

ARLINGTON COUNTY

Transit Development Plan

FY 2018 Update

CHAPTER 5:

Operations Plan



ARLINGTON
VIRGINIA

FY 2018 Report Update Prepared by:

Arlington County Transportation Division / Transit Bureau

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5 OPERATIONS PLAN

A variety of service expansion recommendations have been prepared through this project, including the expansion of service throughout the County; a new Premium Transit Network; and the introduction of a new flexible transit service. These recommendations will be implemented over the course of the next ten years, in accordance to the priority determined based on the overall impact of the service and the expressed need for each recommendation as realized through the project's public outreach process.

The expansion of service throughout the County has required new definitions for the types of services being offered. Currently, Arlington County relies on local routes and express services to provide needed transit connections. Through the implementation of the recommendations described in this TDP, neighborhood circulators; premium transit services; and on-demand flex routes will be placed into service. The current and future bus service types offered in Arlington and where they operate within the County are:

- **Local Routes:** Service focused on providing connectivity within and between activity centers in Arlington County and nearby jurisdictions. These services are operated by ART and Metrobus.
- **Neighborhood Circulator Routes:** Service that helps passengers travel short distances to popular local destinations and/or bus transit stations, and generally operate only during peak hours. These services are operated by ART.
- **Express Routes:** Service focused on long trips delivering commuters directly to major employment centers without making regular stops over the trunk of the route. These services are operated by Metrobus.
- **Premium Service:** High-frequency service connecting major destinations that operates solely along major thoroughfares with enhanced amenities at the majority of its bus stops. These services are operated by Metrobus.
- **On-demand Flex Service:** On-demand service focused on providing a cost efficient alternative to fixed-route service through lower density neighborhoods. These services will be developed by ART, focusing on midday service.

The baseline figures used to estimate the net costs of all service improvements are derived from Arlington County's existing bus service. In FY 2018, 652,900 annual revenue hours (176,600 for ART and 476,301 for Metrobus) and 6,955,890 annual revenue miles (1,854,324 for ART and 5,101,561 for Metrobus) of service are provided. The Operating Plan is fiscally constrained and represents the reality of what can be implemented by the County based on the currently available resources. Additional improvements may be implemented, depending on the availability of new revenue.

Revenue hours and miles will slightly increase for ART and Metrobus service in Fiscal Year 2019. This is due to service changes set for implementation upon approval WMATA State of Good Repair modifications to Metrobus service by the WMATA board. ART bus service changes proposals are subject to approval under County Board approval of the

FY 2019 budget. If approved, some of these changes will become effective June 24, 2018 and August 20, 2018 with the remainder going into effect December 16, 2018.

5.1 Implemented Service Changes

The following sections provide a year-by-year summary of the service recommendations that have been installed since the plan was adopted by the County Board in July 2016.

5.1.1 Fiscal Year 2017

In the first Fiscal Year of the TDP, ART focused on implementing recommendations that will address service in areas where service was being discontinued by Metrobus and where public support for additional services were addressed. These changes will be reflected in the new ART 54, which will serve Dominion Hills, replacing the service currently provided by Metrobus 1E; and ART 92, which saw a service increase in peak frequency in response to feedback from passengers and stakeholders, who stressed the importance of maintaining a transit connection between key employers and the Pentagon for regional express bus connections. Additionally, the County increased the span of service on the ART 43 to include midday and weekend service in support reduced rail service along Metrorail's Blue Line as part of WMATA's SafeTrack rail maintenance and reliability program. Metrobus delayed implementing some of the service recommendations in Fiscal Year 2017 as a result due to postponing Metrobus State-of-Good Operations (SOGO) process for FY 2018. In response, the county postpone implementation of some service changes set for the Summer of 2017 which had connections to the delayed implementation of Metrobus service changes. Overall, the following service reductions that were implemented for Fiscal Year 2017:

- **Metrobus 1EZ:** Eliminate both routes. Replace Metrobus 1E with a new route ART 54 into Dominion Hills and Metrobus 1Z with an increase of frequency on Metrobus 1B.
- **Metrobus 9A:** Eliminate route and provide similar connections using the Metroway and Metrobus 10AE.
- **Metrobus 10RS:** Eliminate routes and provide continued connections to Rosslyn with Metrobus 10E.

