metro to Braddock Road Metro for 15-minute service in Old Town; extend weekday evening hours.	\$1,200,000	92,000	7%	39%	More one-seat trips from King St to Old Town; better connections to West End; more frequent OTC	\$13.04
Mid-Term Service Improvements - Next for Implementation - Not Currently Funded	Not Ranked in any Priority Order	Line 30	Braddock Metro, Old Town Circulator, Duke St, West End	Implement off-peak service levels to every 15 minutes during weekday middays, evenings, and weekends	\$2,600,000	207,000	11%	54%	Better connections between Old Town and West End for transit riders with nontraditional commutes	\$12.56
		Line 32	Landmark Mall, Ripley Street, S. Pickett Street, Van Dorn Metro, Eisenhower Valley, Carlyle	Improve weekday peak service from every 30 minutes to every 15 minutes for entire Line 32 route.	\$900,000	69,000	9%	54%	Shorter waits for buses along Line 32 route during weekday peak periods, providing improved transit options in rapidly densifying corridor	\$13.04
		Line 34	North Old Town, Potomac Yard	Extend service from Potomac Yard Center to Arlandria (3)	\$604,000	69,000	19%	85%	Extends free transit service to Arlandria community; provides one-seat rides from busiest portions of Arlandria to busiest retail corridor in Alexandria	\$8.75
		Line 103	Braddock Metro, North Ridge, W Glebe Rd, Parkfairfax	improve weekday peak headways to run every 20 minutes instead of every 30 minutes, similar to AT-3 peak service prior to the COVID pandemic.	\$500,000	41,000	9%	46%	Increases peak period capacity to meet ridership demand after return-to-office	\$12.20
		Line 104	Braddock Metro, Beverley Hills, Parkfairfax	improve weekday peak headways to run every 20 minutes instead of every 30 minutes, similar to AT-4 peak service prior to the COVID pandemic.	\$500,000	41,000	5%	27%	Increases peak period capacity to meet ridership demand after return-to-office	\$12.20

Notes:

- (1) DASH Service Planning Decision Framework includes a list of factors that inform service planning decisions, in order of their importance. The framework is based on the goals defined by the Alexandria Transit Vision Plan, and was adopted by the ATC Board in January 2021.
- (2) Equity analysis uses census block data to determine the minority and low income percentages of the groups that would be affected by proposed changes, per DASH Title VI Service Equity Analysis policy. Aggregate impact of changes should be +/- 10% of service area average.
- (3) The timing of this improvement shall be coordinated with capital improvement activities planned for the corridor to avoid disruption.

Longer-Term Initiatives Advancing the Alexandria Transit Vision Plan in FY28–FY30

The FY28–FY30 planning horizon represents the latter phase of the Alexandria Transit Vision, during which remaining elements of the Vision may be advanced as funding and implementation readiness allow. The service changes described below reflect ATV-related concepts that are expected to continue progressing during this period, recognizing that some initiatives may extend beyond FY30 depending on funding availability, project complexity, and coordination with external partners. Inclusion in this section reflects alignment with the adopted Vision rather than a commitment to implementation within a specific fiscal year. Subsequent sections describe additional service concepts that have emerged outside of the original ATV framework and are being considered through the ATSP process.

King Street Trolley – As part of longer-term service considerations, DASH is evaluating potential enhancements to the King Street Trolley, including an extension from King Street Metro to Eisenhower Metro and expanded morning service hours. Additional extensions between City Hall and the Old Town Waterfront are also under consideration in coordination with the City’s Pedestrianization Project and Waterfront development. Advancement of these concepts will depend on funding availability and further operational analysis.

Line 102 – DASH is evaluating a potential increase in weekday midday service frequency on Line 102, with a long-term goal of improving headways from 60 minutes to 30 minutes, subject to funding availability and service performance considerations.

West End Transitway – The City of Alexandria is advancing planning for the West End Transitway, a high-capacity BRT service operating along the I-395 corridor between Alexandria and the Pentagon. This project originated as part of the Alexandria Transit Vision and would replace significant portions of DASH Line 35, with corresponding adjustments to the New DASH Network along Beauregard Street and King Street. While initial operating funding has been secured through CMAQ/RSTP, additional funding and implementation coordination will be required. The timing of service initiation and associated network changes may extend beyond FY30.

Although a specific transit provider has not yet been identified, DASH is well positioned to support this service due to its existing service footprint and operating efficiency. Additional state and regional funding sources, including the I-395/95 Commuter Choice program, will continue to be pursued. Further detail will be incorporated in future updates to this plan.

Line 31 – As a longer-term network enhancement identified in the Alexandria Transit Vision, DASH is evaluating a potential extension of Line 31 from NVCC Alexandria to Skyline via Seminary Road. Implementation would be contingent on funding availability and further service planning.

A summary of the impact on platform miles and hours of the route changes identified in previous sections is included below as Table 3-2. The capital costs associated with these increases are outlined in Section 5.

**Table 3-2 | DASH Projected Changes in Platform Hours & Miles (FY 2027 – FY 2034) –
WITH UNFUNDED IMPROVEMENTS**

Platform Hours	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
Line 30			17,544					
Line 31		7,208			18,888			
Line 32	2,885		8,856					
Line 33								
Line 34			6,296					
Line 35								
Line 36A/B								
Line 102				1,764				
Line 103			3,528					
Line 104			3,528					
King St. Trolley				13,032				
Total Change	2,885	7,208	39,752	14,796	18,888	0	0	0
Platform Miles	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
Line 30			181,392					
Line 31		69,638			113,328			
Line 32	41,960		102,672					
Line 33								
Line 34			62,960					
Line 35								
Line 36A/B								
Line 102				10,584				
Line 103			49,392					
Line 104			49,392					
King St. Trolley				78,192				
Total Change	41,960	69,638	445,808	88,776	113,328	0	0	0

Post-ATV Service Strategy & Network Evolution (FY 2030 – FY 2034)

The Alexandria Transit Vision Plan (ATV) established a long-range, ridership-oriented network concept intended to provide frequent, all-day bus service across much of the city, and has served as the foundational framework for service planning over the past decade. FY 2030 marks the conclusion of the ATV Plan's original implementation horizon. As DASH enters FY 2030 and beyond, service planning will shift from plan implementation toward evaluation, refinement, and strategic adaptation. This period represents an opportunity for DASH and the City of Alexandria to collaboratively assess progress made toward the 2030 network vision and determine whether adjustments are warranted based on evolving travel patterns, funding conditions, and community needs.

The ATV Plan was developed, studied, and adopted in a substantially different operating environment than exists today. Travel behavior, workforce patterns, and ridership recovery trajectories have continued to evolve in the years following the COVID-19 pandemic. As a result, DASH anticipates that this planning horizon will include a deliberate reassessment of longer-term service concepts to ensure they remain aligned with current and projected conditions approximately 10–15 years after the plan's original development.

Duke Street Bus Rapid Transit (BRT)

The Duke Street BRT project, scheduled for completion by FY 2030, is anticipated to include dedicated transit lanes, bus prioritization, and other capital improvements that will enhance travel speed, reliability, and customer experience along the corridor between Landmark Mall and King Street Metro. DASH will coordinate with the City of Alexandria to evaluate future service concepts that leverage these infrastructure improvements, recognizing that specific operational changes cannot be finalized until the BRT is completed and funding is confirmed. This corridor represents a key planning input for post-ATV service strategy in the FY 2030–FY 2034 horizon.

4.0 Implications for Implementation

This section describes the operational and capital considerations that underpin implementation of the FY2030 ATSP service vision. It summarizes DASH's ongoing efforts to maintain a state of good repair, prepare the fleet and facilities for future service growth, and advance capital and technology investments necessary to support the service improvements outlined in Section 3.

Implementation of the ATSP remains feasible within the adopted planning framework; however, the pace and sequencing of improvements are directly influenced by the availability of sustained operating and capital funding from the City. In the absence of dedicated funding, timelines have been adjusted to reflect fiscal constraints, rising costs, and competing capital and operational priorities, while preserving the long-term service objectives established by the Board.

4.1 Transit Asset Management Plan

DASH participates annually in the DRPT-sponsored Transit Asset Management (TAM) Group Plan. As a Tier II agency, DASH confirms participation each fiscal year and works with DRPT to update required asset data and performance targets for the applicable year. The current TAM Group Plan covers FY 2026–FY

2029 and is available on the DRPT website (<https://drpt.virginia.gov/guidelines-and-requirements/transit-asset-management-plan/>).

4.2 Bus Fleet

The DASH bus fleet is currently comprised of 113 buses available for daily revenue service. Recent deliveries of expansion vehicles have temporarily increased the total fleet size, allowing buses that have reached or are approaching the end of their useful life to transition into a contingency fleet. To maintain a State of Good Repair, DASH replaces buses upon reaching the end of their 12-year useful life cycle. Ongoing fleet replacement is essential to ensuring safety, reliability, and compliance with federal and state asset management requirements. The list of Active Fixed-Route Bus Fleet for FY27 is included in Table 4-1 below.

Table 4.1 Existing DASH Fixed-Route Revenue Bus Fleet

Vehicle ID's	Year	Make	Type	Length	# of Vehicles
200-206	2011	Gillig	Hybrid	35'	7
300-301	2011	Gillig	Hybrid	40'	2
400-404	2011	Gillig (Trolley)	Hybrid	29'	5
207, 209	2012	Gillig	Hybrid	35'	2
303, 305, 307	2012	Gillig	Hybrid	40'	3
212-216	2014	Gillig	Hybrid	35'	5
308-309	2014	Gillig	Hybrid	40'	2
217-229	2015	Gillig	Hybrid	35'	13
405	2015	Gillig (Trolley)	Hybrid	35'	1
230-233	2017	Gillig	Hybrid	35'	4
310-311	2017	Gillig	Hybrid	40'	2
501-514	2018	Gillig	Low-Emission Diesel	35'	14
515-527	2019	New Flyer	Low-Emission Diesel	35'	13
528-530	2020	New Flyer	Low-Emission Diesel	35'	3
701-705	2020	New Flyer	Low-Emission Diesel	40'	5
801-803	2020	New Flyer	Electric	40'	3
804-806	2021	Proterra	Electric	40'	3
807-808	2021	Proterra	Electric	40'	2
901-904	2021	New Flyer	Electric	60'	4
706-715	2023	New Flyer	Low-Emission Diesel	40'	10
905-906	2025	New Flyer	Electric	60'	4
716-721	2026	New Flyer	Low-Emission Diesel	40'	6
TOTAL ACTIVE FLEET					113

Despite these fleet additions, vehicle availability remains closely aligned with peak service requirements, resulting in a minimal spare ratio. This condition limits operational flexibility and reduces the system's ability to absorb routine maintenance needs, unexpected vehicle failures, or short-term service disruptions. As a result, fleet availability—rather than fleet size alone—has emerged as a key factor

influencing service reliability and the occurrence of missed trips. DASH's fleet replacement plan is outlined in the table 4.2 below.

