BLACKSTONE AREA BUS SYSTEM TRANSIT DEVELOPMENT PLAN: FISCAL YEARS 2010 – 2015

Prepared for:

BABS
BLACKSTONE AREA BUS SYSTEM
BABS LINE

Prepared by:

PBS&J®

Under contract to:

DRPT
Virginia Department of Rail and Public Transportation
The Smartest Distance Between Two Points

December 2009

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Currently defined as a service that is provided in a rural portion of the Commonwealth, Blackstone Area Bus System is not required to prepare and submit its own separate Title VI report or the associated FTA Quadrennial Review; therefore, Appendix A and Appendix B are not included as part of this document.

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1.0 OVERVIEW OF BLACKSTONE AREA BUS SYSTEM

1.1 History

The Blackstone Area Bus System (BABS) initiated operations in January 2003. BABS offers deviated fixed-route services and does not operate any demand-response service. In the first month of operation, BABS transported 100 residents, and the annual ridership that first year was over 8,700 passengers. The ridership on the system has grown to more than 1,400 in December 2008, and during fiscal year 2008, the total annual ridership was approximately 31,000 passengers.

Since its beginning, the system has been providing transportation service to the Town of Blackstone, population 3,675. After BABS started their operation, the service has gradually expanded to serve other portions of the region. In July 2003, Lunenburg County transferred the responsibility for the day-to-day management and operations of the County-owned Town and County bus system to BABS. This route serves the communities of Kenbridge, Victoria, Lunenburg Courthouse, and surrounding areas.

Four additional routes have been added since service began in 2003, as listed below.

- Crewe-Burkeville Express – This route connects the communities of Burkeville, Crewe, and Nottoway Courthouse with the Town of Blackstone.
- Brunswick Express – This route begins in Blackstone, travels through the communities of Lawrenceville and Alberta, and then returns to Blackstone.
- Piedmont Area Transit – In October 2007, the Piedmont Area Transit route formerly operated by Virginia Regional Transit to serve communities in Amelia, Buckingham, Cumberland, and Prince Edward Counties became a BABS operation.
- Dinwiddie Express – This newest route, established in April 2009, serves the Dinwiddie area.

1.2 Governance

The operation of BABS is under the supervision of the Town of Blackstone municipal government. All employees of BABS are Town employees. A staff representative from DRPT serves as the regional transit coordinator and assists BABS in its dealings with public transit agencies in adjacent communities such as Farmville.

BABS obtains matching funding for federal and state grants from the local jurisdictions in which it operates transit services. However, representatives of the local jurisdictions do not have direct involvement in BABS operations. The BABS manager has expressed a desire to have at least one representative from each local jurisdiction take a more active role in the planning of the system.

1.3 Organizational Structure

As mentioned in the preceding section on the governance of BABS, the Town of Blackstone supervises the daily operations of BABS. Jennifer Beck, the manager of BABS, is a Town of Blackstone employee whose official title is Director of the Transportation and Community Division. She reports to Larry Palmore, Town Manager for the Town of Blackstone.

A part-time employee assists the manager with the operations of the transit service. A full-time town employee assists with administrative and customer service activities. All of the bus drivers are part-time town employees, and they are typically retired commercial vehicle drivers. Maintenance of BABS vehicles is conducted by town employees that also service other town-owned vehicles.

The BABS operations are headquartered in the Blackstone Area Bus System's operations and maintenance facility at 101 BABS Lane, Blackstone, Virginia 23824. This facility also serves as the Town of Blackstone's general vehicle maintenance facility. The building was completed and occupied in June 2008 with the Town having paid for three vehicle bays and the bus system having paid for the other three vehicle bays. In addition, the Town and BABS share a bus wash bay.

1.4 Transit Services Provided and Areas Served

Transit Services Provided. Currently, BABS operates six fixed routes. **Table 1-1** summarizes the weekly days of operation, hours of service, service frequency, and base boarding fare associated with each route.

Table 1-1. Summary of Operations for Blackstone Area Bus Fixed-Route Service

Route Name	Days of Operations	Hours of Operation	Service Frequency	Base Boarding Fare
Blackstone Area Bus	Monday through Friday	6:00 AM to 5:00 PM	1 hour headway	$0.50 per trip
	Saturday	9:00 AM to 5:00 PM	1 hour headway	$0.50 per trip
Brunswick Express	Monday through Thursday From September to the last week of May (Memorial Day)	7:50 AM to 4:20 PM	1 service starts at 7:50 AM and 1 service starts at 1:45 PM	$0.50 per trip
	Tuesday and Thursday After Memorial Day to end of August	7:50 AM to 4:20 PM	1 service starts at 7:50 AM and 1 service starts at 1:45 PM	$0.50 per trip
Crewe-Burkeville Express	Monday through Thursday	6:45 AM to 5:30 PM	4 services in the morning. The services start at 6:45 AM,	$0.50 per trip

Table 1-1. Summary of Operations for Blackstone Area Bus Fixed-Route Service

Route Name	Days of Operations	Hours of Operation	Service Frequency	Base Boarding Fare
			9:00 AM, 10:15 AM, and 11:30 AM. 1 service in the afternoon. The service starts at 4:20 PM.	
Town and County Transit	Monday, Wednesday, and Friday (Orange Line)	7:00 AM to 4:15 PM	3 services in the morning. The services start at 7:00 AM, 9:00 AM, and 10:50 AM. 2 services in the afternoon. The services start at 1:00 PM and 2:20 PM.	$1.00 per trip
	Tuesday and Thursday (Green Line)	7:50 AM to 4:45 PM	3 services in the morning. The services start at 7:00 AM, 9:00 AM, and 10:50 AM. 2 services in the afternoon. The services start at 1:00 PM and 2:50 PM.	$1.00 per trip
Piedmont Area Transit (PAT)	Monday through Friday (Cumberland/Buckingham Route)	5:55 AM to 5:00 PM	2 services in the morning. The services start at 5:55 AM and 7:30 AM. 2 services in the afternoon. The services start at 1:00 PM and 3:00 PM.	$0.50 per trip
	Monday through Friday (Amelia/Prince Edward Route)	5:15 AM to 4:45 PM	2 services in the morning. The services start at 5:15 AM and 7:00 AM. 2 services in the afternoon. The services start at 1:00 PM and 3:00 PM.	$0.50 per trip
Dinwiddie Express	Monday through Friday	6:00 AM to 6:14 PM	1 service starts at 6:00 AM and 1 service starts at 2:00 PM.	$0.50 per trip

For their fixed-route services, BABS holds to the FTA regulations of ¾ miles radius off of the defined fixed route for route deviation pick-up areas, i.e., persons with disabilities that are ADA-certified may call ahead and be picked up and dropped off curbside anywhere within ¾ mile of the regular route. [1] In addition, if a rider flags down a bus, it will also stop and pick up the passenger.

[1] *The system does not currently provide direct door-to-door service where ADA-certified disabled persons can be picked up in the region.*

Areas Served. **Figure 1-1** illustrates all of the fixed routes of the BABS system, and **Figures 1-2 through 1-7** show the detailed maps for each of the six routes.

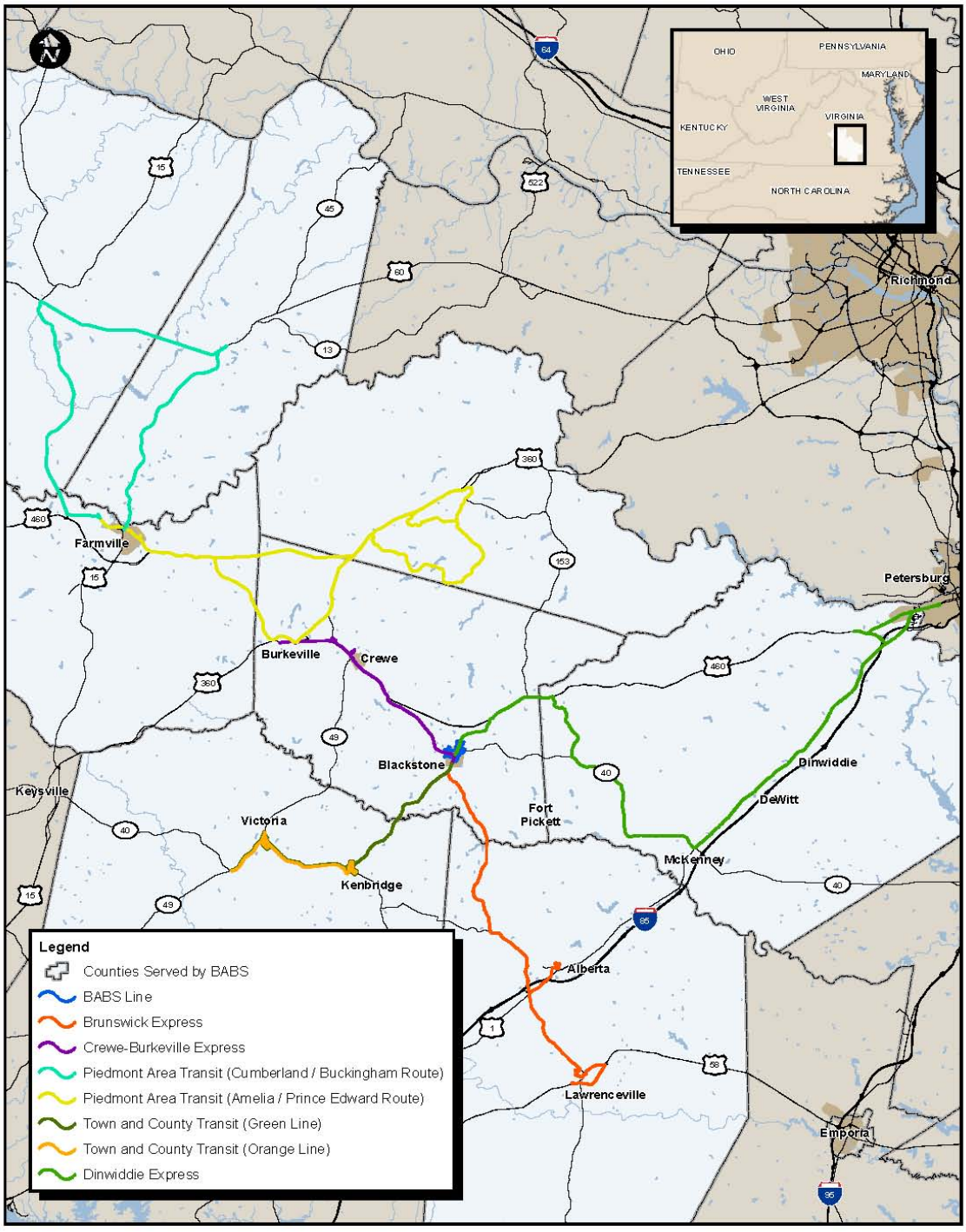


Figure 1-1. Overall Map of BABS Fixed-Route Services

Blackstone Area Bus: The initial route in the system began service in January 2003 and has maintained the same basic routing since that date. This route, shown in **Figure 1-2**, operates from 6:00 AM to 5:00 PM on Monday through Friday, and from 9:00 AM to 5:00 PM on Saturdays. The service area of this route covers the downtown portion of the Town of Blackstone and the surrounding residential neighborhoods and commercial areas of the town. The base boarding fare is $0.50.