ART services saw an overall increase of approximately 8 and 10 percent in annual revenue hours and miles, respectively, while Metrobus will decrease in both revenue hours and miles in order to realize cost efficiencies. **Table 1** summarizes the service changes implemented. while **Table 2** provides an overview in the annual changes to hours and miles, as well as to peak vehicles.

Table 1 | Fiscal Year 2017 Service Improvements

Improvements to ART routes	Status
43 – Add midday and weekend service	Implemented August 2016 – proposed for FY22, but implemented earlier to support Metro’s SafeTrack efforts
54 – New service to Dominion Hills	Implemented August 2016. Under service evaluation due to low performance in FY 2017
92 – Reconfigure service to become a circulator	Original service maintained with added weekday peak period service - implemented September 2016. Under service evaluation due to low performance in FY 2017
Improvements to Metrobus routes	Status
1A/B/E/Z – Increase frequency and streamline	Implemented August 2016
Eliminate duplicative Metrobus 9A	Eliminated June 2016
10A/E/R/S – Reconfigure to supplement discontinued service	Implemented June 2016
16Y – Increase frequency	Implemented December 2016
23A/B/T – Enhance frequencies on Glebe Road	Implemented June 2016

Table 2 | Fiscal Year 2017 Operating Statistics

Route	Type of Recommendation	Annualized Net Change in Revenue Hours	Annualized Net Change in Revenue Miles	Change in Peak Vehicles
ART				
Existing System		122,900	1,335,979	46
43	Hours of Service	5,926	94,281	0
54	New Route	2,067	16,175	1
92	Improve Frequency	1,823	11,622	1
FY 2017 Total		132,716	1,458,057	48
Metrobus				
Existing System		476,301	5,101,561	153
1B	Improve Frequency	2,102	21,830	3
1E	Reassigned Dominion Hills neighborhood service to ART	-1,418	-14,606	-2
1Z	Discontinue Route	-3,607	-44,598	-4
9A	Discontinue Route	-19,999	-205,163	-3
10A	Realign Route	3,281	33,981	1
10E	Extend / Realign Route	2,100	21,256	3
10R	Discontinue Route	-2,775	-29,076	-4
10S	Discontinue Route	-624	-8,229	-2
23A	Reduce Service	-10,378	-151,276	2
23B	Improve Frequency	5,871	73,777	-1
23T	Improve Frequency	6,148	114,367	-1
FY 2017 Total		459,838	4,913,824	145
FY 2017 Overall Total		592,554	6,371,881	193

5.1.2 Fiscal Year 2018

Service changes implemented in Fiscal Year 2018 sought to improve reliability and service on ART 55 and Metrobus 2A, and a realigning of Metrobus 15KL to increase service productivity.

Other Metrobus service improvements proposed for fiscal year 2018 have been shifted to FY 2019 due to a focus on supporting services aim to move passengers through rail service disruptions related to Metro’s SafeTrack rail maintenance program throughout FY 2017. ART also chose to delay proposed service recommendations slated for FY 2018 in order to review FY 2017 service performance. These improvements resulted in small increases in annual revenue hours and revenue miles for ART and Metrobus service throughout the County.

Error! Reference source not found. details the level of services in terms of span and headways for the Fiscal Year 2018 changes. **Table 4** provides an overview in the annual changes to hours and miles, as well as to peak vehicles.

