

Metrobus Service Evaluation Study – Bowie Lines

Bowie State University (B21, 22)

Bowie-New Carrollton (B27)

Bowie-Belair (B24, B25)

Crofton-New Carrollton (B29, B31)

Final Report

May 2013



Study Purpose

- *The primary study purpose is to identify the strategic needs for programs and facilities for the Bowie Lines. The study includes a review of capacity, productivity, reliability, and quality of service indicators as well as recommended changes to improve service delivery.*

Project Scope of Work

- Transit Service Assessment
 - Develop a detailed assessment and “snapshot” of the Bowie Lines
 - Overall service characteristics, ridership and productivity, boardings and alightings, passenger loads, bus stop spacing, on-time performance, driver and planner interviews
- Traffic Operations Assessment
 - Identify the full range of traffic issues on the Bowie Lines
 - Traffic signals and other traffic control devices
 - Lane widths and right-of-way
 - Turns and adequate turning radius

Project Scope of Work

- Public Outreach
 - Rider survey to gauge issues and needs
 - Focus group and two public meetings
 - Issues identification
 - Feedback on preliminary recommendations
 - Outreach results were key input into the study process and recommendations

Project Scope of Work

- Recommendations

- Completed in two steps

- Preliminary recommendations – relied on inputs from all previous steps
 - Final – incorporate team comments

- Areas covered by recommendations

- Hours of service
 - Service frequency
 - Coordinated trips between routes
 - Schedule adjustments to reflect actual run times
 - Weekend service
 - Restructured routes
 - Improvement to bus stop locations and amenities
 - Traffic and running way improvements

Line Summary

- Line Description

- The Bowie State University Line (B21/22) runs from New Carrollton Metrorail Station in the west to Bowie State University in the east via U.S. 50 and Laurel Bowie Road.
- The Bowie-Belair Line (B24/25) runs from New Carrollton Metrorail Station in the west to the Bowie Park & Ride in the east via Annapolis Road.
- The Bowie-New Carrollton Line (B27) runs from New Carrollton Metrorail Station in the west to Bowie State University in the east via Lanham-Severn Road.
- The Crofton-New Carrollton (B29, B31) runs from New Carrollton Metrorail Station in the west to Crofton Country Club in the east via U.S. 50 and Crain Highway

Line Summary

- Service Characteristics
 - Hours of service (start of first trip to start of last trip)

Route	Hours of Service
B21, B22 Westbound	All Day: 4:48 AM – 8:25 PM
B21, B22 Eastbound	All Day: 6:50 AM – 7:40 PM
B24 Westbound	All Day: 5:04 AM – 7:54 PM
B24, B25 Eastbound	All Day: 6:20 AM – 8:00 PM
B27 Southbound	AM Service: 6:25 AM – 7:55 AM PM Service: 3:36 PM – 9:36 PM
B27 Northbound	AM Service: 5:58 AM – 7:25 AM PM Service: 3:05 PM – 9:05 PM
B29 Westbound	AM Service: 6:00 AM – 7:43 AM PM Service: 4:47 PM – 5:52 PM
B29 Eastbound	AM Service: 6:33 AM – 7:13 AM PM Service: 4:15 PM – 6:28 PM
B31 Westbound	PM Service: 7:58 PM – 9:58 PM
B31 Eastbound	PM Service: 7:28 PM – 9:28 PM