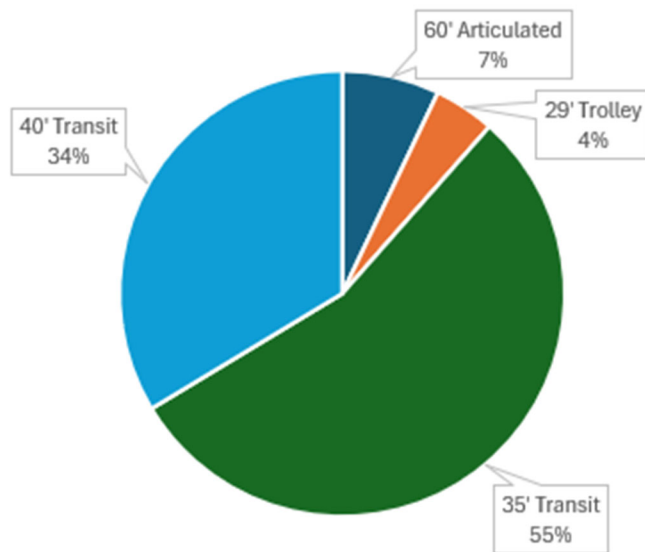
Table 4-2 | DASH Fleet Replacement Plan (FY 2026 – FY 2036)

DASH BUS REPLACEMENT & EXPANSION SCHEDULE													
Funding Year	Type	Quantity	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
Delivery Year			FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36	FY37
2011 Gilligs	Hybrid	10											
2011 Gilligs (Trolley)	Hybrid	5											
2012 Gilligs	Hybrid	10											
2014 Gilligs	Hybrid	7	7										
2015 Gilligs	Hybrid	13		13									
2015 Gillig (Trolley)	Hybrid	1		1									
2017 Gilligs	Hybrid	6			6								
2018 Gilligs	Low Emission	14				14							
2019 New Flyers	Low Emission	13					13						
2020 New Flyers	Low Emission	8						8					
2020 New Flyers	Electric	3						3					
2021 New Flyers	Electric	4							4				
2021 Proterra	Electric	7							7				
2023 New Flyer	Low Emission	10								10			
2025 New Flyer	Low Emission	6											
2025 New Flyer	Electric	2											
2026 New Flyer	Low Emission	2											
2027 Gillig	Electric	10											
2027 Gillig (Trolley)	Electric	5											
Total Retirements			7	14	0	6	14	13	11	11	0	10	0
Replacement Buses (LE			0	10	0	0	0	0	0	0	0	0	0
Replacement Buses			7	4	0	0	0	0	0	0	0	0	0
Replacement Buses			0	0	0	6	14	13	11	11	0	10	0
Total Replacement			7	14	0	6	14	13	11	11	0	10	0
Expansion Buses (LE			0	0	0	0	0	0	0	0	0	0	0
Expansion Buses (Electric)			0	0	0	0	0	0	4	4	0	0	0
Total Expansion Buses			0	0	0	0	0	0	4	4	0	0	0

Note: The dashed line represents the point at which each sub-fleet reaches the end of its useful life (12 years). Buses that are retired in yellow cells are being kept beyond this useful life.

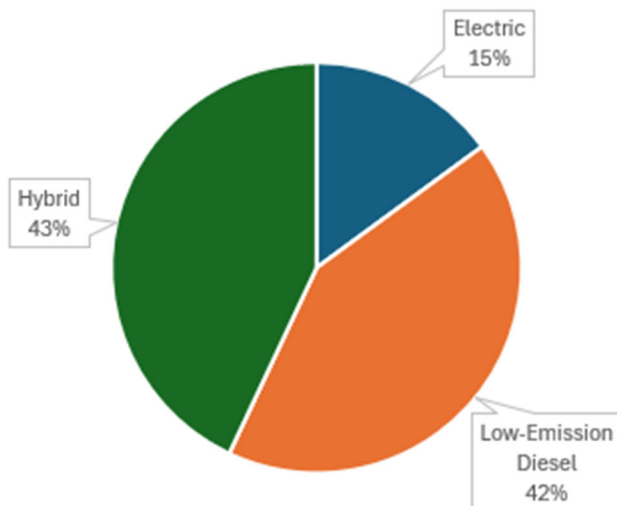
The DASH fleet is comprised primarily of 35-foot buses, which represent the majority of vehicles in service, supplemented by 40-foot buses. DASH also operates a limited number of 60-foot articulated buses and 29-foot trolley vehicles. This composition represents a transition of the standard bus size from 35 foot to 40 foot to accommodate for ridership growth. Fleet composition by vehicle length is illustrated in Figure 4-1.

Figure 4.1 Existing DASH Bus Fleet by Vehicle Size



DASH operates a diverse mix of propulsion technologies, including low-emission diesel (EPA 2010-compliant), hybrid electric, and battery electric buses, supporting the agency's sustainability and emissions-reduction goals. It is important to note that since DASH's adoption of its Zero Emissions goals, 8 of 14 bus orders placed have been fully zero emissions. The distribution of propulsion types is shown in Figure 4-3.

Figure 4.2 Existing DASH Bus Fleet by Propulsion Type



4.3 Support Vehicle Fleet

In addition to its fixed-route bus fleet, DASH also owns and maintains a fleet of 22 non-revenue support vehicles that are used for supervision of operations, operator relief movements, and administrative functions like Planning, Safety and Training. Funding for the maintenance and purchase of these vehicles is included in the annual DASH operating budget.

4.4 DASH Facility

The William B. Hurd DASH Maintenance Facility is located at 3000 Business Center Drive in Alexandria, Virginia and supports all DASH operations, maintenance, and administrative functions. The 160,000-square-foot facility, which opened in 2009, is owned by the City of Alexandria and maintained by the City's Department of General Services (DGS). The City's Department of General Services provides onsite support for routine facility maintenance, including regular inspections of building systems and infrastructure. Necessary funding for ongoing maintenance and facility upgrades is typically identified through the City's annual Capital Improvement Program (CIP) process.

DASH, in coordination with the City's Department of General Services, is advancing a major state-of-good-repair project focused on the rehabilitation and replacement of the maintenance facility's upper deck. This investment will address critical structural needs and support the long-term functionality of the facility. The project is expected to be delivered through a combination of state and local funding and represents an important step toward ensuring the facility can continue to support DASH's operational and maintenance requirements.

Building on these state-of-good-repair investments, DASH and the City are advancing a major Battery Electric Bus (BEB) Charging Yard Expansion project to support the agency's growing zero-emission fleet. A ceremonial groundbreaking for the project was held on November 3, 2025, marking the transition from planning and design into implementation. Construction is anticipated to move forward in FY 2026 and will expand charging and yard capacity to better support current and future BEB operations.

In addition, DASH and DGS prepared an application for the FY 2027 DRPT MERIT cycle to address other critical facility needs, including replacement of the bus chassis wash system and security gate improvements. Collectively, these investments are intended to ensure the DASH Maintenance Facility remains safe, reliable, and capable of supporting evolving fleet technologies and operational demands.

4.5 Capital Improvement Program (CIP)

DASH has identified its most significant capital projects and funding needs in the City of Alexandria's FY 2027 – FY 2035 Capital Improvement Program (CIP). The CIP is updated each year with major updates every other year. Its main purpose is to identify the funding and timelines for all capital projects that will be implemented by the City of Alexandria and DASH over the next decade. Additional details on the City's Capital Improvement Program can be found at <https://www.alexandriava.gov/Budget>.

A summary of the DASH projects in the draft FY 2027 – FY 2035 Capital Improvement Program (CIP) is provided in table 4-3.

Table 4-3 | FY 2027 – FY 2035 DASH Capital Improvement Program (CIP) Summary

Item	Project Description	FY 2027 CIP Funding Approved	FY 2028-2036 CIP Funding Request
1	Bus Fleet Replacement. DASH maintains a regular bus replacement program to ensure fleet state of good repair and adequate resources to deliver the services outlined in the Alexandria Transit Strategic Plan (ATSP) and Alexandria Transit Vision (ATV), replacing buses at the end of their 12-year useful life. Following the DASH Zero Emissions Transition Plan, aging buses will be replaced with zero- or low-emission vehicles as funding allows, while maintaining reliability and compliance with FTA and State standards. In FY 2025, DASH secured a \$10.9 million Low-No grant and local NVTAF funding to replace end-of-life buses with hybrid models, supporting the ongoing transition toward a zero-emission fleet.	\$9,320,000	\$130,112,000
2	DASH Fleet Expansion & Electrification. The DASH Fleet Expansion project will add 8 buses to increase service citywide, supporting the Alexandria Transit Vision Plan and the New DASH Network's frequent, all-day service in key areas like the West End, Arlandria, Potomac Yard, and Old Town. These expansion vehicles will enable DASH to implement short- and long-term recommendations, including the West End and Duke Street Transitways, while advancing the City's goal of a 100% zero-emissions fleet by FY 2037. Fourteen of the new buses are funded as battery electric, doubling the current zero-emissions fleet to 30 vehicles.	\$0	\$15,856,000
3	DASH Facility Expansion. The DASH Facility Expansion project will increase bus parking and charging capacity, adding space for 36 buses and up to 24 charge points to support new technology and the transition to a zero-emissions fleet. This expanded facility will enable DASH to implement Alexandria Mobility Plan and Transit Vision Plan recommendations, including the West End and Duke Street Transitways, and accommodate simultaneous delivery of new buses and decommissioning of old vehicles. Funded in part by a \$9 million Low-No federal grant, the project includes electric bus infrastructure, a 3 MW electrical service, 13 overhead chargers, and associated workforce development, with construction ongoing through FY 2027. The \$10 million requested is provisioned to connect the two facilities.	\$0	\$10, 000,000

4	DASH Electric Bus On-Route Charging. This project will fund the acquisition, installation, and operation of up to five “on-route” electric bus charging stations to support DASH’s transition to a 100% zero-emissions fleet. On-route chargers, installed at strategic bus terminals, allow electric buses to extend their range by charging between trips, complementing existing depot chargers and addressing the primary operational constraint of battery range. The first station will be at the West Alexandria Transit Center, with potential future sites including Potomac Yard, Eisenhower, and Mark Center Transit Centers, subject to ongoing planning and engineering.	\$0	\$4,000,000
5	DASH Technologies. This project funds DASH technology initiatives that improve operational efficiency, provide better real-time information to customers, and enhance planning capabilities. Past and ongoing efforts include Automated Passenger Counters, scheduling and operations software upgrades, and the FY 2026 CAD/AVL system replacement, which will modernize dispatch, service tracking, and customer alerts with a cloud-based platform. These initiatives, coordinated with the City’s Smart Mobility Program, reduce manual processes, improve ridership data, and support the overall customer experience.	\$150,000	\$1,350,000
TOTALS		\$10,570,000	\$216,590,000

4.6 DASH Planning, Demonstration, and Technology-Related Grant Initiatives

DASH continues to pursue planning, demonstration, and technology-focused grant opportunities to improve the customer experience, enhance safety, strengthen data and performance monitoring, and increase internal operational efficiency. These initiatives complement, but are distinct from, the agency’s capital improvement projects and are often advanced in collaboration with the City of Alexandria and regional partners.