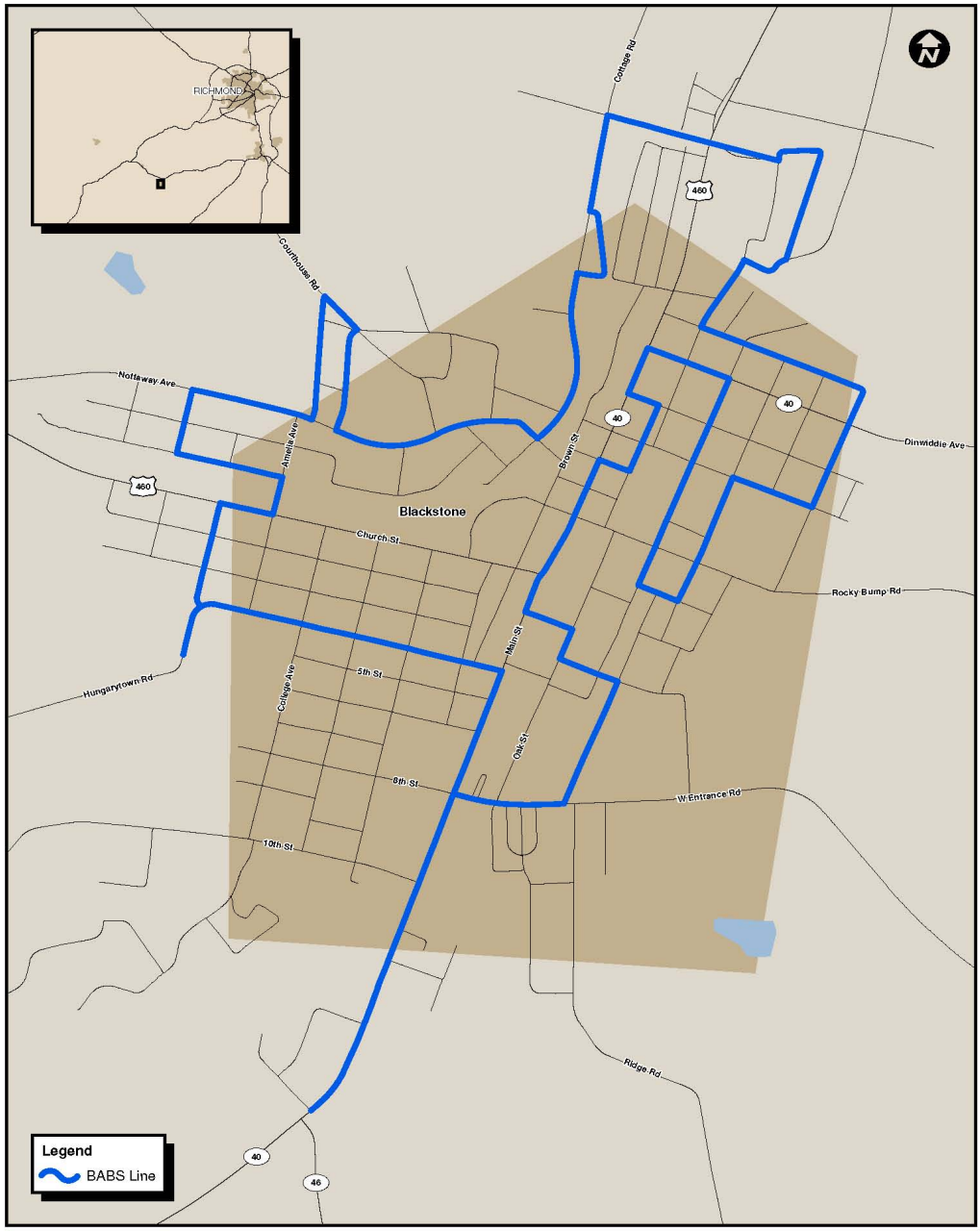


Figure 1-2. Blackstone Area Bus Route Map

Brunswick Express: This route began service in August 2006. It operates from 7:50 AM to 4:20 PM on Monday through Thursday during the regular schedule. However, it only operates on Tuesdays and Thursdays after Memorial Day until the end of August. This route, shown on **Figure 1-3**, connects Blackstone, Alberta, and Lawrenceville. The service area of the route covers two local colleges (Southside Virginia Community College and Saint Paul's College), some communities in Alberta, and the downtown area of Lawrenceville. The base boarding fare is $0.50.

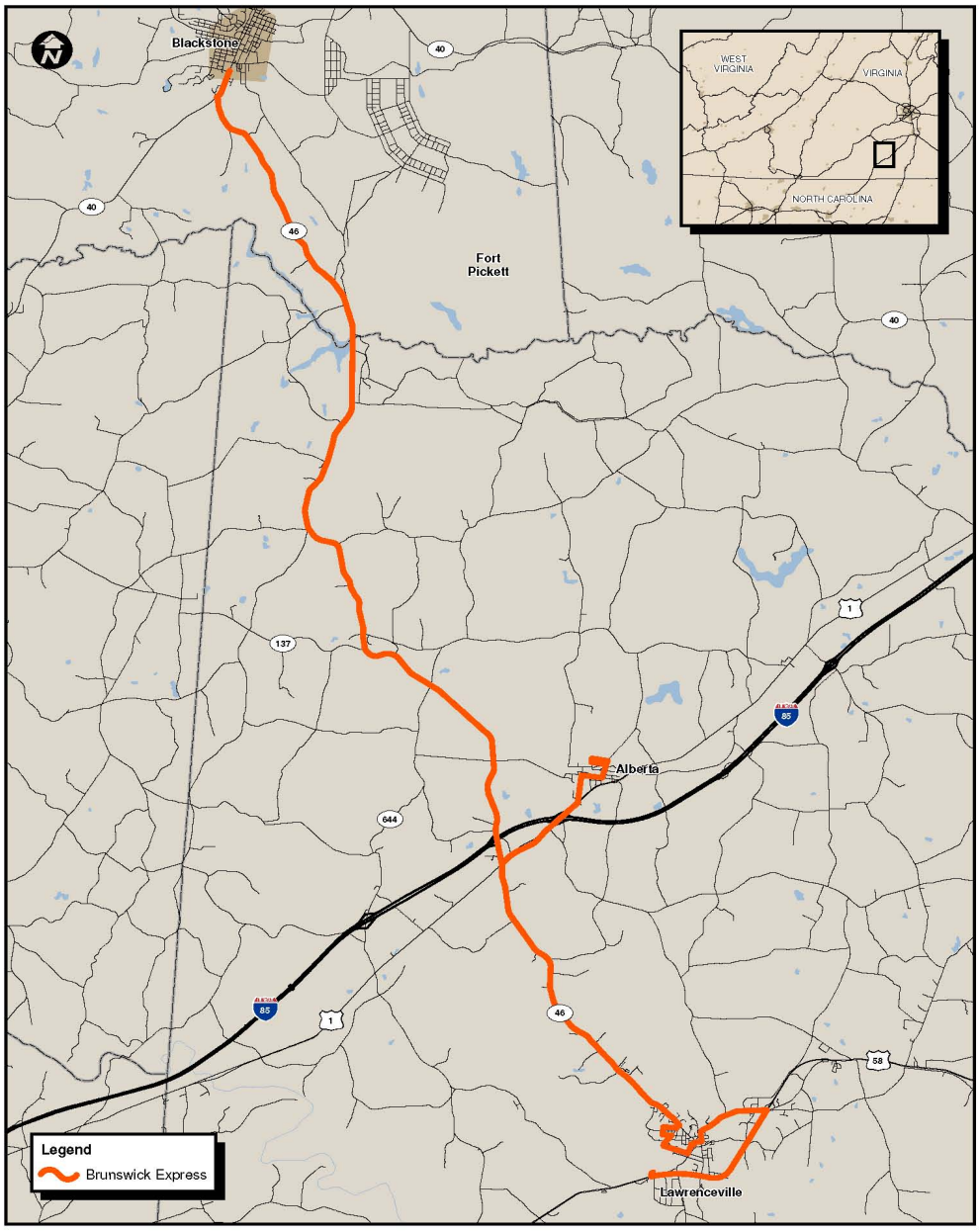


Figure 1-3. Brunswick Express Route Map

Crewe-Burkeville Express: This route, shown in **Figure 1-4**, operates from 6:45 AM to 5:30 PM on Monday through Thursday and connects the communities of Blackstone, Crewe, and Burkeville. The base boarding fare is $0.50.

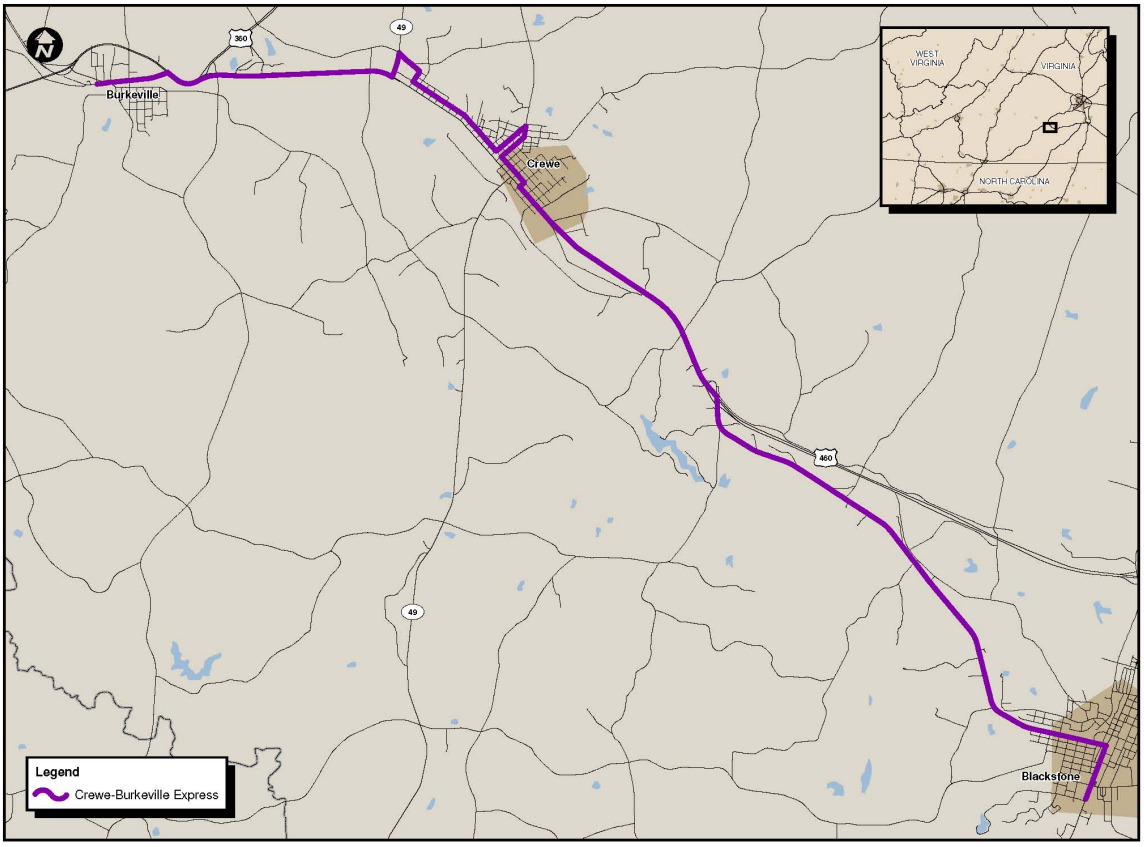


Figure 1-4. Crewe-Burkeville Express Route Map

Town and County Transit: This route started service in October 2007. It has two lines: the Orange Line and the Green Line, as shown in **Figure 1-5**. The Orange Line operates from 7:00 AM to 4:15 PM on Mondays, Wednesdays, and Fridays. The service area of the Orange Line is from Kenbridge through Victoria to Lunenburg Courthouse. The Green Line operates from 7:00 AM to 4:45 PM on Tuesdays and Thursdays. The service area of the Green Line includes the Orange Line and is from Lunenburg Courthouse to Victoria, Kenbridge, and Blackstone. The base fare is $1.00 for both lines.