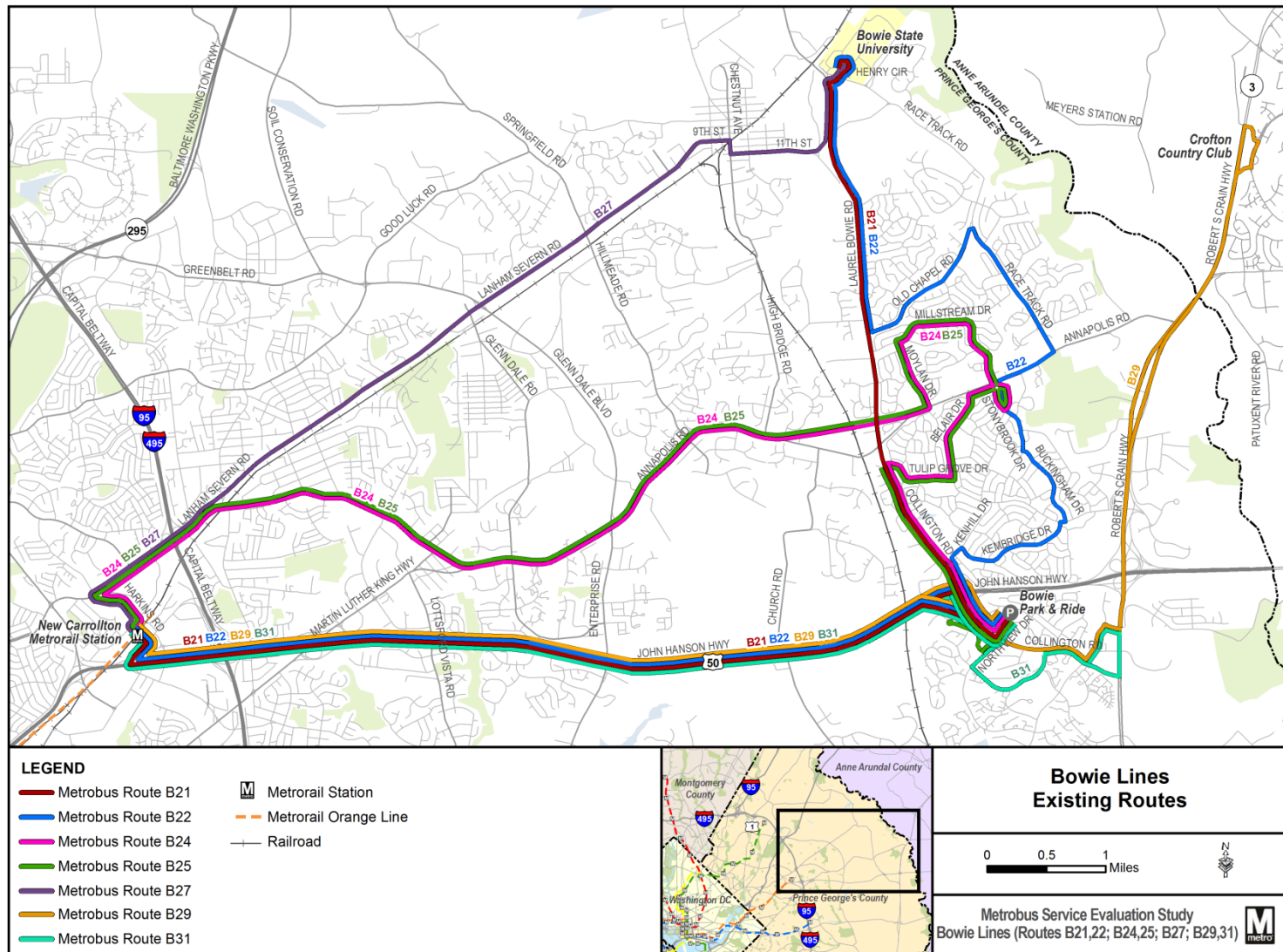
Line Summary

- Weekday Ridership and Productivity

Route	Daily Ridership	Fare Recovery	Boardings/ trip	Subsidy/ passenger	Boardings/ revenue mile
B21, B22	828	32.6%	24.7	\$2.03	1.6
B24, B25	1,071	22.8%	24.5	\$3.31	1.6
B27	270	22.8%	12.7	\$3.32	1.4
B29, B31	268	21.7%	14.3	\$3.63	1.1
WMATA Regional Standard	>360	>15.8%	>10.4	<\$4.47	>1.2

Source: WMATA Productivity Report – December 2012

Line Map



Study Findings

- Hours of Service and Frequency of Service
 - WMATA guidelines for minimum hours of service and service frequency are not met along a majority of the lines.
- On-Time Performance (OTP)
 - Buses on Routes B25 and B29 often do not run on schedule. OTP is poor mainly for the B25 during the midday and PM peak and the B29 in the PM peak.
- Insufficient Run Time
 - Review of NextBus data identified that the B24 during the PM peak period and B25 during the midday and PM peak period have insufficient scheduled run time.
- Passenger Facilities
 - Bus stop spacing – multiple stops are too close together based on WMATA bus stop spacing guidelines.
 - Many stops lack basic bus stop amenities as outlined in WMATA bus stop guidelines.



Service Recommendations

Recommendation #1: Increase Scheduled Run Time

- *Recommendation*
 - Increase scheduled run time along the following trips:
 - Five B24 westbound AM Peak trips
 - Six B25 eastbound Midday trips
 - Eight B25 eastbound PM Peak trips
 - Five B29 eastbound PM Peak trips
- *Recommendation Purpose*
 - Increase scheduled run time to meet WMATA's on-time performance guidelines (adding approximately 5 minutes to each route).
- *Estimated Costs Associated with Recommendation #1*
 - Annual Operating Costs: \$61,000
 - Capital Costs: \$605,000 (for 1 new bus to maintain existing service frequency)



Service Recommendations

Recommendation #2: Increase Service Hours

- *Recommendation*
 - Increase the span of service for the following routes:
 - Start B21 eastbound service to arrive at Bowie State University before 7:00 am.
 - Start B25 eastbound service to arrive at Bowie Park & Ride before 7:00 am.
 - Convert the B24 eastbound PM service (4 trips) into B25 eastbound service to provide access to the Bowie Health Center until 7:00 pm.
 - Extend B27 AM service to 9:00 am.
 - Extend B29 AM service to 9:00 am.
 - Start B29 PM service to begin before 4:00 pm.
 - Extend B29 PM service to begin its last trip after 6:30 pm.
- *Recommendation Purpose*
 - Increase service hours to meet WMATA's hours of service guidelines.
 - Increase service hours to meet the request from riders at focus groups to start service earlier.
- *Estimated Costs Associated with Recommendation #2*
 - Annual Operating Costs: \$184,000



Service Recommendations

Recommendation #3: Expand Service Hours to Bowie State University

- *Recommendation*
 - Expand service hours past 10pm to meet Bowie State University class schedule.
 - Can be accommodated by expanding either B21/22 or the B27.
- *Recommendation Purpose*
 - Would meet the class schedule and service demands at Bowie State University.
- *Estimated Costs Associated with Recommendation #3*
 - Can be completed by expanding one of two routes:
 - Annual B21/22 Expansion Operating Costs: \$51,000
 - Annual B27 Expansion Operating Costs: \$26,000



Service Recommendations

Recommendation #4: Increase Service Frequency

- *Recommendation*
 - Increase service frequency on the following routes:
 - Adjust B21/B22 westbound and eastbound AM peak period service from every 36 minutes to 30 minutes.
 - Adjust B21/B22 westbound and eastbound PM peak period service from every 34 minutes to 30 minutes.
 - Adjust B25 eastbound AM peak period service from every 36 minutes to 30 minutes.
 - Adjust B24 westbound PM peak period service from every 60 minutes to 30 minutes between 3:00 – 6:00 PM.
 - Adjust B27 eastbound PM peak period service from 40 minutes to 30 minutes.
 - Adjust B27 westbound PM peak period service from 35 minutes to 30 minutes.
- *Recommendation Purpose*
 - Add trips to meet WMATA's service frequency guidelines.
- *Estimated Costs Associated with Recommendation #4*
 - Annual Operating Costs: \$201,000