Recent and ongoing initiatives supported through DRPT and other funding programs:

- **CAD/AVL System Replacement (Planning Grant)**

DASH is preparing to release a Request for Proposal (RFP) in FY 2026 to replace or upgrade its Computer-Aided Dispatch / Automated Vehicle Locator (CAD/AVL) system. The existing system, implemented more than a decade ago, has reached the end of its useful life. The CAD/AVL platform is critical to daily operations, supporting real-time vehicle tracking, service management, internal performance

monitoring, and customer-facing real-time information tools. This initiative will also inform future integration with onboard passenger information systems and other technology platforms.

- **Mirrorless Video Mirror System / Blind Spot Reduction (Demonstration Grant)**

Through a DRPT Demonstration Grant, DASH is advancing a mirrorless video mirror system pilot intended to reduce operator blind spots and improve pedestrian and vehicle safety. To date, 16 units have been procured and three units have been installed. Installation of the remaining units has been temporarily paused due to a technical installation issue identified by the vendor. DASH is working closely with the vendor to resolve the issue and resume installations. Once fully implemented and evaluated, the results of this demonstration will inform future vehicle specifications and safety investments.

- **Digital Mirror Technology (Demonstration Grant)**

DASH is also advancing a separate Digital Mirror System demonstration project focused on enhancing operator visibility and overall safety. This project is currently in the vendor identification and early planning phase, with initial activities underway and no challenges identified to date. The demonstration will allow DASH to evaluate operational performance, safety benefits, and maintenance considerations prior to making long-term decisions regarding potential deployment of digital mirror technology across the fleet.

- **Electric Bus Charge Management System (Demonstration Grant)**

DASH is advancing a demonstration project focused on improving monitoring and management of electric bus charging. Program development is ongoing. During implementation, a vendor exited the market, requiring DASH to reassess its procurement approach to ensure long-term system viability and compatibility. The project is expected to move forward following this adjustment and become operational once an alternative solution is finalized.

- **Bus Speed and Reliability Data Improvements**

In collaboration with the City, DASH continues to explore technology platforms that provide improved visibility into bus speed, travel time, and reliability metrics. These efforts are intended to support data-driven service planning, schedule refinement, and identification of corridors where street, stop, or signal improvements could enhance transit performance.

- **Transit Signal Prioritization (TSP)**

DASH continues to work with the City of Alexandria and regional partners, including WMATA, on Transit Signal Prioritization initiatives along key corridors. These efforts include modernization of existing infrastructure and exploration of cloud-based and interoperable TSP capabilities that support DASH, Metrobus, and other transit providers. At present, just over 60 DASH buses are equipped and configured to support TSP, and 29 signalized intersections across the City have been commissioned for TSP operation. This work remains ongoing and will inform future corridor-level strategies to improve bus speeds, reliability, and overall service performance.

- **Workforce Development Grant**

DASH is continuing implementation of a Workforce Development Grant focused on strengthening the transit workforce pipeline and expanding internal training capacity. Activities include internship placements, participation in statewide and regional professional development opportunities, development of training materials, and establishment of maintenance apprenticeships in partnership with Northern Virginia Community College (NOVA). DASH intends to pursue continuation of this program to support long-term workforce stability and succession planning.

Future Grant Opportunities and Funding Strategy

While DASH has not pursued new applications for DRPT Technical Assistance, TRIP, Smart Scale, or additional demonstration grants in FY26, the agency retains the option to pursue these programs in future cycles should funding availability, program eligibility, or strategic priorities align. DASH also intends to pursue Low or No Emission (Low-No) funding should future federal opportunities become available to support fleet electrification and charging infrastructure.

In addition, DASH is pursuing MERIT capital funding for two state-of-good-repair projects, including one facility-related project and one non-revenue vehicle project. These investments are also discussed in the facilities section of this plan. During FY27, DASH staff are assessing projects and grant opportunities for grant cycles that begin during the fiscal year. Recommendations to pursue any grants are being brought to the ATC Board of Directors for support and approval, in alignment with the organization's strategic goals.

5.0 Financial Plan

This section provides information on the DASH budget as well as revenues and funding sources for FY 2027 – FY 2036. This section includes updated financial data and therefore supersedes the information provided in the FY 2025 – FY 2034 Alexandria Transit Strategic Plan.

5.1 / Operating and Maintenance Costs and Funding Sources

In Alexandria, public transit services are provided through two distinct but complementary programs: the Alexandria Transit Company (DASH) fixed-route bus system and the City of Alexandria's Paratransit Services (DOT). DASH operates the City's fixed-route bus network, providing scheduled, high-capacity service along fixed routes. DOT Paratransit Services provide demand-responsive transportation for eligible riders who are unable to use fixed-route bus service due to disability or other qualifying conditions. The geographical service coverage and span of service provided by the DOT program must meet or eclipse that of the DASH system, for the DOT program to fulfill the ADA-mandate of providing paratransit service for the City. DOT services are also further complemented by WMATA's MetroAccess service which provides paratransit coverage for WMATA routes and service within the City, and beyond.

Although DASH and DOT Paratransit Services are coordinated to ensure a comprehensive transit network, the two services are operated independently and funded through separate sources. DASH does not operate paratransit service, nor does it manage paratransit operating or maintenance costs. Accordingly, operating costs and funding sources for DASH fixed-route service and DOT Paratransit Services are presented separately in this section to clearly reflect governance, funding responsibility, and cost accountability for each program.

Federal Funding

Neither DASH nor the Alexandria DOT program receive federal operating assistance. Discretionary Federal funding is used for DASH Capital Projects, such as the FY23 and FY25 Low No program.

State Funding

From FY22 through FY25, DASH received \$7.24 million in state funding through DRPT's Transit Ridership Incentive Program (TRIP) to support the City of Alexandria's transition to fare-free transit, requiring DASH to remain fare free for four years while providing funding for three. With the conclusion of the TRIP grant at the end of calendar year 2025, the City has assumed full financial responsibility for sustaining fare-free service. In parallel, the City of Alexandria, in partnership with academic researchers, conducted an independent evaluation of the fare-free policy examining implementation, system impacts, and lessons learned, including benefits such as increased ridership and improved access as well as emerging operational challenges. The findings of this evaluation are summarized in Appendix B and inform future fare and service policy discussions.

DASH receives additional state funding through the Northern Virginia Transportation Commission's I-395 Commuter Choice program to run enhanced service on lines 35 and 36. This funding supports regular, frequent, service on those lines with headways of at least 15 minutes or better, to reduce congestion along the i-395 corridor. From FY20 through FY25 this program provided more than \$24 million in funding to DASH, accounting for 14% of DASH's operating budgeting.

DOT Paratransit does not receive state operating assistance.

Farebox Revenue

DASH has operated a fare-free structure since September 2021 and does not collect fares.

The City's DOT Paratransit program received \$49,318 in fare revenue in FY 2025.

Note: While DASH has operated fare-free fixed-route service since 2021, paratransit is a separate, demand-responsive program for eligible riders and continues to charge fares for certain out of City trips under a City-established policy. DOT trips within the City are free, in alignment with DASH's fare free framework.

Local Revenue

Roughly 85% of DASH's FY27 Operating Budget is funded by local City Subsidy. This accounts for the continuation of the Fare Free Program as well all associated costs with delivering service. Over the period of this ATSP, the local contribution is expected to increase in line with rising operating costs.

The City's DOT Paratransit program is also funded through the General Fund, with limited fare revenue collected for trips outside the City and other applicable chargeable service zones; however, because DASH fixed-route service is currently fare-free, no comparable fare revenue is generated for in-city paratransit trips under the 50 percent fare alignment policy.

Other Revenue Sources

DASH expects to receive approximately 14% of its FY27 Operating Budget through the I-395 Commuter Choice program, which funds enhanced services on lines 35 and 36. It is important to note that this is a discretionary and competitive fund, which is awarded every 2 years and is not guaranteed. Should DASH lose this funding service, roughly 14% of DASH's service levels will need to be reduced, displaced from elsewhere in the system, or supplemented by City subsidy.

DASH collections a small portion of additional revenue from various sources. These include advertising programs, merchandise sales, and charter services.

DOT Paratransit does not receive funding from any other revenue sources.

Operating and Maintenance Cost Summary

A summary of DASH Operating and Maintenance costs and projections are provided below. All information provided below includes the service enhancements on Lines 35 and 36 that are funded by the Northern Virginia Transportation Commission's I-395 Commuter Choice program.

Alexandria DOT cost information is also provided, but the City of Alexandria does not operate or maintain the vehicles and instead pays the annual amounts listed below for a third-party (Diamond Transportation) to for these responsibilities.

Table 5-1 | Operating and Maintenance Cost History (in \$1,000s)

Operating Cost History	FY23	FY24	FY25	FY26*
DASH	\$ 35,576	\$ 37,485	\$ 40,087	\$ 43,614
Paratransit	\$ 1,905	\$ 2,003	\$ 2,175	\$ 2,215

**Projected*

Table 5-2 | Operating and Maintenance Revenue Projections (in \$1,000)

Revenue Sources	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
Local Subsidy	\$ 36,629	\$ 37,840	\$ 39,543	\$ 41,322	\$ 43,388	\$ 45,341	\$ 47,381	\$ 49,750	\$ 51,989	\$ 54,328	\$ 56,773
One-Time Subsidy Funding	\$ 240	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
State Funding (NVTC)	\$ 6,369	\$ 5,803	\$ 6,065	\$ 6,338	\$ 6,654	\$ 6,954	\$ 7,267	\$ 7,630	\$ 7,973	\$ 8,332	\$ 8,707
Charter Services	\$ 71	\$ 175	\$ 150	\$ 100	\$ 85	\$ 70	\$ 70	\$ 70	\$ 70	\$ 70	\$ 70
Advertising	\$ 190	\$ 160	\$ 165	\$ 175	\$ 175	\$ 180	\$ 180	\$ 180	\$ 180	\$ 180	\$ 180
DASH Merchandise Sales	\$ 5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other Misc	\$ 110	\$ 85	\$ 85	\$ 85	\$ 85	\$ 85	\$ 85	\$ 85	\$ 85	\$ 85	\$ 85
TOTAL DASH	\$ 43,614	\$ 44,063	\$ 46,007	\$ 48,020	\$ 50,388	\$ 52,630	\$ 54,983	\$ 57,715	\$ 60,297	\$ 62,996	\$ 65,815

Paratransit operating costs are primarily spent on the operator, Diamond Transportation, with some smaller operating costs being spent on Senior Services and VIA transportation software. Maintenance is the responsibility of Diamond Transportation.