Table 3 | Fiscal Year 2018 Service Improvements

Improvements to ART routes	Status
55 – Additional peak period service	Implemented June 2017 due to I-66 toll revenue funding
Improvements to Metrobus routes	Status
2A – Increase frequency during peak period	Implemented June 2017 due to I-66 toll revenue funding

Table 4 | Fiscal Year 2018 Operating Statistics

Route	Type of Recommendation	Annualized Net Change in Revenue Hours	Annualized Net Change in Revenue Miles	Change in Peak Vehicles
ART				
FY 2017 System		132,649	1,464,498	48
55	Improve Runtime and Frequency	1,562	13,732	1
FY 2018 Total		134,211	1,478,230	49
Metrobus				
FY 2017 System		458,293	4,913,210	146
2A	Improve Frequency	9,146	112,106	3
15K	Realign Route	0	0	0
15L	Realign Route	0	0	0
FY 2018 Total		467,439	5,025,316	149
FY 2018 Overall Total		601,650	6,503,546	198

5.2 Proposed Service Changes

5.2.1 Fiscal Year 2019

In July 2018, phase one of the Columbia Pike Premium Transit Network will be implemented, which will include consolidating the Metrobus 16ABJPX into the Metrobus 16A, C, and E. Metrobus 16GHK will be restructured into the Metrobus 16G and 16H. Service plans have been revised to operate the premium service between current 16, H western terminals (Arlington Mill and Skyline City) to Pentagon City in phase 1 and service to Crystal City is proposed for the second and third phase of implementation. Service levels on routes that serve the communities surrounding Columbia Pike will remain in phase one as Metrobus 16G will continue to operate through the Arlington Mill (formerly Columbia Heights West) neighborhood. ART will support the first phase of implementation by expanding the span of service Sundays on Routes 41 and 45 to match the span of service proposed on Metrobus 16G and 16H. In response to community input and evaluation of service, Metrobus 22 Line will retain service with Metrobus Route 22B trips being eliminated due to low productivity. ART will provide new supplemental service along Routes 22A/C between Shirlington Transit Center and Ballston station and continue to Marymount University and the Rock Spring neighborhood.

The following service reductions are being considered for Fiscal Year 2019:

- **ART 54:** Route serving Dominion Hills and East Falls Church proposed for elimination due to failing productivity measures.
- **ART 92:** Route serving Long Bridge Park, Crystal City and the Pentagon proposed for elimination due to failing productivity measures.
- **Metrobus 4A:** Proposed elimination of weekday midday and evening service due to low productivity.
- **Metrobus 10E:** Service between Pentagon Station and Rosslyn Station proposed for elimination due to low productivity.
- **Metrobus 16BJPX:** Eliminate routes and replace with enhanced Metrobus 16A and 16C.
- **Metrobus 22B:** Route eliminated due to low productivity.

Error! Reference source not found. details the ART and Metrobus service change proposals for Fiscal Year 2019.

Table 5 | Proposed Fiscal Year 2019 Service Improvements

Route	Type of Recommendation (Service Addition, Expansion, or Extension)	Proposed Recommendation	New or Additional Buses Required
ART			
41	Expansion	Expand Sunday Span of Service to 12 Midnight	None
45	Expansion	Expand Sunday Span of Service to 11:00pm	None
71	New Service	Proposed new 22 Line Overlay Service: Marymount University via Walker Chapel/Ballston/Shirlington	6
77	Extension	Weekday Rush Hour Extension to Rosslyn	1
87	Expansion	Route Restructure to create single route alignment with peak service frequency maintained every 10 minutes.	2
Metrobus			
16ACE	Expansion	Restructure of service between Annandale, Culmore and Pentagon (late nights to Downtown DC)	17
16GH	Expansion	Enhanced service between Arlington Mill (16G) and Skyline City (16H) and Pentagon City	11

5.2.2 Fiscal Year 2020

No improvements or service reductions are proposed for Fiscal Year 2020, due to the significant adjustments proposed for Fiscal Year 2019.