Service Recommendations

Recommendation #5: Implement Weekend Service

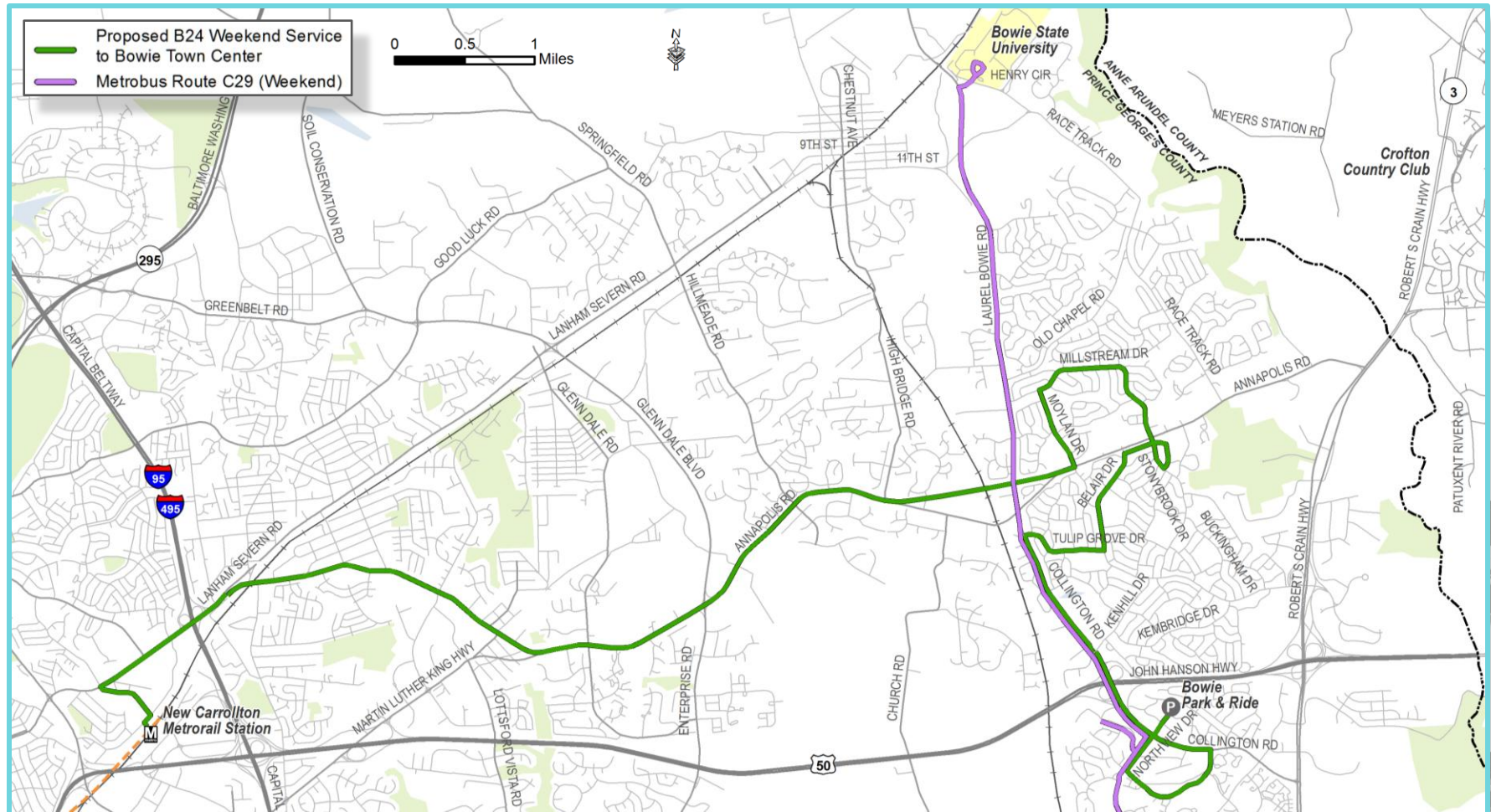
- *Recommendation*
 - Implement weekend service over a modified B24 routing with a loop around Bowie Town Center.
 - Metrobus Route C29 would be expanded to operate on Sundays to provide Sunday service transfers from the B24 to Bowie State University.
- *Recommendation Purpose*
 - Would provide weekend service to commercial developments along Annapolis Road and connect Bowie Town Center with New Carrollton Metro.
 - Would provide a transfer connection with Metrobus Route C29 at Laurel Bowie Road and Annapolis Road and on Northview Drive linking New Carrollton Metro and Bowie State University.
- *Estimated Costs Associated with Recommendation #5*

– Annual Operating Costs for B24 Weekend Service:	\$298,000
– Annual Operating Costs for C29 Sunday Service:	\$265,000
– Total Annual Weekend Operating Costs:	\$563,000



Service Recommendations

Recommendation #5: Implement Weekend Service



Service Recommendations

Recommendation #6: Coordinate Trips Between Routes

- *Recommendation*
 - Coordinate schedules between the following routes at the following locations:
 - Coordinate the B21, B22, and B29 at the Bowie Park & Ride during the AM and PM peak periods in evenly distributed intervals to the extent feasible (every ~15 minutes). The C28 would be included in this distribution.
 - Coordinate the B25 and B27 at the New Carrollton Metro during the PM peak period to start trips at different times.
- *Recommendation Purpose*
 - Recommendation would provide more evenly distributed passenger loads between routes and reduce bus bunching. This will prevent overcrowding at major bus stops (New Carrollton Metro and Bowie Park & Ride) and provide additional frequency for some passengers.
- *Estimated Costs Associated with Recommendation #6*
 - No costs are anticipated (unless changes to hours of service and frequency are necessary)