5.2 Capital Costs and Funding Sources

The following tables outline the costs and funding sources for DASH and City capital projects that are necessary to support DASH services and the improvements identified in the previous chapter. Table 5-3 shows all costs and funding associated with DASH replacement and expansion buses as highlighted in Chapter 4. Table 5-4 shows projected operating costs by route as service improvements are scheduled over time.

Table 5-3 | Vehicle Replacement and Expansion Costs and Funding Sources (in \$1,000)

	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34	FY35	FY36
Replacement Buses	14	0	6	14	13	11	11	0	10	0
Expansion Buses	0	0	0	0	0	0	4	4	0	0
TOTAL Buses	14	0	6	14	13	11	15	4	10	0
Cost of Replacements	\$ 11,536	\$ -	\$ 9,545	\$ 23,385	\$ 22,800	\$ 20,257	\$ 21,270	\$ -	\$ 21,319	\$ -
Cost of Expansion	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 7,735	\$ 8,121	\$ -	\$ -
Total Cost (\$1,000s)	\$ 11,536	\$ -	\$ 9,545	\$ 23,385	\$ 22,800	\$ 20,257	\$ 29,005	\$ 8,121	\$ 21,319	\$ -
Funding Sources:										
Local Funds	\$ 922	\$ -	\$ 1,054	\$ 5,337	\$ 5,062	\$ -	\$ 1,509	\$ -	\$ -	\$ -
NVTA 30% Funds	\$ 8,398	\$ 200	\$ 3,796	\$ 3,963	\$ 4,134	\$ 1,610	\$ 4,491	\$ 1,972	\$ 2,000	\$ 2,190
State/Federal Grants	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Unsecured Grants		\$ 80	\$ 6,705	\$ 18,220	\$ 29,655	\$ 10,453	\$ 16,511	\$ 7,503	\$ 1,500	\$ 1,500
Total Funding	\$ 9,320	\$ 280	\$ 11,555	\$ 27,520	\$ 38,851	\$ 12,063	\$ 22,511	\$ 9,475	\$ 3,500	\$ 3,690

Table 5-4 / Net Changes in DASH Projected Operating Costs by Route (FY 2027 – FY 2034) (in thousands)

Route	FY27	FY28	FY29	FY30	FY31	FY32	FY33	FY34
Line 30	\$ -	\$ -	\$ 2,612	\$ -	\$ -	\$ -	\$ -	\$ -
Line 31	\$ -	\$ 1,027	\$ -	\$ -	\$ 3,086	\$ -	\$ -	\$ -
Line 32	\$ 619	\$ -	\$ 1,319	\$ -	\$ -	\$ -	\$ -	\$ -
Line 33	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Line 34	\$ -	\$ -	\$ 937	\$ -	\$ -	\$ -	\$ -	\$ -
Line 35	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Line 36A/B	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Line 102	\$ -	\$ -	\$ -	\$ 276	\$ -	\$ -	\$ -	\$ -
Line 103	\$ -	\$ -	\$ 525	\$ -	\$ -	\$ -	\$ -	\$ -
Line 104	\$ -	\$ -	\$ 525	\$ -	\$ -	\$ -	\$ -	\$ -
Trolley	\$ -	\$ -	\$ -	\$ 2,037	\$ -	\$ -	\$ -	\$ -
Totals	\$ 619	\$ 1,027	\$ 5,919	\$ 2,313	\$ 3,086	\$ -	\$ -	\$ -

Appendix A:

DASH Public Outreach Summary

Appendix B:

Fare Free Analysis

ATSP Public Outreach and Feedback Summary

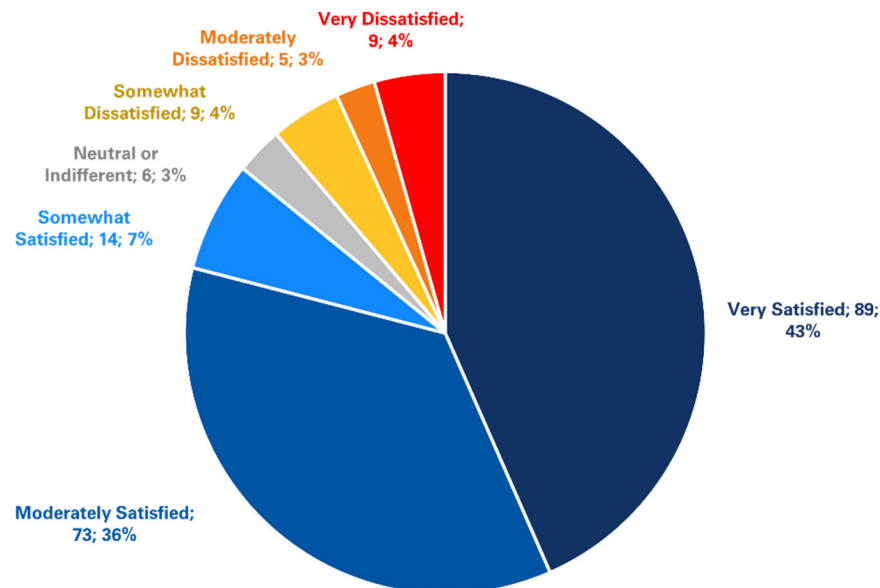
This appendix provides a detailed overview of the public outreach initiatives led by DASH staff in support of the FY 2027 – FY 2034 Alexandria Transit Strategic Plan (ATSP). These efforts were designed to engage the Alexandria community, gather meaningful feedback, and ensure inclusive participation in shaping the future of DASH service. Outreach efforts focused on reaching a broad cross-section of the community through a combination of digital engagement, in-person events, canvassing activities, and multilingual communications materials.

Survey Outreach & Results

A central component of this year’s outreach strategy was the launch of a condensed multilingual survey intended to collect feedback on DASH’s current service performance and identify opportunities for improvement. The survey included 12 standard and conditional questions designed to balance meaningful data collection with ease of participation. Most questions were optional, with only one to four required questions depending on whether respondents requested follow-up communication regarding their submission.

The survey generated 209 responses, representing a 90% increase over FY26. Respondents also submitted 98 comments, reflecting a 26% increase in unique commenters compared to the previous year. Survey accessibility and usability also improved considerably, with most respondents completing the survey with an average completion time of 4 minutes and 7 seconds, a 46% reduction year over year.

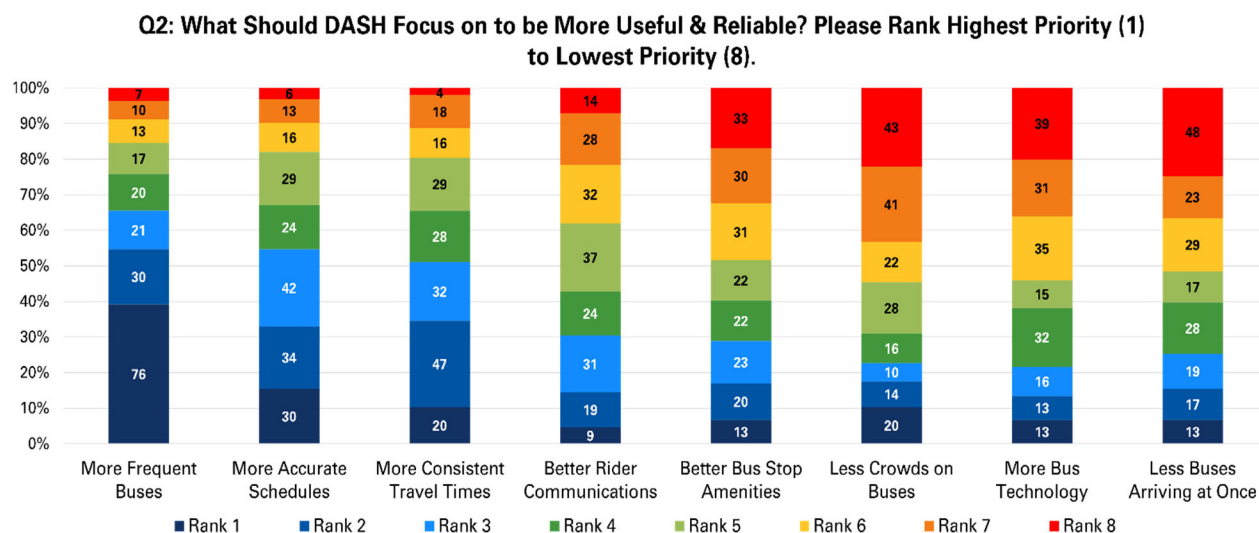
Q1: How Would You Rate DASH’s Overall Performance?



When asked to evaluate DASH’s overall performance, 86% of respondents (176) reported being “Very Satisfied,” “Moderately Satisfied,” or “Somewhat Satisfied.” In comparison, 11% of respondents (23

individuals) reported being “Very Dissatisfied,” “Moderately Dissatisfied,” or “Somewhat Dissatisfied.” Overall, survey responses indicated continued strong public support for DASH service while also highlighting areas where riders would like to see operational improvements and increased reliability.

As part of this year’s survey, respondents were also asked to rank service priorities from highest (1) to lowest (8) in response to the question: “What should DASH focus on to be more useful and reliable?” The most frequently selected top priority was “More Frequent Buses,” identified by 39% of respondents (76 individuals), exceeding the next highest-ranked priority by more than 23%. “More Accurate Schedules” ranked second, selected by just over 15% of respondents (30 individuals). These results reinforce the importance riders place on service frequency and reliability as key factors influencing their transit experience.



At the lower end of the rankings, 25% of respondents (48 individuals) identified “Less Buses Arriving at Once” as the lowest priority, while 21% (41 individuals) selected “Less Crowds on Buses” as their second-lowest priority. These findings suggest that respondents generally prioritized service availability and schedule reliability over crowding-related concerns.

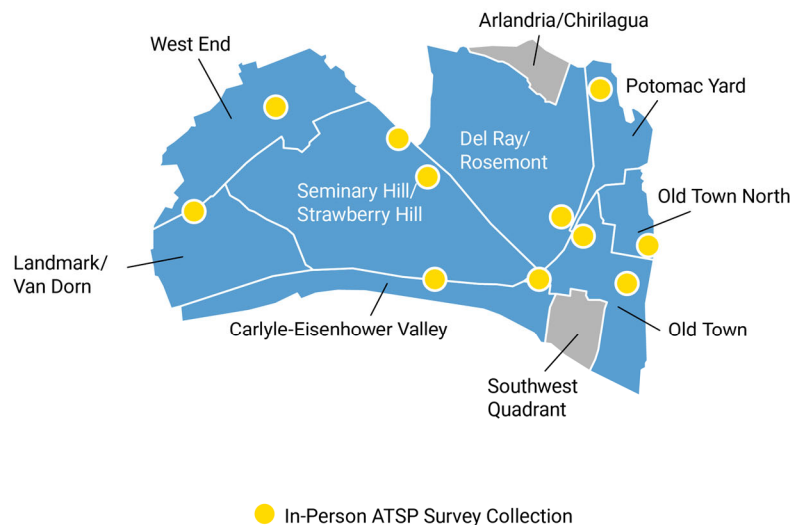
The survey was open from March 20 through April 22 and offered in five languages: Amharic, Arabic, English, Persian, and Spanish. A full version of the FY 2027 survey is included in the appendix for reference.