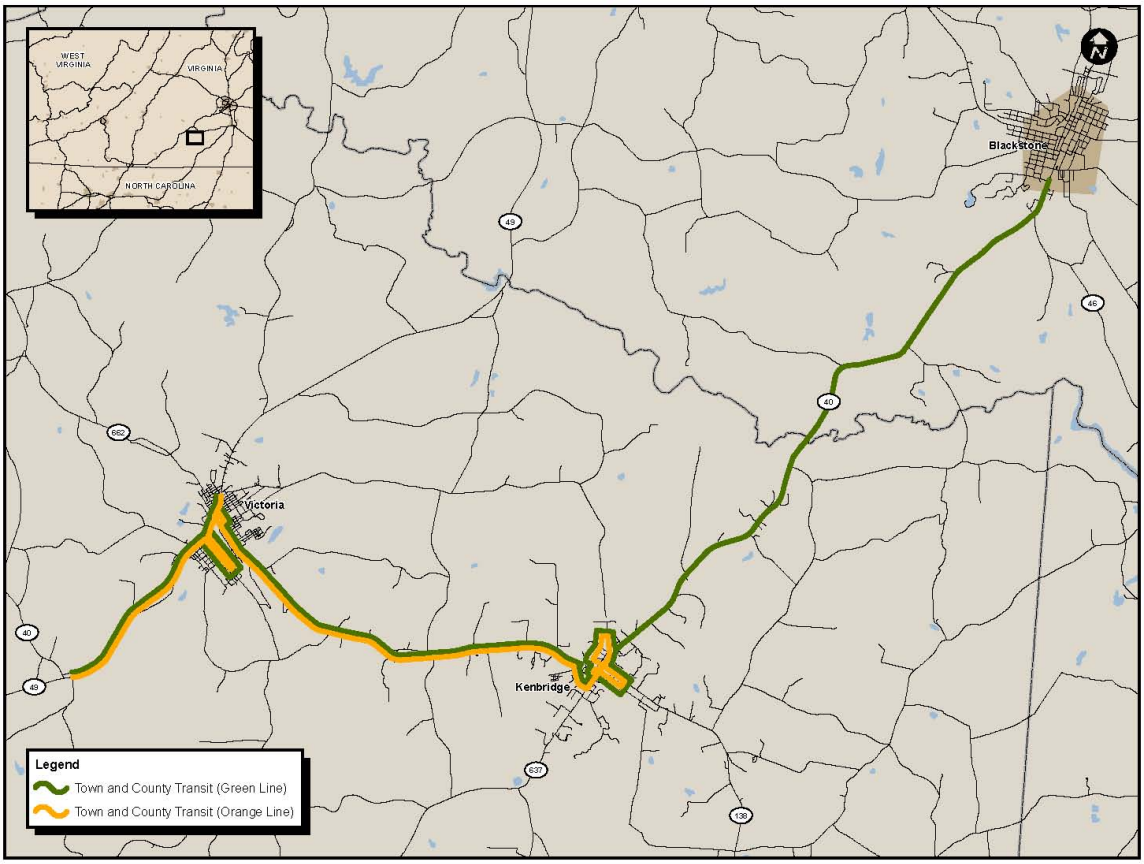


Figure 1-5. Town and County Transit Route Map

Piedmont Area Transit (PAT): The responsibility for the operation of this service was acquired by BABS, and service restarted in October 2007. There are two routes for PAT operation. The Cumberland/Buckingham Route operates from 5:55 AM to 5:00 PM on Monday through Friday. The Amelia/Prince Edward Route operates from 5:15 AM to 4:45 PM on Monday through Friday. The service area of these routes, shown in **Figure 1-6**, covers four counties: Buckingham, Cumberland, Amelia, and Prince Edward. The base boarding fare is $0.50.

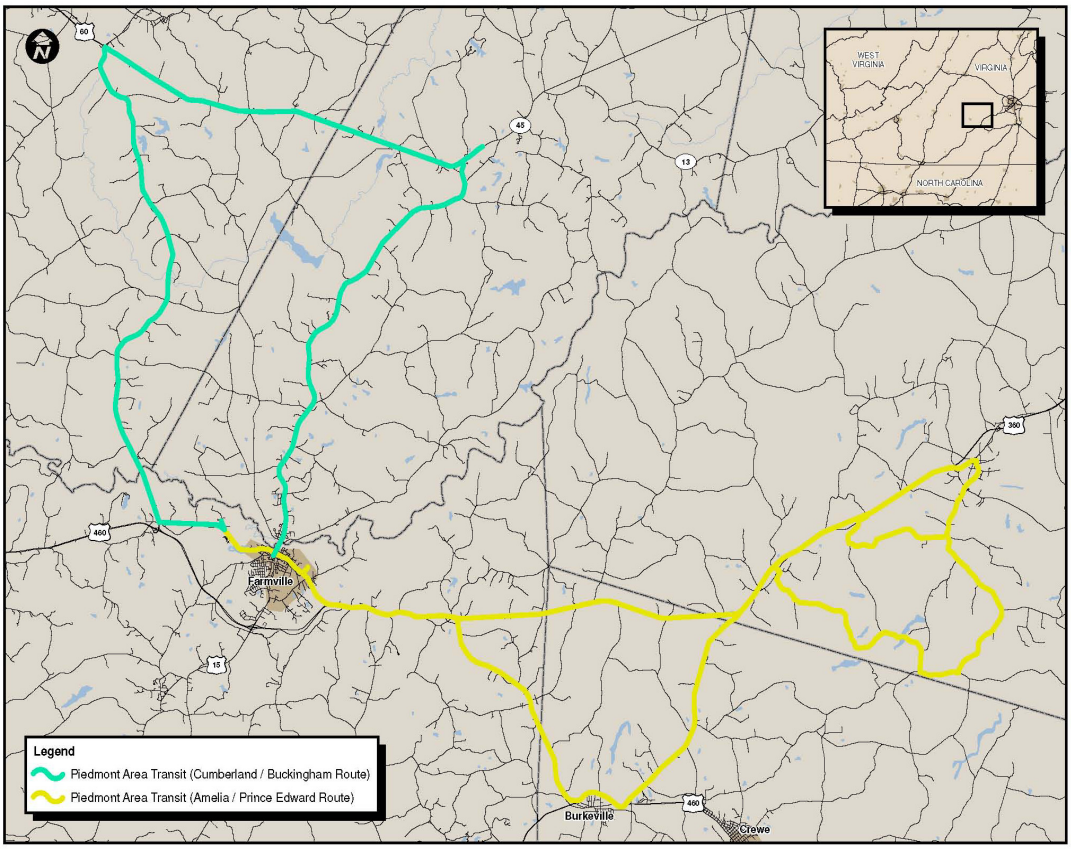


Figure 1-6. Piedmont Area Transit Route Map

Dinwiddie Express: This route is the newest route added to BABS. It began service on April 6, 2009. It operates from 6:00 AM to 6:14 PM on Monday through Friday. The service area of this route, shown in **Figure 1-7**, covers Suthland/Edgehill and McKenney of Dinwiddie County and provides the bus services along the two major corridors (Route 40 and Route 1) in Dinwiddie County. The bus can be flagged down along Route 40 and Route 1 in Dinwiddie County. The base boarding fare is $0.50.

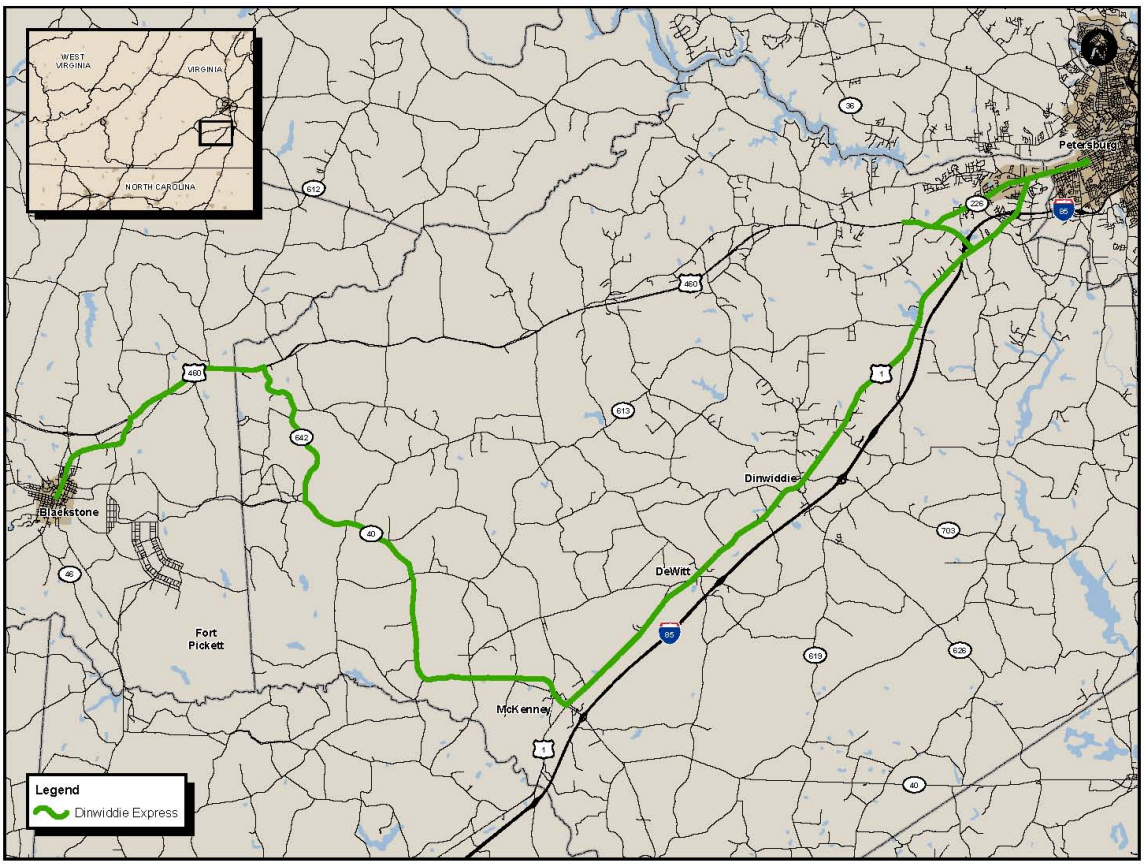


Figure 1-7. Dinwiddie Express Route Map

1.5 Fare Structure

The fare structure is summarized in **Table 1-2**. The regular boarding fare for most of the BABS routes is $0.50. Only the Town and County Transit Line charges a boarding fare of $1.00 per trip. There is no discounted fare for senior citizens or disabled persons.