Service Recommendations

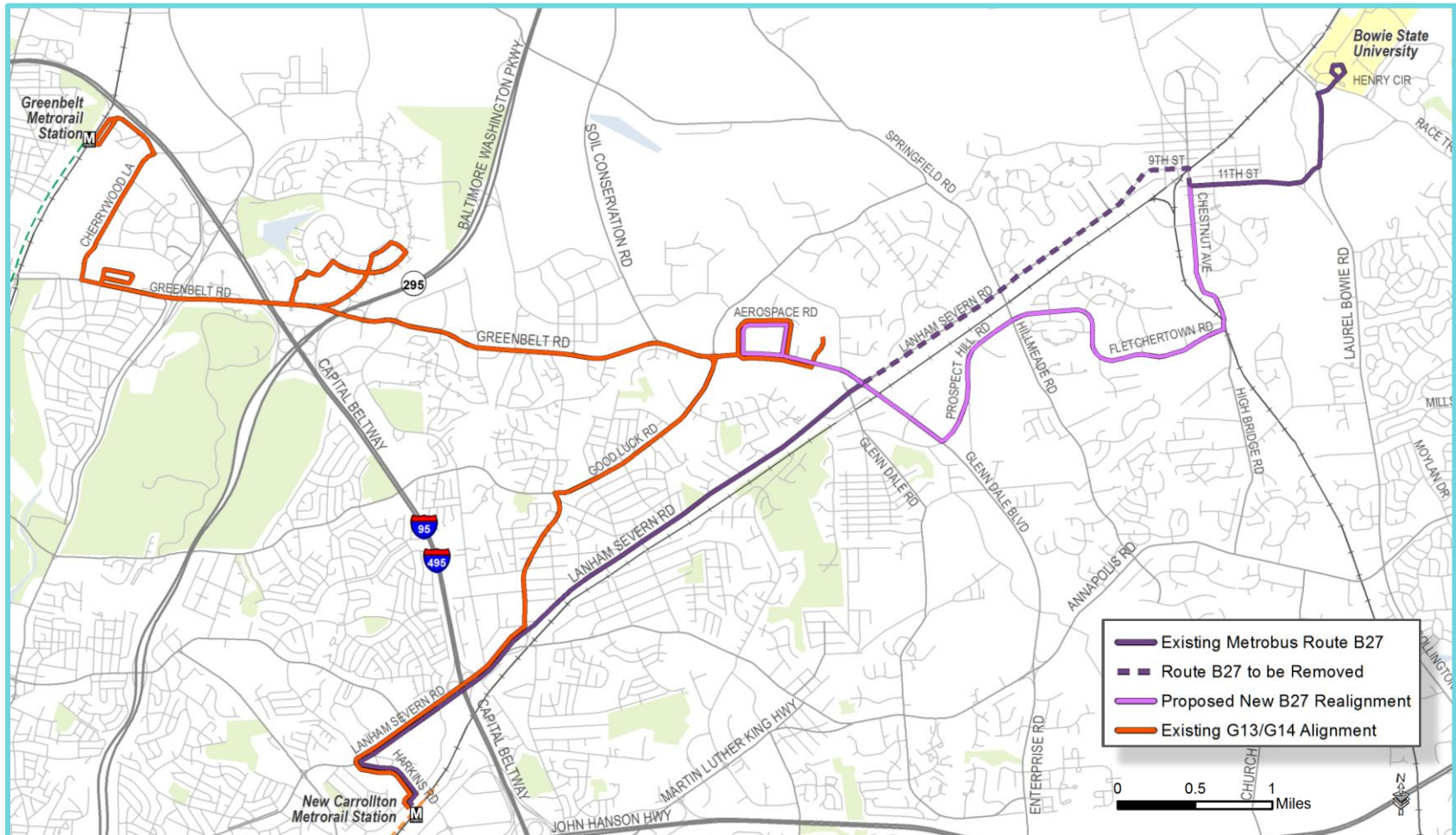
Recommendation #7: Restructure Route B27

- *Recommendation*
 - Divert Route B27 to provide service to Greenbelt Road, Aerospace Road, Forbes Boulevard, Glenn Dale Boulevard, Prospect Hill Road, Fletchertown Road, and Chestnut Road.
- *Recommendation Purpose*
 - Would provide a connection to Greenbelt Metro via a connection with Metrobus Route G13 & G14.
 - Would connect service to Reid Temple Church, Glenn Dale Golf Club, and new residential developments.
 - Route would still provide service to New Carrollton Metro, Downtown Bowie, and Bowie State University.
- *Estimated Costs Associated with Recommendation #7*
 - Annual Operating Costs: \$149,000
 - Capital Costs: \$605,000 (for 1 new bus to maintain existing service frequency)
 - Cost neutral approach requires frequencies beyond WMATA's service frequency guidelines.



Service Recommendations

Recommendation #7: Restructure Route B27



Service Recommendations

Recommendation #8: Implement Hub & Spoke Service Restructuring

- *Recommendation*

- Restructure routes on weekdays into a hub and spoke service using Bowie Park & Ride as a hub. Service frequency and scheduling would be modified to provide ease of transfer to and from the Bowie Park & Ride.
 - A new express service would be introduced between New Carrollton Metro and Bowie Park & Ride. This route would provide the only access between Bowie Park & Ride and New Carrollton via U.S. 50 from 5:00 am to 7:00 pm. The express service would be extended in the evening to provide service from New Carrollton to the Gateway Center from 7:00 pm to 9:30 pm.
 - B21 service would be eliminated.
 - B22 service would provide all-day bi-directional service between Bowie State University and Bowie Park & Ride. Service along U.S. 50 would be replaced by the proposed express service.
 - B24 and B25 would be consolidated into the B24 and no longer serve the Bowie Health Center. C28 would provide service to the Health Center.
 - B27 service would remain unchanged. B27 service could be restructured to include the B27 restructuring found in Recommendation #6.
 - B29 and B31 would be consolidated and serve the existing route configuration as one route (known as the B29). The consolidated B29 service would run during peak periods between 6:00 am to 9:30 am, and 4:00 pm to 7:00 pm. Existing B29 and B31 service between Bowie Park & Ride and New Carrollton along U.S. 50 would be replaced during the peak periods by the proposed express service. Existing B31 service to Gateway Center would be replaced by the express service extension from New Carrollton to the Gateway Center from 7:00 pm to 9:30 pm.
 - C28 would be modified to travel between Bowie Park & Ride and Pointer Ridge. C28 service along U.S. 50 would be replaced by the proposed express service.