In-Person Engagement and Community Events

In addition to the survey effort, DASH staff conducted 12 public outreach activities, including six targeted canvassing sessions at high-traffic transit locations throughout the system. These efforts provided residents and riders with opportunities to learn about the ATSP, ask questions, share feedback on proposed service updates, and offer recommendations directly to staff.

By engaging community members where they live, work, and travel, DASH increased public awareness of the planning process while gathering meaningful, real-time feedback from a diverse range of riders and stakeholders. This in-person outreach approach helped ensure that community input played an important role in informing future service priorities and operational decision-making.

ATSP FY2027 Survey Collection Events by Neighborhood



March 24 – George Washington Middle School Engagement Fair (Del Ray/Rosemont): Engaged middle school students and city staff sharing information about DASH and the ATSP, distributing outreach materials, and gathering feedback related to youth mobility needs and transportation accessibility for students and families.

April 6 – Kids’ First Years Bus Unveiling Event (DASH HQ/Eisenhower Valley): Welcomed families and community partners to celebrate a new partnership and unveil a newly wrapped bus. Staff distributed survey materials, answered questions about DASH services and the ATSP, and encouraged community participation in the planning process.

April 7 – AM Canvassing at Braddock Road Metro (Old Town): Canvassed during the morning commute from 6:00 AM to 10:00 AM, engaging riders on Lines 30, 31, 103, and 104 and sharing ATSP information and survey materials.

April 8 – DASH Board of Directors Meeting and ATSP Public Hearing (DASH HQ/Eisenhower Valley): Presented the draft FY27 ATSP, providing an opportunity for public comment, discussion, and community feedback regarding proposed service priorities and improvements.

April 9 – PM Canvassing at Mark Center and Southern Towers (West End): Canvassed during the afternoon commute from 3:00 PM to 6:00 PM, engaging riders on Lines 35, 36A/B, and 102 and sharing ATSP information and survey materials.

April 11 – Electric Vehicle Ride and Drive Showcase Event (Seminary/Strawberry Hill): Joined city agencies at Chinquapin Park to highlight DASH’s sustainability initiatives, discuss DASH’s electric fleet rollout, connect with riders, and distribute ATSP materials.

April 11 – PM Canvassing at City Hall and Potomac Yard Shopping Center (Old Town/Potomac Yard): Canvassed during a weekend afternoon from 2:30 PM to 6:00 PM, engaging riders on Lines 33, 34, and 36A/B and sharing ATSP information and survey materials.

April 13 – Midday Canvassing at Bradlee Shopping Center (Seminary/Strawberry Hill): Canvassed during the midday lunch commute from 11:30 AM to 2:30 PM, engaging riders on Lines 31 and 36A/B and sharing ATSP information and survey materials.

April 15 – PM Canvassing at West Alexandria Transit Center (Landmark/Van Dorn): Canvassed during the afternoon commute from 3:00 PM to 6:00 PM, engaging riders on Lines 30, 32, and 35 and sharing ATSP information and survey materials.

April 18 – ALX Dog Walk (Old Town North): Participated alongside community organizations and city agencies at Oronoco Bay Park to discuss DASH's sustainability efforts, answer questions, and share ATSP materials with residents and attendees.

April 21 – AM Canvassing at King Street Metro (Old Town): Canvassed during the morning commute from 6:00 AM to 10:00 AM, engaging riders on Lines 30, 31, 32, 33, 102, and KST and sharing ATSP information and survey materials.

April 22 – Spring2Action Day at Pat Miller Neighborhood Square (Del Ray/Rosemont): Partnered with Kids' First Years and several community organizations to engage riders, residents, and young families, share ATSP information, and answer questions about DASH services and future planning efforts during a highly visible community engagement day.

Public Messaging Strategy

To maximize public awareness and participation throughout the ATSP outreach process, DASH implemented a coordinated multi-platform communications campaign designed to reach riders and residents through multiple channels. Outreach efforts included targeted social media posts on LinkedIn, BlueSky, and Instagram; four dedicated email campaigns distributed to 3,532 community members and stakeholders; updates and informational resources posted to the DASH website; and multilingual flyers distributed through community organizations and partner networks.

The communications strategy emphasized accessibility, transparency, and broad community participation. Messaging was designed to inform residents about the ATSP process, encourage survey participation, promote upcoming engagement opportunities, and ensure that community members understood how their feedback would help guide future service planning and operational priorities.

Alexandria's Journey into Fare-free Public Transit: Lessons Learned

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ABSTRACT

In 2021, the City of Alexandria, Virginia, implemented a fare-free public transit (FFPT) policy on its local bus system. Four years on, the City continues to operate its fare-free transit system, providing free mobility to its nearly 160,000 residents. This paper uses the case study of DASH, the agency operating transit in Alexandria, to examine the motivations for and challenges faced during or after adoption of the fare-free transit policy. The paper further assesses the impacts of the fare-free policy on both its riders as well as the agency. Drawing upon ridership data analysis, document analysis, and in-depth interviews with agency staff and transit advocates, the paper sheds light on the key factors that played a role in making DASH's fare-free policy a success.

Findings indicate that a diverse range of factors – including political will and commitment, funding availability, and overall timing (during the COVID era) – facilitated the successful implementation of fare-free transit in Alexandria. The interviewees revealed that the policy is associated with significant benefits, such as increased ridership, enhanced access and mobility, and reduced conflict between operators and passengers. At the same time, some new challenges have emerged, including overcrowding and reduced service reliability on busy lines, that the agency continues to address. Based on these findings, the paper concludes with a discussion on the key lessons that similar local agencies can draw and learn from Alexandria's case to adopt and implement fare-free transit in their jurisdictions.

Keywords: fare-free buses; fare-free public transportation (FFPT); zero fares; transit policy and planning; ridership demand; success factors; best practices; lessons learned

INTRODUCTION

Communities in North America and Europe have implemented fare-free public transit (FFPT) systems with the goal of increasing ridership (1) and combatting urban challenges like traffic congestion (2), environmental sustainability (3), social mobility, access to employment (4), public health (5), and physical activity (6). Proponents of these systems reimagine transit as a public service (7), fundamentally shifting the paradigm from a transactional experience (transport for a paid fare) to a public good that fosters greater mobility and urban vitality, like roads and sidewalks. Some cities also see the potential for FFPT to revitalize transit and downtowns (8), especially in mid-sized and smaller U.S. cities that have historically relied on car-dependent infrastructure.

This paper provides a case study of Alexandria, a mid-sized city in Virginia, that introduced FFPT in 2021. With a population of 159,467 (9), Alexandria is comparable to many small- to mid-sized cities that are currently considering a similar policy. Our goal is to provide policy lessons for other cities. Alexandria is a first-ring suburb of Washington DC and features a diverse built environment, with higher-density areas like Old Town, Duke Street and the West End providing more opportunities for ridership, while the geographic center of the city is more suburban in nature, posing challenges for promoting transit in a car-dependent environment (10).

Furthermore, in recent history Alexandria has lacked a strong transit culture. Originally settled around its port, long distance railroads defined much of the transportation infrastructure in the city (11). In the late 19th and early 20th Century, a handful of neighborhoods were built around the streetcar that connected residents to Washington DC (12). In 1951, the entire western half of Alexandria was annexed from neighboring Fairfax County. This led much of the city to develop in a traditional post-WWII suburban pattern (13). The city's bus system, which was established in 1984, has been relatively modest compared to jurisdictions in larger metropolitan areas with established public transit systems.

Alexandria's bus system, operated by DASH, is administratively integrated with the City government, and consists of 107 buses and 11 routes (14). Before the COVID-19 pandemic, DASH's fare was \$2 per ride, matching the regional Metrobus fare. However, prior to the COVID pandemic, DASH began fare-free programs for high school students and reduced fares for seniors (15, 16). During COVID, like most transit agencies, DASH was completely fare-free to both encourage ridership but also to limit interactions between drivers and passengers. After a short period of charging fares again, DASH went completely fare-free in September 2021. It should be noted that in addition to eliminating fares, DASH also completely restructured its bus routes in September 2021, the first time in its 40-year history (17). This was a result of a planning effort lasting several years called the Alexandria Transit Vision, which aimed to add more bus service to higher density areas of the City.

Alexandria's transition to fare-free transit could offer insights into how such a policy can be implemented and sustained in a city that has not traditionally been a "bus town." The local transit network is not overly complicated, which enables a more straightforward analysis of ridership trends and system efficiency. Alexandria's inner suburb status (of the Washington DC region) also makes it an interesting case, as suburbs are typically resistant to high-performing transit solutions due to entrenched car dependency.

Alexandria's success in FFPT challenges this norm. The city's proactive stance on fare-free policies—evidenced by pre-COVID fare-free and reduced fare programs for students and seniors—combined with strong institutional support, creates a unique opportunity for a case study that blends empirical data with access to key decision-makers. One of the authors, who as a city official works closely with the city's transit agency and played a direct role in implementing the fare-free system, facilitated access to crucial institutional history, data, and interviewees for this research. Specifically, the research questions posed in this paper focus around the following:

- What were the motivations of Alexandria and DASH to implement FFPT?
- How did the City of Alexandria and DASH implement this program?
- What are the major benefits and challenges?
- What lessons can be drawn from Alexandria's case?

LITERATURE

We searched the Web of Science and the Transportation Research Board's TRID database for terms related to public transport and fare-free published in the last 5 years. We found 24 peer-reviewed papers and book chapters published between 2020 and summer 2025. The goal of our search was not to conduct a systematic review of the literature related to fare-free transit, but rather to highlight key findings based on existing reviews. Indeed, the growing interest in FFPT has generated a diverse body of research that explores its impacts from economic, social, and political perspectives. Specifically, we identified and focused on four recent reviews of literature and practice that summarize the current state of knowledge about fare-free systems in the USA and globally.

For example, Keblowski (3) provides a global review of over 100 FFPT programs, identifying three analytical approaches used to study FFPT in the literature: the economic viability of fare abolition, its role in sustainable urban development, and its potential to drive broader social and political transformation. The article cautions, however, that existing studies predominantly focus on economic and technical dimensions of FFPT. Studies generally describe implementation risks such as increased operational costs and induced additional mobility without necessarily attracting private car users to public transit.