Table 1-2. Blackstone Area Bus System Fare Structure

Fare – all routes except Town and County Line	$0.50/trip
Fare – Town and County Line	$1.00/trip
Punch Pass of 20 tickets – no discount	$10.00

BABS accepts either exact fare cash or tokens for the boarding fare. It also has punch passes which offer 20 rides for a cost of $10.00. Some of the local schools and social service agencies have purchased punch passes for their students or employees. An example is the Southside Training, Employment and Placement Services, Inc. (STEPS) organization.

Jennifer Beck, manager of BABS, expressed the view that the current base fare of BABS is low, but has acknowledged that it would be very difficult to increase the fare since the majority of the riders are believed to be low income residents who would not be willing or able to pay more than $0.50 to use the service. However, it is also believed that the $0.50 boarding fare may actually serve to attract more ridership to the system and increases the potential revenues for the Town of Blackstone. For example, riders may take the bus to the Wal-Mart shopping center on multiple days during any given week, and any purchases that are made result in increased sales tax revenues for the Town of Blackstone.

1.6 Fleet

Currently, there are 13 vehicles assigned to BABS operations. Nine (9) vehicles have diesel engines and the other four (4) vehicles have gasoline engines. Among these 13 vehicles, 11 vehicles in the active fleet are 14 to 19 passenger body on chassis type buses, one vehicle is the system's spare bus, and one vehicle is the administrative vehicle. **Appendix C** at the end of this report details BABS' fleet inventory as of December 2008, including vehicle identification number, make, model, year, seated capacity, engine type, wheelchair accessibility, and service type.[2]

BABS plans to sell one of the vehicles in the active fleet by the end of this year or 2010, as it has exceeded its useful life span. The current spare ratio of the BABS passenger bus fleet is 1:12, which is 8.3 percent.

[2] *Note that the September 2009 inventory was made available just before this TDP was finalized; refer to the OLGA system and/or DRPT for this data. All analysis was conducted using the December 2008 data.*

Tim Barnes, the lead mechanic for the Town of Blackstone vehicle maintenance facility, has expressed the view that the transit vehicles with diesel engines are more difficult to maintain than those with gasoline engines because the parts are harder to find. The newer vehicles with gasoline engines are judged to be working fine and have not exhibited any significant problems to date.

1.7 Existing Facilities

The current BABS operations and maintenance facility located at 101 BABS Lane, Blackstone, Virginia, was completed and opened for use in June 2008. The facility is the single maintenance site for all Town-owned and operated vehicles. The staff in the facility are all employees of the Town of Blackstone. Three mechanics work on vehicle repair and maintenance in the facility.

There are six (6) vehicle maintenance bays in this facility. BABS occupies three (3) of the bays for vehicle maintenance and repairs. The Town uses the three remaining vehicle maintenance bays. Additionally, there is a bus wash bay shared by the Town and BABS.

With respect to bus stops, BABS has installed a system bus stop sign at each designated bus stop location in the Town of Blackstone. At some of these locations, a wooden passenger waiting bench also is installed. There is an enclosed passenger waiting area at the new medical center in Blackstone; there are no other enclosed passenger waiting shelters at any of the designated bus stops. Some, but not all, of the passenger boarding locations in other communities in the service area outside of the Town of Blackstone are formally designated with system stop signs.

Informal "flag stops" are allowed along the routes outside of the Town of Blackstone. The accessibility of the bus stops is one of the problems that were observed during the initial system site visit. There are no sidewalks or waiting pads at many of the bus stops in both the Town of Blackstone and in the other communities served, and it is likely to be difficult for passengers to easily access the bus stops at these locations.

1.8 Transit Security Program

Currently, BABS does not have GPS devices, on-vehicle cameras, or alarm sensors installed in their vehicles. All vehicles have two-way radios on board to allow communication with each of the operations facilities.

1.9 Public Outreach

In the greater Blackstone region, the various local communities (towns and counties) have requested expanded transit service. BABS provides the basic mobility services that no other agencies want or are able to provide, and it provides as much service as financially possible. The service provided by BABS has created a positive reaction from the residents of the region and those services that have been provided have been viewed as successful.

2.0 GOALS, OBJECTIVES, AND STANDARDS

The Blackstone Area Bus System (BABS) is an agency of the Town of Blackstone municipal government. As such, BABS is subject to the Town of Blackstone Code, which establishes the legal framework for the provision of public services. The Code itself does not explicitly discuss the BABS operations.

The Town of Blackstone has a Comprehensive plan, which will be updated in 2010. As a small community, The Town also relies on the County Comprehensive Plan prepared by the Nottoway County Planning Council as a guidance document to define the community's vision, goals, and policies.

Section 15.2-2223 of The Code of Virginia requires that every local government adopt and maintain a Comprehensive Plan for the territory that it governs. Once adopted, this plan is required to be reviewed at least once every five years by the County Planning Commission. This process ensures that local governments continue to evaluate factors that may change and have influence on the county.

Section 15.2-2200 of The Code of Virginia establishes the legislative intent of a planning and zoning enabling authority as follows:

> *"…to encourage localities to improve the public health, safety, convenience and welfare of its citizens and to plan for the future development of communities to the end that transportation systems be carefully planned; that new community centers be developed with adequate highway, utility, health, education, and recreational facilities; that the need for mineral resources and the needs of agriculture, industry and business be recognized in future growth; that residential areas be provided with healthy surroundings for family life; that agricultural and forest land be preserved; and that the growth of the community be consistent with the efficient and economical use of public funds."*

The currently adopted Comprehensive Plan for Nottoway County was developed nearly five years ago, with an update process anticipated to be initiated in 2010. At the time of the development of that Comprehensive Plan, BABS essentially operated only within the corporate limits of the Town of Blackstone. The more recent expansions of fixed-route bus service into other portions of Nottoway County and adjacent areas of Amelia, Lunenburg (began operation in July 2003), and Prince Edward Counties were not even anticipated at that time. During the upcoming update of the Town and County Comprehensive Plans, it is expected that a more expansive discussion will be provided of current and future conditions related to the public transportation aspects of Nottoway County and surroundings communities.

In the absence of explicit goals, objectives, and standards, BABS has developed a series of generalized operating policies and procedures that are reviewed and acknowledged by each of the system's employees.

2.1 Goals and Objectives

As part of the preparation of the Blackstone TDP, specific goals, objectives and standards have been defined to help guide BABS' operations and activities over the TDP time period. Goals center on specific themes. Objectives have been defined within each goal. Future updates of the Town of Blackstone and the Nottoway County Comprehensive Plan should take into consideration these goals and objectives.

GOAL 1: Provide reliable fixed-route public transportation service that meets the transportation needs of Blackstone area residents.

Objective 1.1: Provide transit service connections between residential areas and commercial areas with jobs, education, shopping, and medical services.

This objective is to be accomplished through the following minimum activities:

- Document and record customer service requests.
- Work on a regular basis with the Town and County Economic Development Agency staff to identify planned new developments that might warrant transit service.
- Survey transit riders at least once every five years to determine rider service needs.

Objective 1.2: Provide easily identifiable stop locations along routes and passenger shelters, if warranted.

This objective is to be accomplished through the following minimum activities:

- Establish safe bus stop locations when modifying an existing bus route alignment or when implementing new service.
- Work with VDOT staff in expanding sidewalks at stops with high ridership demands.
- Monitor ridership activity at high demand stops to determine if/when passenger shelters are needed.

GOAL 2: Market existing transit services.

Objective 2.1: Actively market transit services as a travel option within the Town of Blackstone, Dinwiddie, Brunswick, Amelia, Buckingham, Cumberland, and adjacent communities in Nottoway, Lunenburg, and Prince Edward Counties.

This objective is to be accomplished through the following minimum activities:

- Maintain a "BABS System - Route and Schedule Guide" for users of the transit system.
- Maintain accurate and up-to-date transit information on the BABS' internet web site, www.blackstonebus.com.
- Participate in community events to promote public transportation.
- Maintain a mailing list of organizations and social service agencies that represent markets that are likely to ride transit and provide service information to those organizations and agencies.

Objective 2.2: Explore potential demand to expand cost-effective transit service to areas outside of those where service is presently being operated.

This objective is to be accomplished through the following minimum activities:

- Initiate exploration meetings on a regular basis with Town and County staff and officials to determine potential transit service needs, likely transit demand, service options, fare structure requirements that will provide farebox recovery ratios comparable to currently operated BABS transit services, and potential supplemental funding sources.
- Such meetings should take place no less frequently than once each year.

GOAL 3: Deliver fixed-route bus services in a cost-effective manner.

Objective 3.1: Maintain a system-wide farebox recovery ratio (farebox revenues/total operating expenses) that meets or exceeds standards identified in **Section 2.2** of this TDP.

This objective is to be accomplished through the following minimum activities:

- Record and monitor trends in passenger trips by route.
- Record and monitor monthly transit operations expenses and farebox revenues.

Objective 3.2: Hold administrative costs to approximately 20 percent of total operating budget.

This objective is to be accomplished through the following minimum activities:

- Record and monitor monthly transit operations expenses and farebox revenues.

Objective 3.3: Achieve system-wide fixed-route ridership levels that meet or exceed standards identified in **Section 2.2** of this TDP.

This objective is to be accomplished through the following minimum activities:

- Maintain and monitor monthly ridership reports for fixed-route service, with ridership reported on a route segment basis for all fixed-route operations.
- Implement corrective measures if ridership falls below established standards for specific routes for more than two (2) months in a row. Such corrective measures may include: route alignment, service frequency, and span of service and/or fare adjustments.

GOAL 4: Deliver fixed-route bus services in a safe manner.

Objective 4.1: Ensure that transit service operators maintain an accident rate of less than the standard identified in **Section 2.2** of this TDP.

This objective is to be accomplished through the following minimum activities:

- Maintain a training program for new employees.
- Review established Operating Policies and Procedures at least once a year and update as necessary.
- Review those policies and procedures as part of all training efforts with new staff. Also review with existing staff at least once every two years.

Objective 4.2: Ensure that an adequate fleet of vehicles is maintained for the fixed-route services.

This objective is to be accomplished through the following minimum activities:

- Identify the need for replacement vehicles based on industry standards for defined useful life of vehicles. For most buses operated by BABS, the defined useful life is four years or 100,000 revenue miles of service.
- Maintain a spare ratio of at least one (1) bus at all times for the BABS fixed-route transit services.