Service Recommendations

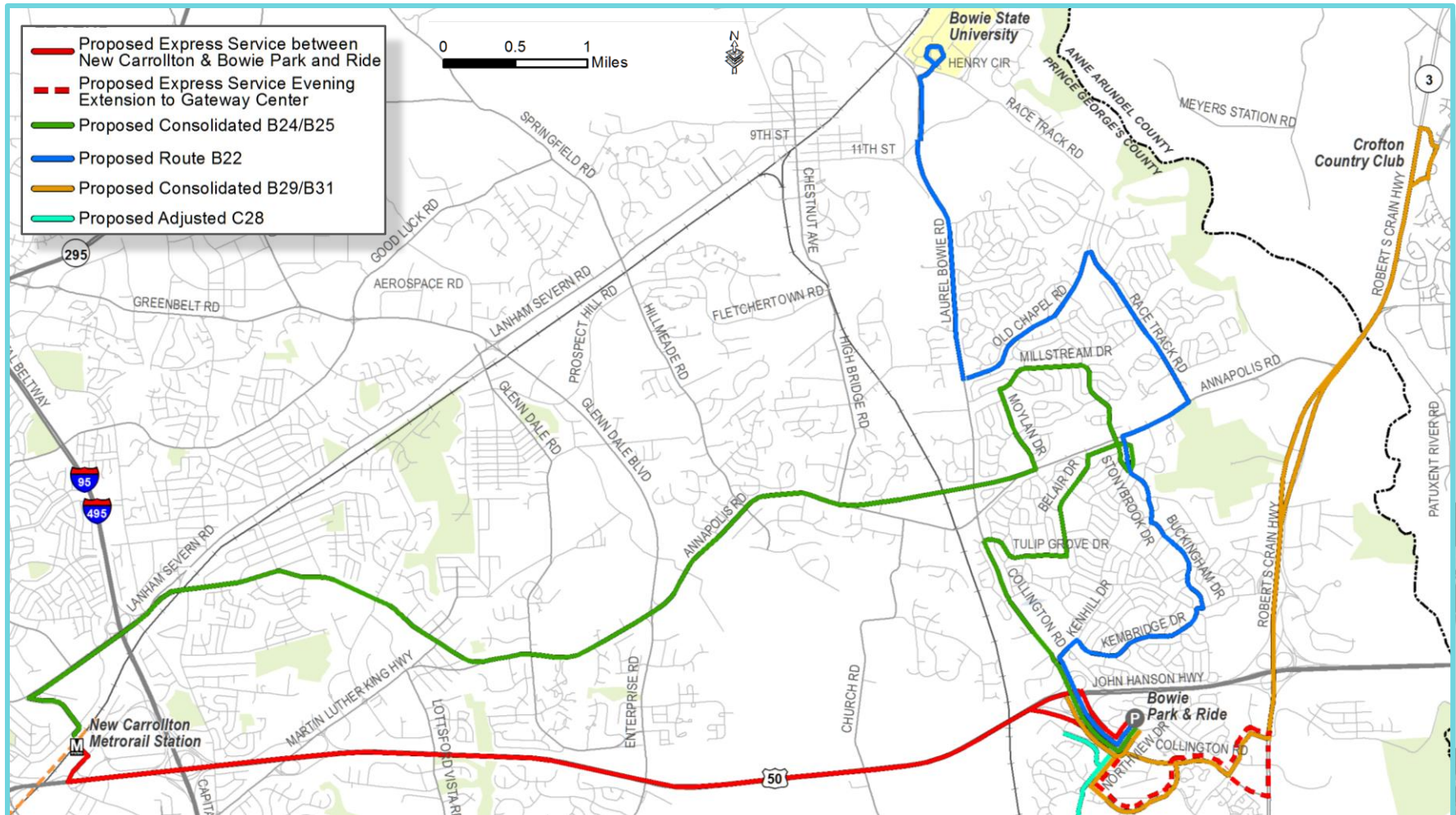
Recommendation #8 (cont.): Implement Hub & Spoke Service Restructuring

- *Recommendation Purpose*
 - Allows for more frequent and reliable service across routes.
- *Estimated Costs Associated with Recommendation #8*
 - Annual Operating Costs: \$117,000
 - Capital Costs: \$1,210,000 (for 2 new buses to maintain existing service frequency)
 - Cost-neutral approach will lead to frequencies far below WMATA's service frequency guidelines.



Service Recommendations

Recommendation #8 (cont.): Implement Hub & Spoke Service Restructuring



Service Recommendations

Recommendation #8 (cont.): Implement Hub & Spoke Restructuring – Additional Improvements

- *Recommendation*

- Include additional improvements to the base hub and spoke recommendation:
 - Combine B22 and B27 into one route.
 - Include restructured B27 realignment from Recommendation #6.

- *Recommendation Purpose*

- Combined B22/B27 would improve connectivity and provide all day service along the B27 alignment.
- Restructured B27 would expand the route's service area.
- Creates new direct link between Lanham-Severn Road and Bowie Park & Ride and Bowie Town Center.



Service Recommendations

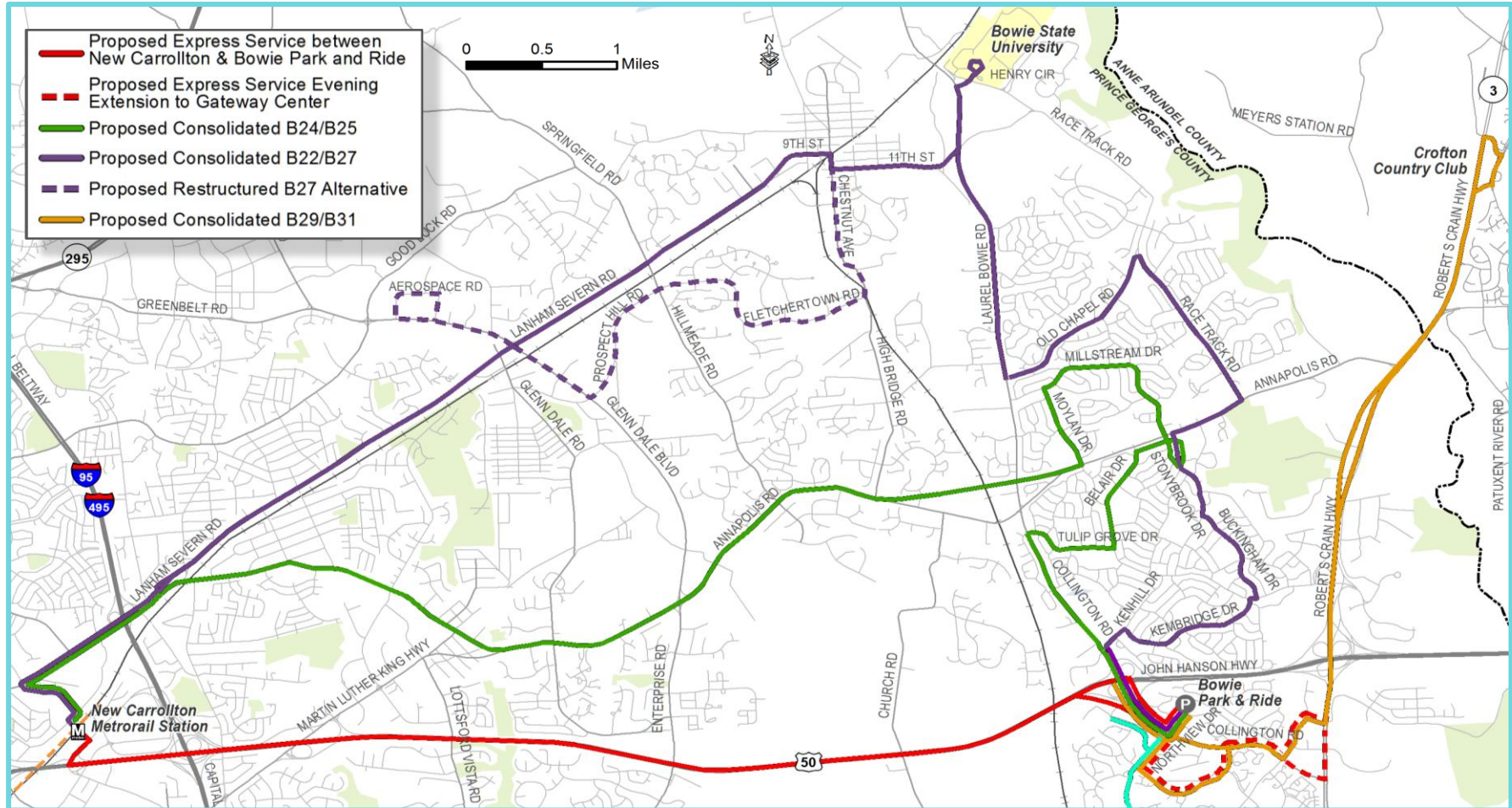
Recommendation #8 (cont.): Implement Hub & Spoke Restructuring – Additional Improvements