The COVID-19 pandemic marked a significant turning point in the adoption of FFPT in the United States, as documented by Maciejewska et al. (18). Analyzing data from nearly 400 urban transit agencies, their study reveals that approximately two-thirds of agencies suspended fare collection during the early pandemic period in 2020, with 73 new FFPT initiatives introduced alongside 29 pre-existing programs. FFPT adoption was widespread across diverse community types, but notably more prevalent and sustained in politically Democratic-leaning jurisdictions. Contrary to previous assumptions that FFPT is more feasible for small systems, larger agencies with medium to large vehicle fleets also embraced fare-free policies. The availability of federal COVID-19 relief funding, particularly from the CARES Act, was a crucial enabler of these fare suspensions. This period solidified FFPT as a more mainstream transit policy, with around 40 agencies maintaining fare-free service post-pandemic peak.

Keblowski's (19) analysis of fare abolition programs in Aubagne, France, and Tallinn, Estonia, offers insights into the political and institutional dynamics shaping FFPT implementation. It demonstrates that FFPT policies tend to emerge within stable urban regimes characterized by inter-institutional collaboration. This research highlights how fare abolition can serve to reinforce local political elites and be adaptable enough to withstand varied political and intellectual climates, contributing to the resilience of fare-free initiatives.

The question of social equity and broader economic impact remains contested. Using longitudinal panel data covering 516 U.S. transit agencies, Ofosu-Kwabe et al. (4) confirm that while fare-free transit significantly increases ridership, it does not yield statistically significant improvements in labor force participation or reductions in income inequality in small and medium-sized urban areas. These findings challenge the often-cited economic and social equity arguments for FFPT, suggesting that fare policy alone is insufficient to address deeper structural inequalities. Moreover, external factors such as rising household incomes and the prevalence of remote work can independently suppress transit demand, further complicating the effectiveness of fare abolition policies in certain contexts.

Taken together, this literature indicates that while FFPT can help boost transit ridership and has gained political traction—especially during crisis periods such as the COVID-19 pandemic—its broader socio-economic benefits remain ambiguous. These findings underscore the importance of examining FFPT within its specific political and fiscal context. Alexandria, VA offers a compelling case for such an analysis, offering insight into both the governance dynamics and the socio-economic implications of implementing FFPT.

METHODS

To answer our research questions stated above, we conducted a case study of the implementation of FFPT on the City of Alexandria's DASH bus system (20). To our knowledge this is the first study about the implementation of a fare-free bus system in an affluent, medium-sized town in the inner suburbs of a large metropolitan area in the United States. Most other studies of fare-free systems in the United States focus on college towns, specific zones (like downtowns) of the public transport system, or describe main cities in a metropolitan area. To collect information about the implementation of fare-free public transport in Alexandria, we relied on official and internal government and agency documents, results from DASH bus rider surveys, statistics collected by the National Transit Database and reported by the Northern Virginia Transportation Commission (NVTC), and stakeholder interviews.

We compared trends in public transport ridership and supply in Alexandria and neighboring jurisdictions in Northern Virginia between 2019 and 2024. Data for this analysis originated from the NVTC and the National Transit Database (22). To compare trends in ridership and supply, we indexed ridership and supply levels at 100% for the year 2019 and reported all following years relative to 2019 levels.

Additionally, we included results of the DASH On-Board Customer Survey 2023 to gauge rider opinions and self-reported behavior after the implementation of free-fare buses (23). The survey was conducted on-board DASH buses in October and November 2023 and resulted in 2,983 responses from riders. The customer intercept survey has the goal of providing information on customer demographics, travel patterns, and overall satisfaction with DASH services. We also briefly report results from a smaller DASH bus rider survey conducted by Penn State (24).

Lastly but most importantly, we conducted six (6) in-depth interviews with representatives from stakeholder groups of public transport in Alexandria, VA. The groups included a city council member, policy makers, transit planners, public transport advocates, operations managers and operators, and the DASH's communications and marketing team members. The interviews were conducted online via Microsoft Teams and were roughly one hour long each. Each interview followed a set of structured interview questions that were developed based on a review of the literature on FFPT and a review of City of Alexandria's government documents (to identify issues not covered in the academic literature) (21). The questions were designed to open a conversation in the areas of planning, public involvement, finance, political processes, operations, and outcomes with each stakeholder, allowing us the flexibility to ask follow-up questions as needed. The stakeholders were chosen based on organizations and groups identified in government documents about FFPT in Alexandria, as well as recommendations by interviewees themselves (a process known as snowballing).

We asked each interviewee for their consent to record the meeting; all agreed. Recorded meetings were transcribed using Microsoft Teams software. The research team then read the interview transcripts and identified themes that emerged across the interviews. Interviewees were asked follow-up questions by email if contradictory narratives or facts emerged. We then built our results and narrative around those common themes.

The number of participants per interview varied. Some interviews were conducted with only one stakeholder participant, while other stakeholders preferred group interviews with colleagues from the same group. For example, one interview with a public transport advocacy group included five respondents—the largest group we interviewed.

RESULTS/FINDINGS

As we explore the results below, it should be noted that at the same time that DASH went fare-free, it also implemented a route restructuring effort that had been in planning since 2018. From the perspective of implementing a new system, it was logical to introduce both features simultaneously, in that free fares would provide incentives to test out the new route structure and reduce any frustrations with changed bus routes. Combined, both efforts have been successful and led to record ridership. However, the combination also makes it difficult to distinguish the impacts of the FFPT from the impacts

of the route restructuring. In the section below, we highlight general trends in ridership and rider demographics. In some instances, we are also able to report results specifically related to free fares, based on specific survey questions.

Trends and Socioeconomics of bus ridership in Alexandria since 2019

Figure 1 shows trends in the number of bus riders for DASH buses in Alexandria, bus systems in neighboring jurisdictions, as well as Metrobuses operated in Northern Virginia by the Washington Metropolitan Area Transit Authority (WMATA). Data are indexed to the year 2019 (=100%) to facilitate comparability in trends between systems and over time. All systems saw steep declines in ridership during the COVID pandemic (in particular in the years 2020 and 2021; see **Figure 1**). This finding is in line with overall national trends in the USA and abroad (25). Ridership recovered in all systems, but to a different extent. In 2024, bus ridership in Alexandria was 35% greater than pre-COVID ridership in 2019. Fairfax Connector reached pre-COVID levels. Arlington Transit (ART), WMATA Bus, and Omni Ride all recovered to roughly 80-85% of pre-COVID ridership levels, while Loudon County Transit only achieved 40% of pre-COVID ridership levels.

All systems maintained or expanded revenue miles of bus service compared to pre-COVID levels (2024 vs. 2019): ART +9%, Fairfax Connector +8%, Omni Ride +18%, and DASH +33%. Loudon County Transit did not increase its bus service supply between 2019 and 2024. Comparing increases in ridership to changes in revenue miles of service provides a measure of bus service productivity. **Figure 2** shows that DASH slightly increased the number of passengers per revenue mile of bus service (+1%), while the other systems saw declines: ART -22%, Fairfax Connector -3%, Loudon County Transit -60%, and Omni Ride -30%.

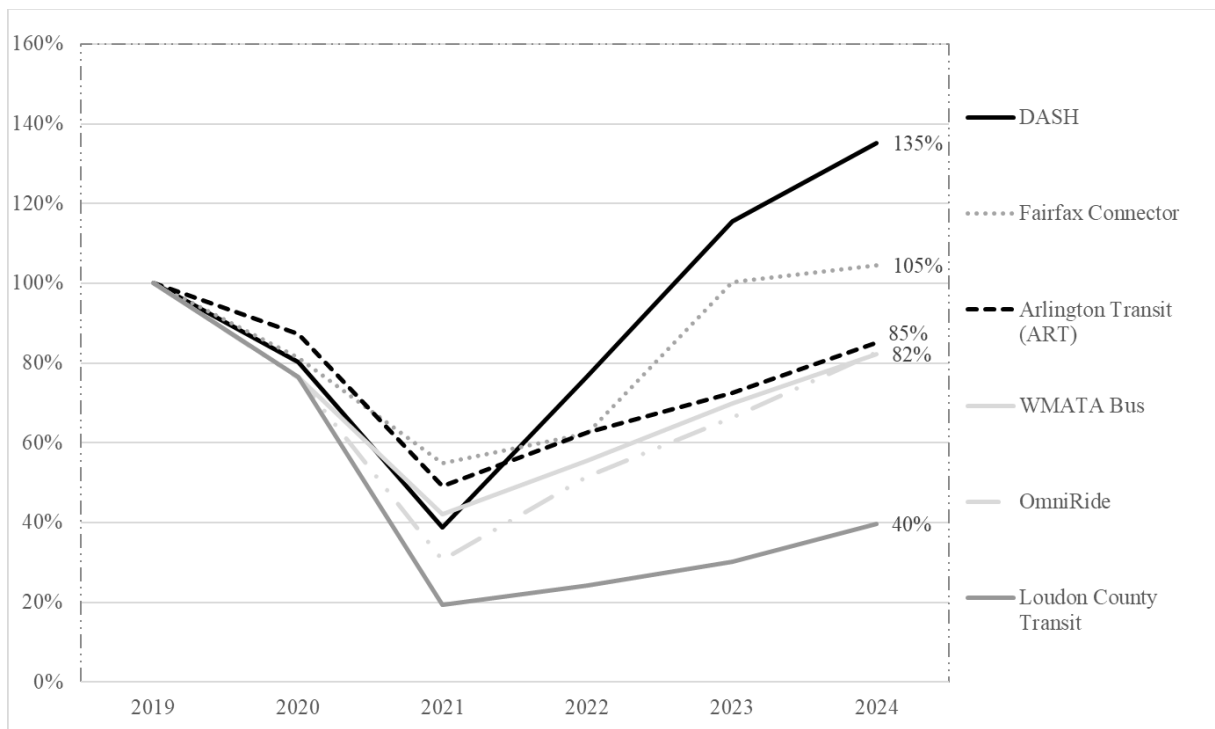


Figure 1. Bus Ridership in Alexandria and neighboring jurisdictions, 2-19-2024 (relative to 2019 levels = 100%). *Source: based on data provided by NVTC, 2025.*



Figure 2. Passengers per Revenue Mile in Northern Virginia Relative to 2019 (=100%) Levels. Source: based on data provided by NVTC, 2025.

The DASH rider survey of 2023 provides details on the socioeconomics of DASH riders and their assessment of fare-free buses (23). Ridership demographics show that responding DASH riders were more likely non-white (74%), male (51%), employed (79%), had incomes below the poverty level (66%), and never worked from home (62%). Moreover, 36% had limited English proficiency and roughly 40% did not have access to a car or did not have a driver's license. Over three-quarters of respondents (78%) rode the system 3 times or more per week and over 90% reached the system on foot.