GOAL 5: Provide transit services that are accessible to citizens.

Objective 5.1: Provide transit services that are accessible to all population groups within the Town of Blackstone, Dinwiddie, Brunswick, Amelia, Buckingham, Cumberland, and adjacent areas of Nottoway, Lunenburg, and Prince Edward Counties.

This objective is to be accomplished through the following minimum activities:

- Comply with the applicable requirements of the Americans with Disabilities Act (ADA).
- Provide the ADA-eligible population with paratransit service that is comparable to service provided by the fixed-route system.

2.2 Service Performance Standards

This TDP work effort has also identified the following service standards that are to be monitored on a monthly basis by BABS administrative staff.

Ridership Service Productivity Measures

The following system-wide service standards are proposed based on a review of ridership characteristics over the past several months:

Fixed-Route Standard – Monthly system-wide fixed-route ridership should maintain levels equivalent to at least 0.08 passenger trips per revenue mile.

Blackstone Area Bus route ridership should maintain a level equivalent to 0.10 passenger trips per revenue mile.

Corrective measures should be investigated if ridership on BABS' fixed-route system and/or on the Blackstone Area Bus route fall below the levels identified above for a period of three (3) consecutive months.

Cost-Effectiveness Measures

Fixed Route Standard – BABS' system-wide farebox recovery ratio (farebox revenues as a percentage of operating expenses) shall remain at approximately 3.6 percent.

Corrective measures should be investigated if the system-wide farebox recovery ratio falls below this standard for a period of three (3) consecutive months.

The currently budgeted FY2009 farebox recovery ratios for each of the individual routes as shown in **Table 2-1** should be met or exceeded over the course of the year. Corrective measures should be investigated if the actual observed farebox recovery ratio falls below this standard for a period of three (3) consecutive months.

Table 2-1. Fiscal Year 2010 Farebox Recovery Ratio by Route

Route Name	Total Expenses	Farebox Revenue	Farebox Recovery Ratio
Blackstone Area Bus	$216,100	$8,500	0.039
Brunswick Express	$59,000	$2,000	0.034
Piedmont Area Transit	$166,000	$5,250	0.032
Town and County	$55,300	$2,700	0.049
Dinwiddie	$78,200	$2,000	0.026
System Totals	**$574,600**	**$20,450**	**0.036**

Vehicle Maintenance Performance Measures

The following two standards shall be monitored with regards to vehicle maintenance performance:

Bus Preventive Maintenance Inspections – Preventive maintenance shall be conducted on all vehicles in the transit fleet per vehicle manufacturer recommendations.

Revenue Vehicle Failures – BABS should maintain a standard of no more than 0.15 revenue vehicle failures per 1,000 revenue bus-miles of service.

3.0 SERVICE AND SYSTEM EVALUATION

The purpose of this chapter is to describe the recent performance of the Blackstone Area Bus System (BABS) relative to generally accepted performance standards for the fixed-route bus transit mode associated with this system. This assessment describes the manner in which BABS is providing public transportation services to the residents of the seven-county region in which it operates. Each of the following sections discusses one facet of this evaluation process.

3.1 Historical and Existing Service Perspective

BABS is one of the newer public transportation systems in the Commonwealth of Virginia. From the initiation of service in the Town of Blackstone of Nottoway County in January 2003, the system has expanded to now offer fixed-route services across a total of seven (7) counties in south-central Virginia.

As the system has continued to grow and expand, changes have been regularly observed in virtually all relevant comparative factors, from the number of revenue-miles and revenue-hours operated each year, to the total system operating costs and the number of passengers transported.

With many of the service changes having been observed over just the past several years, it is difficult to apply a traditional five-year service history to the system. The most comprehensive assembly of statewide system performance data for public transit systems in Virginia was only published in 2007.[3] Although the title of this statewide transit performance report indicates that it presents data for the period FY2002 – FY2006, this information is typically only provided for the larger and better established urban bus and rail systems in the Commonwealth.

In the case of BABS and virtually all of the other small municipal and rural public transit systems in the state, data only for FY2006 is provided in this report. As a result, the historical evaluation of BABS operations associated with this TDP has only been able to consider the three year period from FY2006 through FY2008. **Table 3-1** illustrates several operating statistics in each of these three years.

[3] Virginia Transit Performance Report (FY2002-FY2006); Virginia Department of Rail and Public Transportation; Richmond, Virginia; 2007.

Table 3-1. Operating Statistics for BABS, FY2006-FY2008

Operating Statistics	FY2006	FY2007*	FY2008
Annual Passengers	13,963	27,962	30,764
Annual Operating Costs	$ 115,152	$ 428,423	$ 361,194
Annual Revenue Miles	38,816	313,904	364,025
Annual Revenue Hours	4,932	12,613	13,744
Passengers per Revenue Mile	0.36	0.09	0.08
Passengers per Revenue Hour	2.83	2.22	2.24
Cost per Passenger	$ 8.25	$ 15.32	$ 11.74
Cost per Revenue Mile	$ 2.97	$ 1.36	$ 0.99
Cost per Revenue Hour	$ 23.35	$ 33.97	$ 26.28

Source: Virginia Department of Rail and Public Transportation
Note: Higher costs in FY2007 due to the following: acquisition of PAT and Town and County Lines as well as the construction of a new maintenance center.

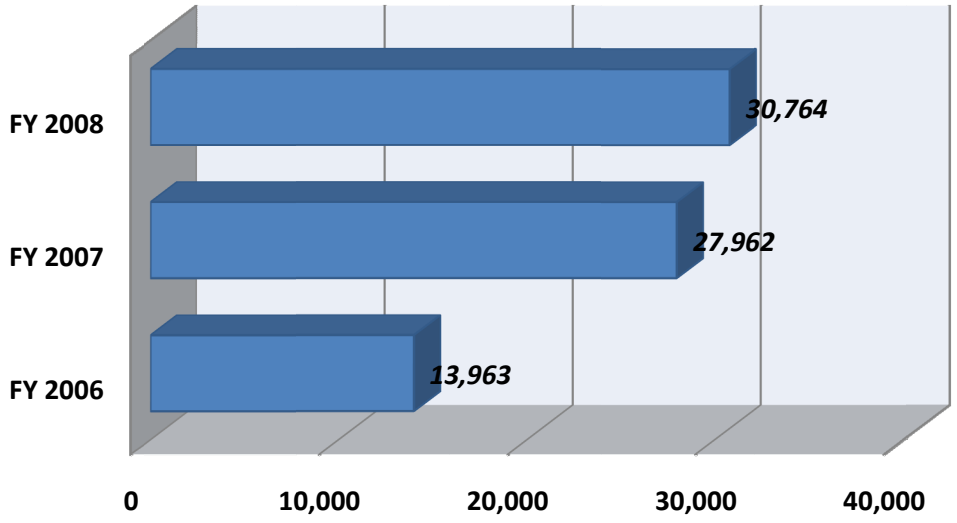


Figure 3-1. Annual Passengers, FY2006-FY2008

As shown in **Table 3-1** and **Figure 3-1**, the number of annual passengers increased from 13,963 persons in FY2006 to 30,764 persons in FY2008. This net increase in ridership of 16,801 persons over a period of two years represents a 120.33 percent increase over this time period.

Much of this reported ridership increase appears to be attributable to the continuing expansion in the amount of transit service being provided by BABS, from 38,816 revenue miles in FY2006 to 364,025 revenue miles in FY2008 (more than an 800 percent increase), and from 4,932 revenue hours in FY2006 to 13,744 revenue hours in FY2008 (a 180 percent increase).

As would be expected with increases of this magnitude in the amount of service provided, annual system operating costs also experienced a significant increase, from $115,152 in FY2006 to $361,194 in FY2008 (an increase of 214 percent) as shown in **Figure 3-2**.

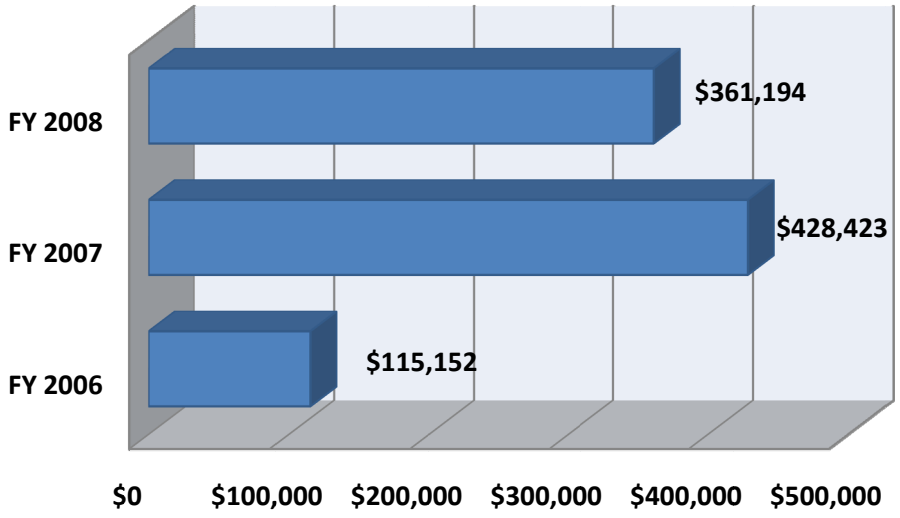


Figure 3-2. Annual Operating Costs, FY2006-FY2008

When these total annual values are expressed in terms of unit factors, somewhat different conclusions can be drawn. For example, the average passengers per revenue hour value of 2.83 observed in FY2006 declined to a value of 2.24 passengers per revenue hour in FY2008. Yet this only represents a 21 percent decline in this productivity factor. Even at this lowered value, the factor is still in an acceptable range.

Similarly, as shown on **Figure 3-3**, the average cost per passenger increased from $8.25 per passenger in FY2006 to $11.74 per passenger in FY2008, or a change of approximately 42 percent. Much of this increase appears to be attributable to the observed increase in system operating costs, with much of the increase due to both significantly more service being provided and the higher fuel costs experienced during FY2008 for the predominantly gasoline-powered vehicle fleet operated by BABS.

Figure 3-3. Cost Per Passenger, FY2006-FY2008

All of these cost and ridership response factors will need to be regularly monitored and reported by the system's management on a continuing basis in order to identify trends of both a positive and a negative nature.

3.2 Peer System Review

The preparation of a transit development plan includes the comparison of the performance characteristics of the subject system with those systems of a similar size. At the national level, all public transit agencies are required to report such information to the Federal Transit Administration (FTA) for inclusion in the National Transit Database (NTD) unless they are granted a reporting exemption.

Since its original establishment, the NTD has developed uniform standards and procedures for the reporting of this information on an annual basis. With all transit agencies having to report the same information to NTD in the same manner, this database provides a consistent set of data that can be used for a peer group type of analysis.