- *Estimated Costs Associated with Additional Improvements to Recommendation #9*
 - Consolidate B22/B27 Independently
 - Annual Additional Operating Costs (beyond base hub & spoke costs): \$189,000
 - Annual Additional Capital Costs (beyond base hub & spoke costs): \$605,000
(for 1 new bus)
 - Restructure B27 Independently
 - Annual Additional Operating Costs (beyond base hub & spoke costs): \$192,000
 - Annual Additional Capital Costs (beyond base hub & spoke costs): \$605,000
(for 1 new bus)
 - Consolidate B22/B27 with Restructured B27 Service
 - Annual Additional Operating Costs (beyond base hub & spoke costs): \$483,000
 - Annual Additional Capital Costs (beyond base hub & spoke costs): \$1,210,000
(for 2 new bus)



Service Recommendations

Recommendation #8 (cont.) : Implement Hub & Spoke Restructuring – Additional Improvements



Facility Recommendations

Recommendation #9: Add New Bus Stops

- *Recommendation*
 - Add new bus stops at the following locations:
 - Annapolis Road and Race Track Road (Hill Top Shopping Center) – along the B22
 - Annapolis Road and Martin Luther King Jr. Highway (Vista Gardens Marketplace) - along the B24/B25
 - Health Center Drive between Bowie Senior Center and Bowie Health Center (Harmony Place) - along the B25
- *Recommendation Purpose*
 - New stops would serve new commercial and residential developments.
- *Estimated Costs Associated with Recommendation #4*
 - Capital Costs: \$6,600 (costs include bus stop flag and landing pad where needed)



Facility Recommendations

Recommendation #10: Consolidate Bus Stops

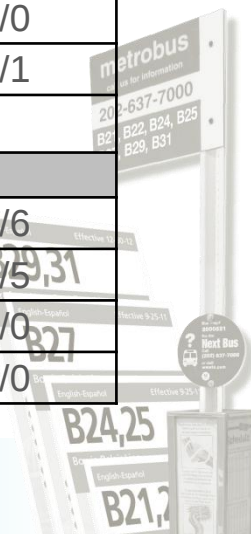
- *Recommendation*
 - Begin bus stop consolidation process following WMATA procedures – potential candidates identified based on distance between stops guidelines.
- *Recommendation Purpose*
 - Improve passenger convenience
 - Improve trip times and reliability
- *Estimated Capital Costs Associated with Recommendation #10*
 - Costs cannot be calculated until specific stops to be consolidated are identified.



Facility Recommendations

Recommendation #10 (cont.): Stop Consolidation Candidates

Westbound Candidate Stops	Boardings/ Alightings	Eastbound Candidate Stops	Boardings/ Alightings
B22			
Kembridge Dr + Kenhill Dr	13/9	Kembridge Dr + Kenhill Dr	2/3
		Stonybrook Dr + Brunswick La	0/1
B24/B25			
Tulip Grove Dr + Folsom La	8/1	Annapolis Rd + West Lanham Dr	8/6
Tulip Grove Dr + Trainor La	0/0	Annapolis Rd + #7970	2/5
Tulip Grove Dr + Foxhill La	0/0	Moylan Dr + Malin La	0/0
Belair Dr + Stafford La	0/0	Moylan Dr + Madeley La	0/0
Millstream Dr + Memory La	1/0	Millstream Dr + Manvel La	2/0
Millstream Dr + Mabank La	1/0	Millstream Dr + Mabank La	0/0
Annapolis Rd + #7970	2/2	Tulip Grove Dr + Foxhill La	1/1
Annapolis Rd + West Lanham Dr	7/9		
B27			
Lanham-Severn Rd + Church La	0/0	Annapolis Rd + West Lanham Dr	8/6
Lanham-Severn Rd + Louise St	0/0	Annapolis Rd + #7970	2/5
Annapolis Rd + #7970	2/2	Lanham-Severn Rd + Louise St	0/0
Annapolis Rd + West Lanham Dr	7/9	Lanham-Severn Rd + Church La	0/0



Facility Recommendations

Recommendation #11: Improvements to Bus Stop Landing Pads

- *Recommendation*
 - Install 90 missing bus stop landing pads.
- *Recommendation Purpose*
 - A landing pad provides a safe boarding and alighting area for passengers, greater access for wheelchair users, the elderly, and other encumbered riders such as parents with strollers.
- *Estimated Costs Associated with Recommendation #11*
 - Capital Costs: \$135,000