5.2.3 Fiscal Year 2021

ART will seek to implement improvements focused creating new connections and streamlining services to continue increasing system-wide efficiencies. ART anticipates the second phase of the Columbia Pike Premium Transit Network will be implemented, which will include extending Metrobus 16G and 16H from Pentagon City to Crystal City. ART will support this change by providing additional service within the Arlington Mill neighborhood on Routes 41 and 45. ART Route 51 will be expanded to connect the Department of Human Services (DHS) and Ballston Metrorail station via the Buckingham neighborhood; and increasing services on ART Routes 42 and 55. Finally, ART will provide more frequent service supporting Metrobus 4B within Arlington County. ART and Metrobus are currently working on efforts to update and revise service recommendations for Metrobus 4B.

Alexandria’s West End Transitway was anticipated to begin operating in Fiscal Year 2021. Due to changes in priorities of the City of Alexandria Transit Development Plan, future updates to the TDP will provide additional recommendations to be incorporated on the Metrobus 7 Line family of services

The ART system will see another dramatic increase of approximately percent in annual revenue hours and miles. Most of this increase is due to the addition of service expansion and the proposed reassignment or addition of service on Metrobus Route 4B. **Table 6** details the ART and Metrobus service change proposals for Fiscal Year 2021. Error! Reference source not found.

Table 6 | Proposed Fiscal Year 2021 Service Improvements

Route	Type of Recommendation (Service Addition, Expansion, or Extension)	Proposed Recommendation	New or Additional Buses Required
ART			
41	Expansion	Weekday Rush Hour Frequency Increase to 10 minutes	2
42	Expansion	Weekday Rush Hour Frequency Increase to 15 minutes	1

45	Expansion	Weekday Rush Hour Frequency Increase to 20 minutes	1
51	Extension	Extend Service to Sequoia with frequency at 30 minutes.	1
NEW	Expansion	New bus service coordinated with Metrobus 4B as a replacement/complement service.	6
Metrobus			
16GH	Extension	Enhanced service between Arlington Mill (16G) and Skyline City (16H) and Pentagon City extended to Crystal City	1

5.2.4 Fiscal Year 2022

In Fiscal Year 2021, two of the proposed improvements will increase service on previously implemented recommendations: extending ART 51 to Crystal City; and extension of all service to Rosslyn on ART 77. Additionally, enhanced weekday and weekend service within the western portions of the County will be provided on ART 75 with increasing weekday frequency and new weekend service.

Table 8 details the ART and Metrobus service change proposals for Fiscal Year 2022.

Table 7 | Proposed Fiscal Year 2022 Service Improvements

Route	Type of Recommendation (Service Addition, Expansion, or Extension)	Proposed Recommendation	New or Additional Buses Required
ART			
51	Extension	Weekday Rush Hour Frequency Increase to 10 minutes	1
75	Expansion	Weekday Rush Hour Frequency Increase to 15 minutes	2
77	Expansion	Weekday Rush Hour Frequency Increase to 20 minutes	1

5.2.5 Fiscal Year 2023

The Fiscal Year 2023 recommendations will realign and combine routes in order to increase route productivity. This includes extending ART 62 to Rosslyn, absorbing the northern portion of the ART 61 and creating a new route, ART 63, which will connect Rosslyn with Clarendon, along 10th Street North and absorbing the southern portion of the ART 61.

The following service reduction is being considered for Fiscal Year 2023:

- **ART 61:** Discontinue route and replace service on certain segments with ART 62 and the proposed ART 63; North Veitch Street between Wilson Boulevard and Lee Highway, and North Rhodes Street between 14th Street North and Clarendon Boulevard will no longer have any local service.
- **ART 62:** This route will be realigned to serve Rosslyn Metrorail Station. As a result, local service on North Kirkwood Road between Lee Highway and Fairfax Drive will be discontinued.

There will be no significant change in the ART or Metrobus annual revenue hours or miles. Error! Reference source not found. describes the ART service change proposals for Fiscal Year 2023.