While the NTD was originally developed to allow for the consistent compilation of comparable statistics for transit systems operating in metropolitan areas with populations of 50,000 or greater, it was subsequently expanded to include all urban and rural public transportation operations across the country. Particularly in the case of smaller urban and rural transit systems, the state departments of transportation compile the individually submitted annual operating statistics and provide this information to NTD. In the Commonwealth of Virginia, this data compilation and submittal function is provided by the Department of Rail and Public Transportation (DRPT).

It is important to note that while all public transit systems report the same information in the same manner, each system has a unique set of associated administrative, governmental,

operating, and financial characteristics. Thus, while several systems may appear to be similar to one another through a comparison of basic operating statistics, they are not identical in all respects to their designated "peers". The peer group comparison for BABS was limited to the use of available information on other similar rural fixed-route public transit systems currently operating in the Commonwealth of Virginia.

While this geographically-oriented process of peer group selection may have resulted in a wider than desired range of values for some system characteristics, such as service area population or the number of vehicles operated during peak periods, it did ensure that all of the peer systems were known quantities to DRPT staff and had been in operation for a reasonable period of time. Using this process, the following four candidate peer transit systems were identified:

- Farmville Area Bus
- Pulaski Area Transit
- Graham Transit
- Virginia Regional Transit (VRT) – Staunton County

Table 3-2 summarizes the performance indicators for each of these four selected peer transit agencies and BABS.

Table 3-2. Peer Group Comparison Summary

Performance Indicators	Peer Group Transit Systems				Peer Average	Blackstone Area Bus
	Farmville Area Bus	Pulaski Area Transit	Graham Transit	VRT-Staunton		
Total System Operating Cost	$ 567,844	$ 290,539	$ 210,389	$363,370	$358,036	$361,194
Total Vehicle Revenue Miles	230,595	89,175	119,783	86,330	131,471	364,025
Total Vehicle Revenue Hours	11,364	7,317	7,240	7,175	8,274	13,744
Total Unlinked Passenger Trips	116,229	55,384	40,589	93,709	76,478	30,764
Passengers per Revenue Mile	0.50	0.62	0.34	1.09	0.64	0.08
Passengers per Revenue Hour	10.23	7.57	5.61	13.06	9.12	2.24
Cost per Trip	$ 4.89	$ 5.25	$ 5.18	$ 3.88	$ 4.80	**$ 11.74**
Cost per Vehicle Revenue Mile	$ 2.46	$ 3.26	$ 1.76	$ 4.21	$ 2.92	**$ 0.99**
Cost per Vehicle Revenue Hour	$ 49.97	$ 39.71	$ 29.06	$ 50.64	$ 42.34	**$ 26.28**

As shown above, compared to the average values for the four peer systems, Blackstone Area Bus has significantly higher values in terms of total vehicle revenue miles and total vehicle revenue hours.

BABS' annual system operating cost of $361,194 is very similar to the four peer group average value of $358,036. However, BABS' annual amount of service provided of 364,025 vehicle revenue miles is 176.9 percent greater than the peer group average of 131,471 vehicle revenue miles, while BABS' 13,744 annual vehicle revenue hours of service is 66.1 percent greater than the peer group average value of 8,274.

Given the differential in the amount of service being provided, it is interesting to note that BABS' total annual ridership of 30,764 is 40.2 percent of the average value for the other four systems of 76,478 passengers. If the potential "outliers" in the peer group of Farmville Area Bus (116,229 annual passengers) and VRT-Staunton (93,709 annual passengers) are excluded from the comparison, the ridership of BABS is much more in line with that observed by the other two small urban area/rural service systems of Pulaski Area Transit and Graham Transit.

As shown in **Figure 3-4** below**, except for the average cost per trip, the overall average unit operating cost factors for Blackstone Area Bus are significantly lower than the comparable average value for the other four peer systems.** BABS' average cost per revenue mile value of $0.99 is 66 percent below the peer group average value of $2.92, and BABS' average cost per vehicle revenue hour of $26.28 is almost 38 percent below the peer group average value of $42.34. ***These numbers show that BABS operates at a good level of efficiency for their system.***

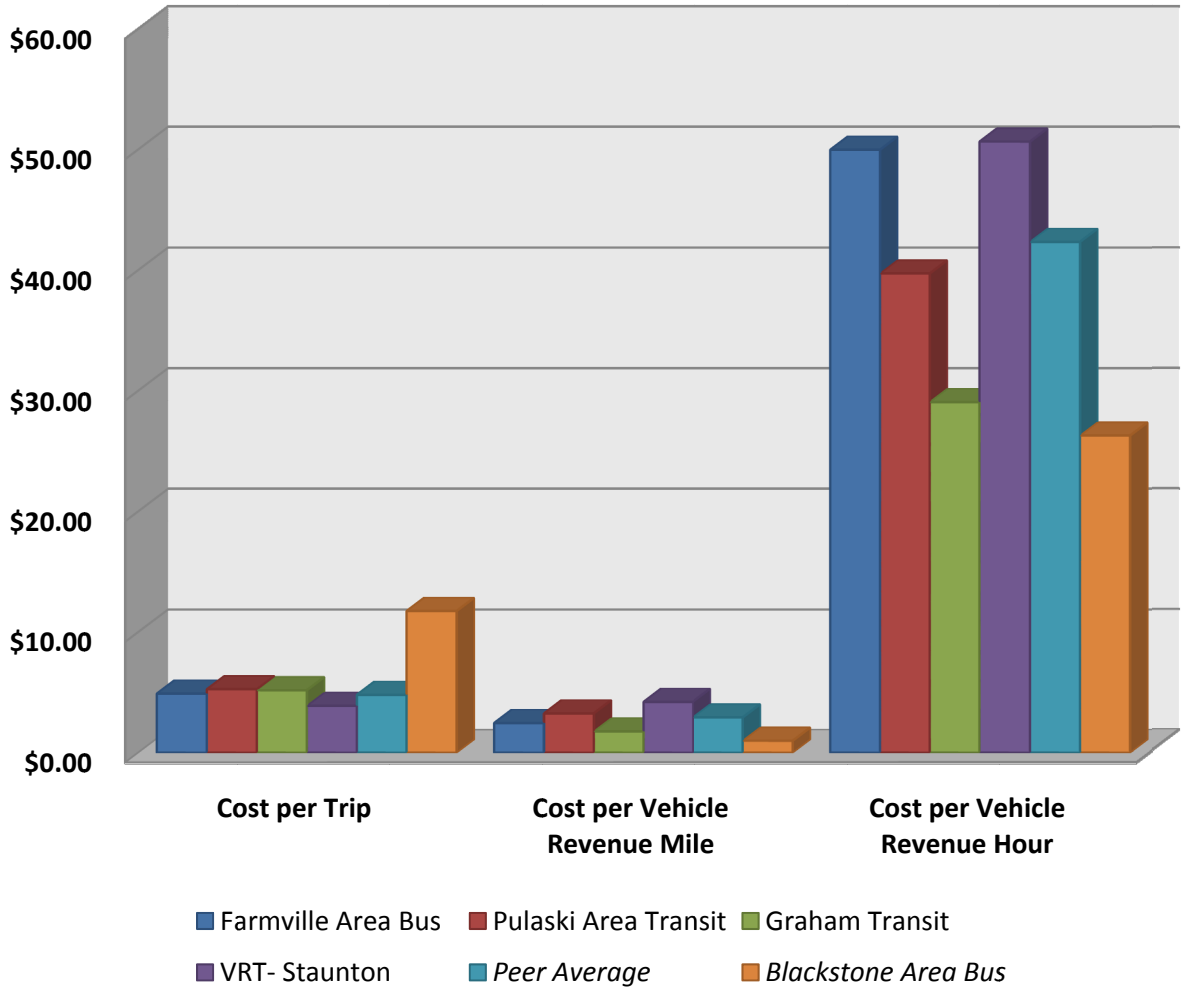


Figure 3-4. Peer Comparison

The number of passenger trips on BABS is much lower than the average number of the peer transit systems, which results in the higher operating cost per trip and less passengers per revenue hour or mile for BABS. This value suggests that BABS may require some improvements for attracting more ridership in the service area.

3.3 Public On-Board Passenger Survey

Appendix E at the end of this report presents a technical memorandum with detailed findings from the on-board transit rider survey.

3.4 Level of Support for Transit

BABS has created a positive reaction from the residents of the region, and residents regularly express the opinion that it is a good service for the community and a great community success. In the greater Blackstone region, the various local communities (towns and counties) have requested expanded transit service. BABS has tried to provide all of the requested services. If a service was determined to be successful, the service has continued to be operated with the use of federal, state, and local government financial support to supplement passenger fares.

The change in transit service demand appears to be generally keeping pace with observed population and employment growth in the region. BABS developed an initial plan for potential system growth, but recent limitations on funding provided by the different federal, state, and local government agencies is the major constraint on the ability to expand the services beyond what is presently being provided.

BABS is currently in discussion with Chase City regarding new transit service. In addition, there are several areas that currently have service where service may be expanded, including Cumberland County and Amelia County. The purposes of these trips include work, school, and hospital trips. Students' transportation demands to and from local colleges account for a certain amounts of BABS' services.

Amelia County has experienced more recent residential growth, but their street system is not growing accordingly since much of this housing growth is taking place along existing public roadways.

Cumberland County is planning ahead for overall population growth and has been aggressive in the new developments within the county. Consequently, the demand for transit services in these areas has the potential to increase over time.

Aging population live throughout the region, which leads to the growing need for transit services. It should also be noted that a large proportion of the baby boomers generation will be retiring soon and may create a growing market for retirement communities in the region. However, the provision of basic transportation services to low income families in the region is likely going to remain the major purpose of the BABS operation.

In general, there appears to be a good level of local government support for the continued operation of BABS, but the finances of all of the local governments are being strained at the present time. As a result, the potential for significant increases in local operating assistance is viewed as being unlikely over the next few years.

3.5 Focus Groups and General Community Input

DRPT has recently changed their previous policy on state operating assistance support due to a reduced level of available funding. Combined with the effects of new federal regulations issued by FTA restricting the provision of local charter type services by public transportation agencies,

BABS is no longer able to provide transit services to local charity organizations or the sponsors of local non-profit events.

This change has generated a number of complaints from many local agencies with respect to the increased challenges it presents to increasing community involvement with such activities. These local community groups and private citizens are interested in and supportive of the provision of additional public transit services in the region, but they are unable to generate local government support for increased public funding.

During the course of the TDP development process, BABS and consulting team staff received a number of suggestions from the passengers and residents of the counties that currently have BABS services. Most of those that offered these suggestions are not users of the system. What they suggested as potential service improvements included better on-time performance and an expanded service frequency (longer hours of operation during the day as opposed to initiation of service on weekends).

3.6 Recent Changes in Patronage, Operating Costs, and Operating Revenue

Over the past three years, the number of annual passengers has increased from 13,963 persons in FY2006 to 30,764 persons in FY2008. This net increase in ridership of 16,801 persons over a period of two years represents a 120 percent increase over this time period. Much of this reported ridership increase appears to be attributable to the continuing expansion in the amount of transit service being provided by BABS, from 38,816 revenue miles in FY2006 to 364,025 revenue miles in FY2008 (an 840 percent increase in revenue miles), and from 4,932 revenue hours in FY2006 to 13,744 revenue hours in FY2008 (a 180 percent increase in annual revenue hours).