Regarding free fares, 62% of riders who started using the bus after free fares were implemented said that free fares impacted their decision to ride. While 53% of riders who rode before the implementation of free fares said that they now rode more often because of free fares—41% said they rode the same amount as before. Free fares were mentioned most often (58%) when respondents were asked to state their 3 primary reasons to choose DASH bus. However, the reorganization of bus routes in Alexandria also played a role. Almost half (49%) said that they chose DASH because of bus routes connecting customers to where they need to go. Other factors mentioned by the respondents included service reliability (36%), frequency of service (29%), service hours (21%), feeling safe (15%), cleanliness (13%), environmental sustainability (11%), bus stop amenities (7%), and fuel prices (6%). The ordering of the top 6 factors for riding DASH (free fares, bus routes, service reliability, frequency of service, service hours, and safety) was the same across response groups including new and existing DASH riders, men and women, Whites and racial minorities, riders with and without cars, and income quartiles. Another survey conducted by Penn State (24) provides additional details about ridership changes and attitudes regarding free fares. The survey only had 201 valid responses for Alexandria; thus, the results may not be as reliable as those from the larger DASH survey presented above. The report states that once free-fares were implemented, 47% of respondents started riding transit on weekends—shifting the proportion of weekend vs. weekday trips. Specifically, 43% of women indicated started to ride on

weekends compared to 55% of men. Starting to ride on weekends declined with age: two-thirds of riders younger than 25 indicated riding more on weekends, compared to less than 30% of those older than 50. Whites reported starting to ride on weekends at a slightly higher rate (48%) than minorities (44%). Increased weekend ridership was lower for those with higher incomes: 50-60% of those in the lowest three income quartiles started riding on weekends, compared to 24% in the highest income quartile. On average, pre-fare-free riders increased their transit ridership by 0.7 days per week once free fares were implemented. New riders reported making bus trips on at least 4 days per week. The PennState survey also asked new riders about modes of transport replaced by DASH. Over half (51%) of new riders said that they would have driven in a car. Another 7% replaced ridehailing services. About a quarter would have ridden Metrorail or Metrobus, and 6% replaced walking.

Findings from the Interviews

Our stakeholder interviews suggest that a diverse range of factors – including political will and commitment, funding availability, and overall timing (due to reduced ridership during the COVID era) – facilitated the successful implementation of fare-free transit policy in Alexandria. Based on four years of experience with fare-free transit, the interviewees revealed that the policy is associated with significant benefits and some new challenges. In the section below, we group the findings by major themes that emerged during the stakeholder interviews.

Motivation

DASH transitioned to a fare-free service model in September 2021. The idea had been under consideration since 2018, driven by interest from the City Council and the Mayor. A regional study funded by the Metropolitan Washington Council of Governments (MWCOC) evaluated several discounted and partial fare options for low-income riders and found fare-free transit to be the most beneficial option in terms of administrative simplicity, societal benefits, and projected ridership growth.

The shift coincided with the launch of a redesigned bus network guided by the Alexandria Transit Vision (ATV) Plan. The new network emphasized higher-frequency service and improved connectivity in key corridors. Launching the fare-free policy alongside a redesigned network created a strategic alignment, enabling the agency to generate public interest, collect feedback, and promote a new vision for transit service. The COVID-19 pandemic provided a real-world pilot for fare-free operations, which demonstrated benefits, such as reduced barriers to access transit and administrative savings. These findings, coupled with reduced ridership and expected lower farebox revenue during the pandemic, encouraged a full transition.

Throughout the process, DASH emphasized the importance of maintaining public trust, demonstrating the value of transit to the community, and ensuring that service improvements benefit all residents. The fare-free policy was part of a broader effort to make transit in Alexandria more accessible and responsive to changing mobility needs while building long-term public and political support for sustained investment in transit.

Political Will and Support

All interviewees emphasized the City of Alexandria's proactive role, highlighting close collaboration between DASH leadership, the City Council, and the City Manager's office. The former City Manager was identified as a key advocate for fare reduction, with early efforts focused on providing free transit for student riders.

This foundation of support enabled a coordinated decision-making process and ensured alignment between policy goals and funding commitments. The City Council's consistent backing, combined with a shared vision for equitable and accessible mobility, played a critical role in advancing and sustaining the fare-free initiative.

Funding Availability

Availability of state funding supported by both political will and multi-level financial backing proved to be another catalyst for the implementation of fare-free transit. Interviewees noted that while DASH had historically relied on local general funds from the City (primarily), the availability of dedicated state funding and pandemic relief resources played a critical role in enabling this transition.

In particular, Virginia's Transit Ridership Incentive Program (TRIP) grant provided targeted support for fare-free operations. The TRIP grant provided about \$7.2 million to be spent over a period of four years, with a tapering structure (80% in Year 1 down to 0% in Year 4), offering what agency staff described as a "soft landing" approach. The grant also helped ease concerns from the DASH Board of Directors and internal stakeholders regarding the long-term fiscal implications of eliminating fares. Additionally, the City of Alexandria increased its general fund subsidy to DASH by \$1.5 million, allowing the agency to offset fare revenue losses without compromising service quality or operational stability.

Interviewees consistently emphasized that fare revenues historically accounted for only approximately 10-12% of DASH's operating budget. While the total fare collection pre-pandemic was around \$3.5-\$4 million (with approximately \$150,000 being spent on operating and maintaining the fare system) annually, reinstating fare collection post Covid was expected to cost approximately \$7 million—significantly outweighing the revenue collected. This would include updating fare collection infrastructure such as fareboxes, mobile applications, and enforcement systems, as well as maintenance. Recognizing the cost inherent in the fare collection model, the agency leadership team encountered little to no internal resistance to the fare-free transition. The total cost of the fare-free system was estimated to be approximately \$18.5 million over 4 years, however actual subsidy increases attributable to the fare-free system are difficult to estimate because of other cost increases from a new collective bargaining agreement and service expansion, and the fact that the state government subsidized a portion of the costs for the first several years.

Moreover, the COVID-19 pandemic brought in additional federal relief funds that, when combined with state and local contributions, created a healthy financial environment for policy implementation. DASH leadership leveraged this moment to reframe public transit as essential civic infrastructure, rather than a service dependent on farebox recovery. This perspective, reinforced by strong political support, allowed the agency to implement fare-free service not as a temporary measure, but as a durable policy shift.

Together, the available funding resources and mechanisms not only facilitated implementation but also helped garner buy-in from relevant stakeholders and reinforced the case for fare-free transit as a fiscally responsible and socially beneficial investment in people's mobility.

Operational and Institutional Adjustments

Interviewees were also asked about any operational and institutional adjustments that DASH might have had to undergo to facilitate the fare-free transition. Several adjustments were reported by the operations and planning teams that were necessary to maintain service efficiency, monitor ridership, and address evolving passenger dynamics. Initially, DASH retained existing fareboxes, covering them up rather than removing them outright to preserve flexibility. These units are now being permanently removed as part of the agency's full commitment to fare-free operations.

To replace farebox and SmartTrip data previously used to track ridership and passenger characteristics, DASH shifted to Automated Passenger Counters (APCs). Although APCs provide reliable counts, DASH acknowledged that the loss of fare transaction data has made it more difficult to capture detailed rider demographics and travel patterns. Agency leadership emphasized the need for developing more robust future data collection strategies to fill this emerging gap.

Improving on-time performance (OTP) was another central operational outcome of the fare-free program and an important driver of ridership growth. The operational shift to all-door boarding reduced per-passenger dwell times and improved passenger flow, especially during peak periods. Although the

overall dwell times did not see many changes due to higher passenger volumes, DASH restructured layover times to accommodate increased throughput and maintain schedule adherence. These actions helped preserve OTP, demonstrating that reliability improvements worked in tandem with fare-free service to support ridership gains. Additionally, recognizing concerns about potential behavioral issues in a fare-free environment, DASH introduced a more stringent Passenger Code of Conduct to support operators and maintain a safe onboard environment. The agency further highlighted that the fare-free environment is transforming the traditional driver-passenger dynamic. Without the need for fare enforcement, operators now engage passengers differently. While reports of disruptive passenger behavior saw a small increase, they were not disproportionate relative to ridership growth. Reports of passenger-driver conflict, however, significantly decreased since DASH became fare-free, implying that many of these conflicts centered around fare payment or fare evasion. This suggests an overall improvement in operator safety. The Planning team also emphasized that new vehicle designs, including electric vehicles, are being considered which would include fully enclosed cabs enhancing operator safety.

Benefits

The transition to fare-free service at DASH resulted in measurable improvements in ridership, access, and safety. Ridership increased from approximately 3.8 million pre-pandemic to over 5.3 million in FY2023, with projections reaching 5.5 million in FY2024—a growth of over 30% (for details see Figure 1 above).

Most of the ridership increase occurred on routes serving Alexandria’s West End, particularly Route 35, and during off-peak hours such as midday, evenings, and weekends. These trends align with DASH’s goals of expanding access beyond peak commuting times, because service was increased along this route as a result of a regional grant.

As discussed above, the fare-free policy also led to fewer fare-related conflicts between passengers and drivers. Operators reported improved interactions and reduced stress, contributing to a more consistent and efficient boarding process.

DASH’s ridership is predominantly composed of racial and ethnic minorities (approximately 75%) and low-income individuals (about 50%), both higher than the citywide averages. For example, the DASH on-board survey showed that 80% of riders before the implementation of free fares were minorities, compared to 74% of new riders who started riding after free fares were implemented. Similar comparison can be made for women (48% of legacy riders and 47% of new riders), individuals without car access (41% and 37%), those in the lowest income quartile (53% vs. 44%) and those unemployed (6% vs. 5%). While staff did not observe a clear shift in ridership among these groups specifically after the fare change, removing the cost barrier likely improved access for transit-dependent populations. Indeed two-thirds to three quarters of new riders in those groups report that free fares impacted their decision to ride (minorities 65%, women 66%; carless 68%, lowest income quartile 70%, unemployed 78%) and 50 to 60% of legacy riders in those groups indicated that they rode more often because of free fares (minorities 53%, women 55%; carless 50%, lowest income quartile 51%, unemployed 64%). The Penn State survey provides some indications about changes in DASH being used as the main mode by trip purpose. Prior to free fares, 23% indicated mainly commuting to work by DASH. The share increased to 57% after free fares. Similar increases can be observed for DASH serving as main mode for education (13% to 24%), recreation (18% to 47%), shopping (18% to 40%), and errands (18% to 43%).

Challenges

While the transition to fare-free service at DASH has generated clear benefits, it also introduced several challenges that the agency continues to navigate. In the short term, the system has witnessed a significant increase in overall ridership, leading to crowding on some routes, particularly during peak and off-peak periods with high demand. Higher passenger volumes have further contributed to service

reliability issues, as increased boardings extended dwell times, and regional traffic congestion further added to delays.

Staffing and maintenance capacity is another constraint that emerged during the interviews. DASH has been facing difficulties in retaining sufficient bus operators—which is a problem across the transport industry nationally (and not only Alexandria)—and ensuring timely vehicle maintenance, both of which are critical to sustaining reliable service.