Table 8 | Proposed Fiscal Year 2023 Service Improvements

Route	Type of Recommendation (Service Addition, Expansion, or Extension)	Proposed Recommendation	New or Additional Buses Required
ART			
62	Extension	Route restructure and extension to Rosslyn	1
63	Expansion	Route restructure and extension to Clarendon	None

5.2.6 Fiscal Year 2024

In Fiscal Year 2024, the recommendations focus on increasing frequency on routes that connect major destinations. These routes include ART 45, which connects Arlington Mill, Columbia Pike, Sequoia Plaza/DHS, Clarendon, and Rosslyn, as well as a new route, ART 93, which will connect Shirlington, Crystal City and Reagan National Airport.

There are no service reductions being considered for Fiscal Year 2024.

There will be a slight increase in annual revenue hours and miles for the ART system. Error! Reference source not found. illustrates the level of service changes proposed for Fiscal Year 2024.

Table 9 | Proposed Fiscal Year 2024 Service Improvements

Route	Type of Recommendation (Service Addition, Expansion, or Extension)	Proposed Recommendation	New or Additional Buses Required
ART			
45	Expansion	Weekday Rush Hour Frequency Increase to 15 minutes	1
93	New Service	New route between Shirlington, National Airport and Crystal City; Weekday and weekend service	3

5.2.7 Fiscal Year 2025

The recommendations originally proposed for Fiscal Year 2025 being addressed in earlier years, no service proposals are recommended in this fiscal year.

5.2.8 Fiscal Year 2026

By Fiscal Year 2026, a new service type will be introduced: the on-demand flex service. In the earlier years of the plan, the exact service mechanisms for operating this new flex service will have been determined through a focused study. The on-demand flex service will consist of four different zones which will provide midday service to lower density areas in a more cost efficient manner. The on-demand flex zones will be associated with peak hour only routes and will only provide trips to and from defined activity/transfer centers.

The following service reduction is being considered for Fiscal Year 2026:

- **ART 53:** Service during midday will be reduced on this route and replaced by an on-demand flex zone service.

There will be a slight increase in annual revenue hours and miles for the ART system. **Table 10** describes the level of service changes for Fiscal Year 2026.

Table 10 | Proposed Fiscal Year 2026 Service Improvements

Route	Type of Recommendation (Service Addition, Expansion, or Extension)	Proposed Recommendation	New or Additional Buses Required
ART			
Flex Zone 1	New Service	New Flexible Service	1
Flex Zone 2	New Service	New Flexible Service	1
Flex Zone 3	New Service	New Flexible Service	1
Flex Zone 4	New Service	New Flexible Service	1

5.3 Title VI Response

No current or planned service improvements were developed as a direct response to the most recent Title VI Service Equity Assessment. ART has not yet had a Triennial review.

5.4 Facility Improvements

The proposed projected fleet size for ART is eighty-five (92) buses in 2026. The maintenance requirements of a fleet of this size are typically accommodated in a single facility located with the fleet parking. As a general rule, most agencies support maintenance operations at a single facility until the total fleet count is above 200 buses. This is different at Arlington County where it is nearly impossible to find a single property large enough to accommodate the entire fleet plus a maintenance facility.

The Arlington County maintenance program will be split to address the multiple bus parking locations. A single bay facility will be located at the South Eads Service Center and will be used to perform minor maintenance on the forty plus buses stored there. The remainder of the maintenance activities will occur at a new facility on a yet to be determined site. The programmatic requirements for the new facility are based on the fleet size, fleet mix, and maintenance practices of the County. A maintenance facility sized to support the projected fleet is approximately 22,510 square feet. The total area is divided into the following functions:

- **Administration:** offices and workstations for maintenance administrative staff at just over 1,020 square feet;
- **Repair Bays:** 9 repair bays, one chassis wash bay and one body bay at a total of 13,200 square feet;
- **Shops:** common work areas, tire shop and electronics shop at 480 square feet;
- **Support Areas:** areas such as battery rooms, tool box storage, etc. at 2,600 square feet;
- **Personnel Areas:** Mechanic's lunchroom and locker areas at 1,380 square feet; and
- **Parts Storeroom:** parts storage at 3,830 square feet.