Facility Recommendations

Recommendation #11 (cont.): Westbound Stops Requiring a Bus Stop Pad

Annapolis Rd + Princess Garden Pkwy	11 th St + Myrtle Ave	Laurel Bowie Rd + Rustic Hill Dr	Collington Rd + Lyle La	Lanham-Severn Rd + Church La
Annapolis Rd + Seabrook Rd	Race Track Rd + Clearfield Dr	Lanham-Severn Rd + Main St	Race Track Rd + Yorktown Dr	Lanham-Severn Rd + Louise St
Annapolis Rd + Baltimore La	Lanham-Severn Rd + Santa Cruz St	Annapolis Rd + Carter Ave	Lanham-Severn Rd + 93rd Pl	Evergreen Pkwy + East Dr
Annapolis Rd + Ellerbie St	Annapolis Rd + #9607	Lanham-Severn Rd + 96th Ave	Lanham-Severn Rd + Green Haven Rd	
Annapolis Rd + Atwell Ave	Lanham-Severn Rd + Greenbelt Rd	Lanham-Severn Rd + 98th Ave	Lanham-Severn Rd + Woodstream Dr	
Annapolis Rd + Morley Rd	Annapolis Rd + Silvergate La	Annapolis Rd + St Pius X Church	Collington Rd + Tulip Grove Dr	
Belair Dr + Sussex La	Annapolis Rd + Bell Station Blvd	Laurel Bowie Rd + Race Track Rd	Evergreen Pkwy + Endicott Pkwy	
Annapolis Rd + Glendale Woods Ct	9th St + Park Ave	Lanham-Severn Rd + Cowan Ave	Annapolis Rd + Lottsford Vista Rd	
Annapolis Rd + Galveston Rd	Lanham-Severn Rd + Driscoll Dr	Race Track Rd + Marquette La S/N	Harkins Rd + Ellin Rd	



Facility Recommendations

Recommendation #11 (cont.): Eastbound Stops Requiring a Bus Stop Pad

Bowie Health Center + Entrance #15001	Kenhill Dr + Kemmerton La	Annapolis Rd + Fairwood Pkwy	Lanham-Severn Rd + Green Haven Rd	Harkins Rd + Ellin Rd
Annapolis Rd + Sir Lancelot Dr	Annapolis Rd + Baltimore La	Harkins Rd + Sherwood St	Old Chapel Rd + Welsley La	Collington Rd + Faith La
Annapolis Rd + Whitfield Chapel Rd	Annapolis Rd + Grenville La	Lanham-Severn Rd + Main St	Race Track Rd + Marquette La	Laurel Bowie Rd + Rustic Hill Dr
Health Center Dr + Senior Center	Annapolis Rd + Enterprise Rd	Old Chapel Rd + Laurel Bowie Rd	Annapolis Rd + Martha's Choice Cir	Lanham-Severn Rd + Cowan Ave
Annapolis Rd + Highbridge Rd	Annapolis Rd + #9607	Lanham-Severn Rd + Wingate Dr	Lanham-Severn Rd + Santa Cruz St	Lanham-Severn Rd + Hillmeade Rd
Lanham-Severn Rd + Glenn Dale Rd	Annapolis Rd + Atwell Ave	Lanham-Severn Rd + Woodstream Dr	Lanham-Severn Rd + 93rd Pl	Collington Rd + Tulip Grove Dr
Annapolis Rd + Forbes Blvd	11th St + Myrtle Ave	Race Track Rd + Overbrook La	9th St + Park Ave	Annapolis Rd + Galveston Rd
Annapolis Rd + Lottsford Vista Rd	Annapolis Rd + Silvergate La	Lanham-Severn Rd + Forbes Blvd	Laurel Bowie Rd + Race Track Rd	Lanham-Severn Rd + Church La
Sussex La + Belair Dr	Lanham-Severn Rd + Driscoll Dr	Lanham-Severn Rd + 98th Ave	Lanham-Severn Rd + 96th Ave	Lanham-Severn Rd + Louise St



Facility Recommendations

Recommendation #11 (cont.) : Eastbound Stops Requiring a Bus Stop Pad

Race Track Rd + Yorktown Dr

Recommendation #11 (cont.): Combined Westbound/Eastbound Stops Requiring a Bus Stop Pad

Crofton Country Club	Collington Rd + Tongue Ave	Collington Rd + Faith La
Collington Rd + Long Ridge La	Collington Rd + Lerner Pl	



Facility Recommendations

Recommendation #12: Improvements to Sidewalks

- *Recommendation*
 - Install sidewalks for 67 bus stops.
- *Recommendation Purpose*
 - A landing pad connected to an accessible sidewalk separated from the general pedestrian flow creates a safe boarding and alighting experience for passengers.
- *Estimated Costs Associated with Recommendation #12*
 - Costs cannot be calculated since assessment only identified missing sidewalks and not the existing sidewalk network.



Facility Recommendations

Recommendation #12 (cont.): Westbound Stops Requiring a Sidewalk

9th St + Chapel Ave	Lanham-Severn Rd + Greenbelt Rd	Lanham-Severn Rd + 98th Ave	Lanham-Severn Rd + 93rd Pl	Lanham-Severn Rd + Church La
Belair Dr + Sussex La	9th St + Park Ave	Laurel Bowie Rd + Race Track Rd	Lanham-Severn Rd + Green Haven Rd	Lanham-Severn Rd + Louise St
11th St + Myrtle Ave	Laurel Bowie Rd + Rustic Hill Dr	Lanham-Severn Rd + Cowan Ave	Lanham-Severn Rd + Woodstream Dr	Evergreen Pkwy + East Dr
Lanham-Severn Rd + Santa Cruz St	Lanham-Severn Rd + Main St	Collington Rd + Lyle La	Collington Rd + Tulip Grove Dr	
Lanham-Severn Rd + Wingate Dr	Lanham-Severn Rd + 96th Ave	Race Track Rd + Yorktown Dr	Evergreen Pkwy + Endicott Pkwy	

Recommendation #12 (cont.): Combined Westbound/Eastbound Stops Requiring a Sidewalk

Crofton Country Club	Collington Rd + Tongue Ave	Collington Rd + Faith La
Collington Rd + Long Ridge La	Collington Rd + Lerner Pl	