As would be expected with increases of this magnitude in the amount of service provided, annual system operating costs also experienced a significant increase, from $115,152 in FY2006 to $361,194 in FY 2008 (an increase of 214 percent). Note that costs were higher in FY2007 due to the acquisition of the PAT and Town and County Lines as well as the construction of a new maintenance center.

When these total annual values are expressed in terms of unit factors, somewhat different conclusions can be drawn. For example, the average passengers per revenue hour value of 2.83 observed in FY2006 declined to a value of 2.24 passengers per revenue hour in FY2008. Yet this only represents a 21 percent decline in this productivity factor. Even at this lowered value, the factor is still in an acceptable range when compared to the average of the four peer transit systems (see Section 3.2).

Similarly, the average cost per passenger increased from $8.25 per passenger in FY2006 to $11.74 per passenger in FY2008, or a change of 42.3 percent. Much of this increase appears to be attributable to the observed increase in system operating costs, with much of the increase due to both significantly more service being provided and the higher fuel costs experienced during FY2008 for the predominantly gasoline-powered vehicle fleet operated by BABS.

All of these cost and ridership response factors will need to be regularly monitored and reported by the system's management in order to identify trends of both a positive and a negative nature.

Table 3-3 and **Figure 3-5** present a summary of BABS' annual revenues and operating assistance for Fiscal Years 2006 to 2008. As shown in this table, system passenger revenues experienced relatively modest growth over this period, from $10,016 in FY2006 to $14,814 in FY2008. This represents an increase of 47.9 percent over this two-year period, a rate of increase that is substantially lower than the approximately 120 percent increase in annual passengers reported in **Table 3-1**. The average revenue per passenger of $0.72 in FY2006 decreased to a value of $0.48 per passenger in FY2008, a decline of approximately 33 percent.

As noted earlier in this chapter, total system operating costs have been steadily increasing in recent years. The total annual system operating costs shown in **Table 3-3** (defined here as passenger fares + operating assistance) are reported to have increased from $115,152 in FY2006 to $361,194 in FY2008. This represents a percentage increase of 214 percent. With system revenue miles of service increasing from 38,816 miles in FY2006 to 364,025 miles in FY2008, the observed increase in total system operating costs appears to be reasonable.

Table 3-3. BABS Revenues and Operating Assistance, FY2006-FY2008

System Revenues and Operating Assistance	FY2006	FY2007*	FY2008
Passenger Fares	$ 10,016	$ 18,745	$ 14,814
Local Operating Assistance	$ 34,457	$ 112,691	$ 108,026
State Operating Assistance	$ 22,454	$ 99,173	$ 65,163
Federal Operating Assistance	$ 48,225	$ 166,099	$ 173,191
Totals	$ 115,152	$ 396,708	$ 361,194

Source: Virginia Department of Rail and Public Transportation, NTD database.

Note: Higher costs in FY2007 due to the following: acquisition of PAT and Town and County Lines as well as the construction of a new maintenance center.

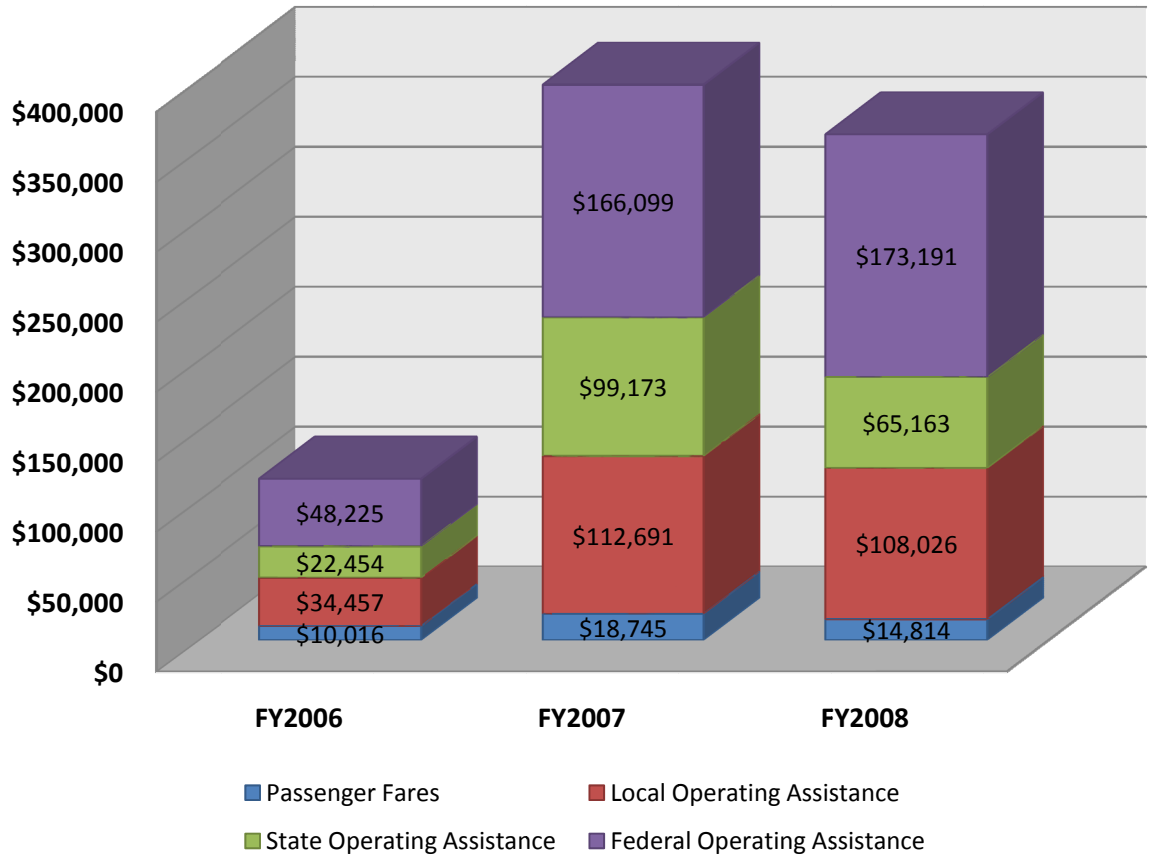


Figure 3-5. Bay Transit System Revenues and Operating Assistance FY2006-FY2008

Total reported passenger fare revenues in FY2006 of $10,016 represented approximately 8.7 percent of the total reported operating cost of $115,152. In FY2008, the total reported revenues of $14,814 represented approximately 4.1 percent of the total reported operating costs in that fiscal year.

As shown in **Table 3-4** and **Figure 3-6**, the share of operating assistance provided by local governments, the Commonwealth of Virginia, and the Federal government have fluctuated somewhat from year to year. The Federal Transit Administration's share of total net operating assistance has ranged from 45.9 percent in FY2006 to 43.9 percent in FY2007 and to 50.0 percent in FY2008.

Table 3-4. Allocation of Net Operating Assistance, FY2006-FY2008

Funding Source	FY2006	FY2007	FY2008
Local Governments	32.8%	29.8%	31.2%
State Government	21.4%	26.2%	18.8%
Federal Government	45.9%	43.9%	50.0%
Totals	100.0%	100.0%	100.0%

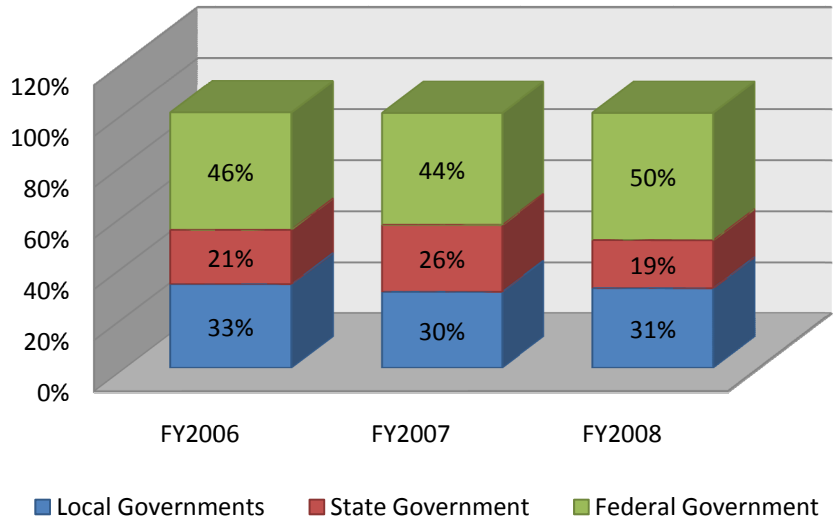


Figure 3-6. Allocation of Net Operating Assistance FY2006 – FY2008

State operating assistance funding provided by the Department of Rail and Public Transportation has fluctuated between 21.4 percent of total net operating assistance in FY2006 to 26.2 percent in FY2007 and 18.8 percent in FY2008.

Local government funding has fluctuated to cover the remaining difference, from 32.8 percent of total net operating assistance in FY2006 to 29.8 percent in FY2007 and to 31.2 percent in FY2008.

3.7 Deviations from Service Standards and Potential Remedies

As a fixed-route bus public transportation program whose service area encompasses a fairly large and generally low density rural portion of the Commonwealth, there are a number of different service standards and operating guidelines that can be applied to the operations of BABS. Some of these service standards and operating guidelines have been developed at a national level through research sponsored by the Federal Transit Administration (FTA) or by the Transit Cooperative Research Program (TCRP) of the Transportation Research Board. Others have been developed with a focus on rural public transit services being operated in an individual state. At the present time, DRPT has not developed a set of general transit service standards for application to small urban area or rural fixed-route bus systems such as BABS.

In May 2002, the Maryland Transit Administration of the Maryland Department of Transportation published a report titled "Maryland Transit Guidelines." Prepared in conjunction with the Maryland Comprehensive Transit Plan (MCTP), the Maryland Transit Guidelines were defined as having four primary objectives or purposes[4]:

[4] *Maryland Transit Guidelines, Maryland Transit Administration, Baltimore, Maryland; May 2002, Page 2.*

1. Provide technical guidance to transit agencies and transit providers throughout Maryland.
2. Create consistency in transit service and infrastructure throughout Maryland.
3. Establish measurable guidelines for transit.
4. Provide a basis for securing funding for transit improvements.

The Maryland Transit Guidelines encompassed all of the transit modes operating in the state, from large urban fixed guideway systems to small urban area bus and rural demand-responsive services. For the purposes of the BABS TDP, the following Maryland service guidelines developed for application to fixed-route bus transit services were applied:

- Consideration of Service
- Frequency of Service
- Span of Service
- Loading Guidelines
- Service Availability and Bus Stop Spacing
- Directness
- Dependability
- Financial
- Productivity

The application of each of these guidelines to the current operations of BABS is discussed below.

Consideration of Service. Among the most difficult decisions that a transit agency must make is the determination of which residents and activity centers will receive service. The transit agency receives many requests for service from citizens and businesses that are not within walking distance of any route, or who would like transit routes in their neighborhoods to serve different destinations.