Longer-term challenges center on maintaining the financial and political foundations of the fare-free model. As temporary grants and relief funds phase out, the city and the agency must integrate fare-free operations into the base budget. This requires managing trade-offs between sustaining current service levels, addressing capital needs, and expanding capacity to meet continued demand. Additionally, ongoing political and community support will be essential to ensure the program's durability.

Finally, effective communications and community engagement remain an ongoing challenge. The community engagement team noted that, even after four years of fare-free service, many residents remain unaware that 'transit buses are free for all in Alexandria.' A particular difficulty has been in engaging non-transit riders and attracting them to transit—a challenge also highlighted by other global studies like Keblowski (3). While high ridership has reduced the urgency of expanding awareness among occasional or potential users, the lack of universal public recognition continues to constrain broader perception and utilization of the system.

Future Plans

Looking ahead, DASH plans to expand its service, improve overall service reliability, address the overcrowding issue, and strengthen public engagement to ensure broader awareness of its fare-free model. Additionally, DASH continues to focus on securing continued political and community support to sustain and scale the program as a core component of Alexandria's transit system. However, as federal COVID-19 relief funds and TRIP grant funds expire, DASH faces the challenge of sustaining progress toward these goals. To continue improving service reliability, workforce stability, and fleet capacity, the agency will continue to explore alternative funding sources and strategic partnerships.

DISCUSSION AND CONCLUSIONS: WHAT LESSONS CAN OTHER CITIES/AGENCIES DRAW FROM ALEXANDRIA'S CASE?

Alexandria's case offers valuable insights that might prove helpful for other jurisdictions contemplating a fare-free transition. While no single blueprint applies universally, several overarching lessons emerged from stakeholder interviews that highlight the significance of the correct policy design, availability of funds, supportive political leaders, strong transit advocacy, and thoughtful service design in making the fare-free policy both feasible and effective. **Table 1** summarizes candidate lessons for other systems and cities, while identifying the stakeholder groups who offered the insights.

Establish a clear policy narrative and build political buy-in

A strong, (transit-)values-driven narrative was central to building support for fare-free transit in Alexandria. By framing the policy around improving access and mobility, particularly for historically underserved populations, city leaders were able to shift the conversation from one focused on revenue loss to one centered on public benefit. The agency explored multiple fare structures, including discounted and zero-fare models, and clearly communicated that fare revenue accounted for a small share of the system's overall funding. Moreover, the administrative costs of fare collection and farebox maintenance, on top of the capital cost of replacing existing farebox infrastructure, further weakened the financial case for retaining fares. Articulating these challenges transparently, while centering the policy on its long-term social and financial benefits, helped position transit as essential public infrastructure—and not a business enterprise. For other cities, this underscores the importance of crafting a clear, compelling narrative and securing political alignment early in the process. Rather than dismissing fare-free models based on fear or

misconceptions, agencies should approach the issue with openness and rigor, allowing evidence and values to guide the decision.

Plan for financial sustainability from the outset

Fare-free transit is only as sustainable as its funding model. Alexandria benefited from funding support from state as well as city sources, using the opportunity to run a pilot eliminating fares on its transit service. While these funding sources provided a critical starting point, long-term success hinges on establishing diversified and dependable revenue streams. Cities must plan beyond temporary grants or political cycles, accounting for future operational costs, service expansions, and capital needs. Embedding fare-free transit within multi-year operating budgets is essential to institutionalizing the program and shielding it from fiscal or political disruptions. Treating fare elimination as an enduring public investment—rather than a short-term initiative—can help ensure both long-term stability and impact.

Align fare elimination with broad system changes

Alexandria's experience highlights the importance of timing the fare-free transit policy with broad system changes, such as network redesign, service expansion, and infrastructure investments. This alignment enabled DASH to reintroduce its services with a renewed focus on access and reliability, reinforcing the message that fare elimination was part of a larger commitment to transit modernization. Cities considering fare-free policies should look for similar inflection points—such as major service overhauls, infrastructure investments, or political transitions—to enhance feasibility and public receptivity of such initiatives. In Alexandria—like in the case of many other cities in the United States, as discussed in Maciejewska et al. (18)—the COVID-19 pandemic played a key role in creating a window of opportunity, as it prompted political leaders and the public to explore contactless mobility solutions. While a global crisis is not a desirable or replicable condition, the lesson remains: timing matters. Seizing the right moment can minimize resistance and maximize impact.

Invest in enhancing service quality alongside fare elimination

While eliminating fares can increase ridership—as demonstrated in Alexandria's case and also noted by Ofosu-Kwabe et al. (4)—investing in service enhancements can sustain that growth and maintain public confidence. Without corresponding improvements in frequency, reliability, and coverage, rising demand can strain operations, leading to overcrowding and reduced quality. High-quality service is also critical for attracting and retaining so-called choice riders, not just those who are transit dependent. If service degrades, fare-free transit risks being perceived as a marginal option at large, reinforcing the notion that it serves only those without other mobility choices. To avoid this, cities must view fare elimination as part of a broader investment in transit excellence—not a substitute for it.

Engage the public and key stakeholders early

The success of a public-facing policy like fare-free transit depends not only on policy design but also on community trust and rider engagement. In Alexandria, interviewees noted that many potential riders remained unaware of the fare-free policy well after its launch—highlighting the lack of public engagement early in the policy design and implementation process.

Equally important is anticipating and addressing negative perceptions early. Without clear and consistent messaging, fare-free programs risk being misunderstood or seen as short-term ventures. Partnering with a wide range of organizations—including community groups, advocacy coalitions, city departments, and local businesses—can help amplify messaging and legitimize the initiative across diverse communities. Outreach efforts must also be culturally and demographically tailored, with communications available in multiple languages to ensure a broad understanding of the policy and its intended benefits. Deliberate and inclusive engagement therefore is crucial to realizing the full benefits and value of FFTP.

Define clear metrics and track outcomes holistically

Lastly, establishing clear evaluation metrics at the outset is essential for assessing the effectiveness of fare-free transit and building long-term policy credibility. Cities should develop a performance framework that captures both quantitative and qualitative outcomes. Traditional indicators—such as ridership growth, cost per passenger trip, on-time performance, and vehicle utilization—remain important but must be complemented by measures that reflect broader goals, including improved access to jobs and services, reductions in household transportation costs, perceptions of safety, and ease of use among riders. In Alexandria, the absence of a robust evaluation framework early in implementation limited the ability to communicate the program’s full impact, especially its social and equity benefits. Qualitative feedback from riders and frontline staff—gathered through surveys, interviews, or community listening sessions—can reveal insights often missed by numerical data alone. Documenting both types of outcomes allows agencies to adjust strategies over time, respond to public concerns, and build a strong evidence base to justify continued investment.

No one-size-fits-all solutions

The lessons outlined above make clear that fare-free transit is not a one-size-fits-all solution, nor a silver bullet. Its success hinges on multiple interrelated factors, including political will, financial planning, service design, and community engagement. For cities considering this approach, the path forward must involve a careful and context-sensitive assessment of feasibility—both in policy design and implementation. While each city’s circumstances will differ, the overarching framework can be guided by shared principles: a clear and inclusive policy narrative, realistic funding strategies, strong political and community backing, operational readiness, and long-term planning to ensure durability.

Alexandria’s experience demonstrates that when fare-free transit is approached with intentionality and sustained commitment, it can evolve beyond a pilot into a permanent and valued part of the urban mobility landscape. More than just removing a farebox, it redefines transit as a public good—central to fostering a more inclusive, equitable, and accessible future.

1 **Table 1: Key Lessons Learned as Shared by Interviewees**

Team/Interviewee	Key Lessons shared
City Council Member	• Start with a clear narrative—center the policy around improving access and social inclusion. • Secure flexible funding that allows for local ramp-up and long-term ownership. • Engage diverse stakeholders—beyond transit, include housing, health, and workforce voices. • Make sure to invest in spreading public awareness and support. • Go meet people where they are (at bus stops). Talk to the riders who are most impacted. • Pay attention to topography when planning bus stops. • Operational: Frequency is key. Achieving 8-12 min frequency is great.
Executive Leadership	• Timing and opportunity are crucial for policy implementation • Transparent communication helps address public concerns – transit must be seen as an infrastructure and not a business. • Fare-free transit can significantly improve mobility and service usage. Benefits must be seen in the broader context of social and environmental benefits • Proactive management can mitigate potential negative consequences of policy changes
Strategic Planning & Infrastructure Team	• Avoid preemptively rejecting fare-free models based on fear or misconceptions. • Align with community needs and political priorities, ensuring top-down commitment. • Establish clear metrics early and document both qualitative and quantitative benefits. • Robust marketing and stakeholder engagement are essential for sustained success.
Operations	• Plan long term; fare-free isn't easily reversible. • Anticipate and counter negative perceptions early. • Promote it vigorously. Even with marketing, awareness lags.
Community Engagement & Communications	• Partner with a wide range of organizations—community groups, city departments, and local businesses—to amplify messaging. • Conduct culturally and demographically tailored outreach and communications in multiple languages.
Transit Advocates	• Fare-free transit should be evaluated within local context—what works in Alexandria may not be suitable elsewhere. • A data-driven approach that considers operational costs, equity goals, and existing funding streams must be considered when planning • Important factors: comprehensive planning, realistic funding assessments, and engaging the community in shaping transit values and expectations.

3 Limitations and Future Research

4 The findings presented in this paper are based on a single case study, which limits
5 generalizability. However, the case provides a valuable opportunity to examine the impacts of specific
6 interventions in a real-world context. While the insights may not be universally applicable, they offer
7 important lessons and hypotheses that can inform future research and practice in similar settings.

8 At present, we do not have access to rider-level data that would allow us to disaggregate the
9 ridership growth by fare policy, service changes, or pandemic recovery effects, nor to distinguish between
10 new and returning riders. However, it is worth noting that DASH has demonstrated a stronger ridership
11 recovery compared to peer systems in the region, many of which have not implemented similar fare or
12 service changes. This suggests that the observed growth may be partially attributable to these
13 interventions, though further research is needed to isolate their individual impacts.

1 Additionally, as mentioned above, the impacts of the FFPT were difficult to discern from the
2 impacts of the route restructuring, which has also proven successful in boosting ridership in other
3 municipalities. For example, weekend ridership hovered between 16.8-17.5% of total ridership from
4 FY16-FY21 and starting in FY22 (when DASH implemented the FFPT and route restructuring), weekend
5 ridership increased to 20.3-21.4% per year between FY22-FY25. Weekend service levels, measured by
6 run time, revenue hours, and platform hours, increased from 14-15% in FY19 to 22% in FY25. However,
7 based on ridership gains compared to other nearby systems, the authors are confident of the importance of
8 FFPT in ridership growth.
9

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17

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19 The authors confirm contribution to the paper as follows: study conception and design: SS, RB, CZ; data
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