Facility Recommendations

Recommendation #12 (cont.): Eastbound Stops Requiring a Sidewalk

Annapolis Rd + Sir Lancelot Dr	Annapolis Rd + Grenville La	Lanham-Severn Rd + Woodstream Dr	9th St + Park Ave	Lanham-Severn Rd + Church La
Health Center Dr + Senior Center	Annapolis Rd + Enterprise Rd	Race Track Rd + Overbrook La	Laurel Bowie Rd + Race Track Rd	Lanham-Severn Rd + Louise St
Annapolis Rd + Highbridge Rd	Annapolis Rd + Atwell Ave	Lanham-Severn Rd + Forbes Blvd	Lanham-Severn Rd + 96th Ave	Race Track Rd + Yorktown Dr
Lanham-Severn Rd + Glenn Dale Rd	11th St + Myrtle Ave	Lanham-Severn Rd + 98th Ave	Collington Rd + Faith La	
Annapolis Rd + Forbes Blvd	Annapolis Rd + Silvergate La	Lanham-Severn Rd + Green Haven Rd	Laurel Bowie Rd + Rustic Hill Dr	
Annapolis Rd + Lottsford Vista Rd	Lanham-Severn Rd + Driscoll Dr	Old Chapel Rd + Welsley La	Lanham-Severn Rd + Cowan Ave	
Sussex La + Belair Dr	Annapolis Rd + Fairwood Pkwy	Annapolis Rd + Martha's Choice Cir	Lanham-Severn Rd + Hillmeade Rd	
Annapolis Rd + Baltimore La	Lanham-Severn Rd + Main St	Lanham-Severn Rd + Santa Cruz St	Collington Rd + Tulip Grove Dr	
Lanham-Severn Rd + Seabrook Rd	Lanham-Severn Rd + Wingate Dr	Lanham-Severn Rd + 93rd Pl	Annapolis Rd + Galveston Rd	



Facility Recommendations

Recommendation #13: Install Information Cases

- *Recommendation*
 - Install information cases immediately at 3 bus stops with over 50 boardings per day.
 - Install information cases for 10 bus stops with more than 20 boardings per day in the long term.
- *Recommendation Purpose*
 - Stops are the gateway to the transit system for bus passengers. Improving stop amenities creates a better passenger experience and an overall positive image for the system.
- *Estimated Costs Associated with Recommendation #13*
 - Immediate Installation Capital Costs: \$600
 - Long-term Installation Capital Costs: \$1,800



Facility Recommendations

Recommendation #13 (cont.): Stops Requiring Immediate Installation of an Information Case

Stop	Direction
Bowie State University + Martin Luther King Jr Ctr	Terminal Stop
Northview Dr + Collington Rd (W)	Westbound
Northview Dr + Collington Rd (E)	Eastbound

Recommendation #13 (cont.): Stops Requiring Long-Term Installation of an Information Case

Stop	Direction
Crofton Country Club + North Pkg Lot Rdwy	Terminal Stop
Annapolis Rd + Glenn Dale Blvd	Westbound
Annapolis Rd + Fontana Dr	Westbound
Annapolis Rd + Washington La	Westbound
Annapolis Rd + Forbes Blvd	Westbound
Annapolis Rd + Princess Garden Pkwy	Westbound
Annapolis Rd + Whitfield Chapel Rd	Eastbound
Mitchellville Rd + Harbour Way	Westbound
9th St + Chapel Ave	Westbound



Facility Recommendations

Recommendation #14: Install Trash Receptacles

- *Recommendation*
 - Install 5 trash receptacles at stops that have over 25 boardings per day.
- *Recommendation Purpose*
 - Stops are the gateway to the transit system for bus passengers. Improving stop amenities creates a better passenger experience and an overall positive image for the system.
- *Estimated Costs Associated with Recommendation #14*
 - Capital Costs: \$5,000



Facility Recommendations

Recommendation #14 (cont.): Stops Requiring a Trash Receptacle

Stop	Direction
Bowie State University + Martin Luther King Jr Ctr	Terminal Stop
Northview Dr + Collington Rd (W)	Westbound
Northview Dr + Collington Rd (E)	Eastbound
Annapolis Rd + Glenn Dale Blvd	Westbound
Annapolis Rd + Forbes Blvd	Westbound



Facility Recommendations

Recommendation #15: Install Shelters and Benches

- *Recommendation*
 - Install a shelter and bench at one bus stop with over 50 boardings per day.
- *Recommendation Purpose*
 - Stops are the gateway to the transit system for bus passengers. Improving stop amenities creates a better passenger experience and an overall positive image for the system.
- *Stop Requiring a Shelter and Bench*

Stop	Direction
Northview Dr + Collington Rd (E)	Eastbound

- *Estimated Costs Associated with Recommendation #15*
 - Capital Costs: \$10,000



Facility Recommendations

Recommendation #16: Add Bus Stop Flags

- *Recommendation*
 - Install missing bus stop flags at three bus stops.
- *Recommendation Purpose*
 - Stops are the gateway to the transit system for bus passengers. Improving stop amenities creates a better passenger experience and an overall positive image for the system.
- Stops Requiring a Bus Stop Flag

Stop	Direction
Annapolis Rd + Washington La	Eastbound
Collington Rd + Lerner Pl	Southbound
Lanham-Severn Rd + Cipriano Rd	Eastbound

- *Estimated Costs Associated with Recommendation #16*
 - Capital Costs: \$300

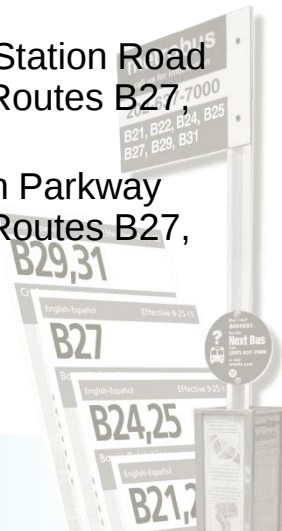


Traffic Improvement Recommendations

Recommendation #17: Improvements to Traffic Operations

- *Recommendation*

- Implement multiple traffic related recommendations to improve operations and reliability on the Bowie Lines.
- Specific Recommendations:
 - Coordinate with Prince George's County or Maryland Department of Transportation to conduct traffic movement counts at certain intersections in order to optimize cycle length/splits and prioritize bus traffic movements.
 - Coordinate with Prince George's County and Maryland Department of Transportation to move the westbound stop at Annapolis Road and Laurel Bowie Road to the far side of the intersection.
 - Discontinue B25 service at the eastbound stop at Annapolis Road and Lanham Station Road due to difficulty accessing the stop. The stop would still be served by Metrobus Routes B27, B29, B31, F13, G12, G13, G14, and G16.
 - Discontinue B24 service at the westbound Annapolis Road and Princess Garden Parkway due to difficulty accessing the stop. The stop would still be served by Metrobus Routes B27, B29, B31, F13, G12, G13, G14, and G16.
 - Coordinate with City of Bowie on parking restrictions in front of stops.



Traffic Improvement Recommendations

Recommendation #17 (cont.): Improvements to Traffic Operations