Because transit resources are limited, it is difficult to accommodate everyone. Therefore, it is necessary to determine how to allocate the available resources to provide the best possible service. This guideline defines the minimum thresholds for employment concentrations, shopping center size, hospital size, college enrollment, and residential dwelling units that warrant consideration of service. In addition, the guidelines include qualitative factors that should be considered in indicating specific areas that a transit agency should consider for providing fixed route transit service.

Transit service should be provided to activity centers that produce a relatively high number of trips. To assist in determining what constitutes a "major" activity center, minimum threshold levels have been suggested for different categories of activity centers. The threshold levels are designed to serve as guidelines in determining which activity centers in each category should be given primary consideration for the provision of public transportation service.

Table 3-5. Minimum Levels for Consideration of Transit Service

Activity Center	Urban	Suburban	Rural
Business concentrations (number of employees)	500	300	100
Shopping centers (size in square feet)	350,000	200,000	50,000
Hospitals (number of beds)	200	100	All
Colleges (number of students)	2,000	1,000	All
Housing developments (number of dwelling units)	400	200	100

Source: Maryland Transit Guidelines, Maryland Transit Administration, May 2002, Page 9

In addition, there are several qualitative factors that can also be used to determine which areas should be considered for transit service. These include the following:

- *A sufficiently high population density in terms of persons per square mile in the service area*. A high population density generally indicates that an area contains the concentration of population necessary to support reasonable levels of use. However, it should be recognized that there are differences in population density and development patterns among urban, suburban, and rural service areas.

- *Service should be provided to transit-dependent populations*. The transit-dependent require transit service to meet their basic transportation needs. Transit-dependent segments of the population include those who do not have use of an automobile. The percentage of senior citizens and the location of low income housing are also measures frequently used to determine transit dependency.

- *Transit service should be provided to support economic development*. Transit service can support existing and attract potential economic activity and consideration of service should take this into account.

In the case of a rural or small urban area bus system such as BABS, the rural service guidelines developed by the MTA are most applicable.

The main service area of BABS is located in the Town of Blackstone. BABS also provides transit services for several shopping centers in the region. For example: Wal-Mart and Food Lion. The size of these grocery centers is larger than 50,000 square feet. **Thus, the current operations of BABS satisfy the consideration of transit service guideline.**

Frequency of Service. Frequency is expressed as the interval of time between successive transit vehicles at a particular location on a route. This length of time is defined as a route's "headway." Typically, more frequent service is regarded as more attractive service. Frequency of service is important in determining system operating cost and must match the financial capability and policy of the system.

Service frequency can be based on demand or policy considerations as to what the public considers attractive service. Demand considerations require the operator to provide a sufficient number of trips on a transit route to accommodate the passenger volume within the loading guidelines discussed below. In those instances where passenger loads are so light as to require excessive time periods between vehicles in order to conform to loading guidelines, a policy-based headway should be used. The headways shown in **Table 3-11** are an attempt to balance the transit rider's desire for frequent service with the operator's need to provide service in a cost-effective manner.

Transit service in Virginia's larger urban areas will typically operate more frequently than in the state's suburban and rural areas. In rural areas, the interval between buses can be established as the cycle time, i.e., the time it takes for one bus to make a complete round trip on the route. Finally, the headways on routes with low frequency (wide headways) should be designed, whenever possible, to conform to regularly recurring "clock face" intervals (e.g., 9:10 AM, 10:10 AM, 11:10 AM, etc.) in order to increase convenience.

Table 3-6. Maximum Policy Headway Guidelines

Day and Time	Minutes Between Buses		
	Urban	**Suburban**	**Rural**
Monday-Friday			
Peak (6 to 9 AM and 3 to 7 PM)	20	30	60
Midday (9 AM to 3 PM)	30	60	60 or cycle time
Early Morning / Evening (Start of service to 6 AM and 7 PM to end of service)	60	60	60 or cycle time
Saturday and Sunday			
Midday (8 AM to 7 PM)	30	60	60 or cycle time
Early Morning/Evening (Start of service to 8 AM and 7 PM to end of service)	60	60	60 or cycle time

Source: Maryland Transit Guidelines, Maryland Transit Administration, May 2002, Page 11

In the case of a rural, small urban area bus system such as BABS, the rural service guidelines developed by the MTA are most applicable.

The service frequencies of BABS' routes are varied. For the basic Blackstone Area Bus Line that operates within the Town limits, the service frequency is a one-hour headway. The other routes that operate into the more rural areas of the surrounding counties basically use the route cycle times for their service frequencies. Only the Blackstone Area Bus Line provides transit service on Saturdays with a one-hour headway service frequency.

Several of the rural area routes only operate a few trips per day, sometimes less frequently than what could be done by more closely adhering to the cycle time criteria. **Given the service**

frequencies listed in Table 1-1, the current operations of BABS generally comply with the maximum policy headway service guideline. However, it is suggested that this situation be monitored and that consideration be given to the provision of more regular service throughout the day on some of the routes.

Span of Service. The Maryland MTA guidelines define "span of service" as the duration of time when service is "made available", with this time period being measured from the earliest to the latest pick-up times during the day, as well as the days of the week the service is offered. Considerations noted earlier for the frequency of service, such as the desires of transit riders and the financial capability of the transit service provider, apply to the span of service guidelines as well.

Table 3-7. Span of Service Guidelines

Day of Week	Start and End times		
	Urban	Suburban	Rural
Weekday	5 AM to 1 AM	5 AM to 10 PM	5 AM to 10 PM
Saturday	5 AM to 1 AM	5 AM to 10 PM	5 AM to 10 PM
Sunday	5 AM to 1 AM	5 AM to 10 PM	As needed

Source: Maryland Transit Guidelines, Maryland Transit Administration, May 2002, Page 12

In the case of a rural, small urban area bus system such as BABS, the rural service guidelines developed by the MTA are most applicable.

The service spans for BABS' routes are varied, as shown in **Table 3-8**. Most of the services start around 6 AM and end around 5 PM, with operations on these routes being provided primarily during the weekday period of Monday through Friday. As noted below, there is some variation in terms of which days during the week certain BABS routes are operated.

Table 3-8. Blackstone Area Bus Spans of Service

Route Name	Days of Operation	Hours of Operation
Blackstone Area Bus	Monday through Friday	6:00 AM to 5:00 PM
	Saturday	9:00 AM to 5:00 PM
Brunswick Express	Monday through Thursday (Sept. 1 to Memorial Day)	7:50 AM to 4:20 PM
	Tuesday and Thursday (Memorial Day to Aug. 31)	7:50 AM to 4:20 PM
Crewe-Burkeville Express	Monday through Thursday	6:45 AM to 5:30 PM

Table 3-8. Blackstone Area Bus Spans of Service *(Continued)*

Route Name	Days of Operation	Hours of Operation
Town and County Transit	Monday, Wednesday, and Friday (Orange Line)	7:009 AM to 4:15 PM
	Tuesday and Thursday (Green Line)	7:50 AM to 4:45 PM
Piedmont Area Transit	Monday through Friday (Cumberland/Buckingham Route)	5:55 AM to 5:00 PM
	Monday through Friday (Amelia/Prince Edward Route)	5:15 AM to 4:45 PM
Dinwiddie Express	Monday through Friday	6:00 AM to 6:14 PM

While the Blackstone Area Bus line, the Piedmont Area Transit, and the Dinwiddie Express routes all operate Monday through Friday, the Brunswick Express and the Crewe-Burkeville Express routes only operate Monday through Thursday, with no service provided to these areas on Fridays. This schedule may impose a burden on passengers who might wish to use these routes for travel to and from work, since most standard work weeks are Monday through Friday. It is suggested that consideration be given to providing Friday service on both of these routes.

Conversely, the limited days per week that service is provided on the Town and County Transit route options (the Orange Line and the Green Line, which overlap), while not desirable, appear to be more reasonable and logical. Ideally, both of these route variations should be operated each day of the Monday through Friday work week, but local government funding considerations are a factor.

BABS does not provide transit services on Sunday and only the Blackstone Area Bus Line provides Saturday services from 9:00 AM to 5:00 PM.

In summary, BABS is in general compliance with the span of service guidelines as presented above. However, consideration should be given over time to the establishment of a more traditional operational pattern where the basic routes of the system are all operated each day, Monday through Friday. This type of schedule would allow for the use of all of these routes for work trips and other basic mobility needs which may not otherwise be easily rescheduled.

Loading Guidelines. This guideline refers to the number of passengers on board a transit vehicle at a single point of time. It is measured as the ratio of passengers on board to the seated vehicle capacity and is expressed as a percentage. To ensure that passengers will be able to obtain seats on transit vehicles for at least a major portion of their trips, loading

guidelines must be established and schedules devised so that passenger volumes conform to the guidelines.

Values at, or less than, 100 percent indicate that all riders have a seat. Values greater than 100 percent indicate that some passengers are standing for at least a portion of the trip. Loading standards indicate the acceptable number of standees with consideration given to both the operating period and the service area type.

Table 3-9. Maximum Recommended Load Factors

Time Period	Urban	Suburban	Rural
Peak (6 to 9 AM and 3 to 7 PM)	120%	110%	100%
Off-peak	100%	100%	100%

Source: Maryland Transit Guidelines, Maryland Transit Administration, May 2002, Page 13

The guidelines shown in **Table 3-9** allow for some standees only during the peak periods on urban or suburban transit operations. In the case of rural and small urban area transit operations, particularly those using smaller size vehicles, route planning and design principles should not anticipate any standees. In addition, due to safety concerns, it is recommended that standees not be permitted on roadways with a posted speed limit of 55 mph or higher.

In the case of a rural, small urban area bus system such as BABS, the rural service guidelines developed by the MTA are most applicable.

Based on the ridership information provided for BABS and observations from the Transit System Manager, Jennifer Beck, the system has rarely, if ever, experienced the situation where passengers cannot easily obtain seats during their whole trip. **Thus, the loading guideline is being satisfied.**

Service Availability and Bus Stop Spacing. These transit service guidelines relate to both the availability of the transit system to potential customers as well as the spacing of bus stops along a transit route.

- *Service Availability* – In the course of evaluating both existing services and proposals for new transit services, the transit system operator must determine whether or not a specific location is "served" by the transit system, thus determining whether or not the transit service is available at that location. The standard guideline in this regard is that a location should be considered to have service only if it is within a quarter mile walking distance to a bus stop.
- *Bus Stop Spacing* – While route alignments are the primary determinants of transit availability, a second influence on the proximity of transit is the bus stop spacing along those routes. As stated above, the key measure of the ability to access the transit system is the walking distance to the nearest bus stop. Stops at every intersection provide the shortest walking distance to the bus. However, this spacing would

adversely affect vehicle speed and trip times for patrons already riding the bus. For this reason, the placement of bus stops along transit routes requires balancing passenger convenience and speed of operation.

Bus stop spacing guidelines are shown in **Table 3-10**. Bus stop spacing should also reflect the characteristics of the area being served. In some cases, the bus stop spacing guidelines should be disregarded in favor of simply considering the locations of patron concentration. This situation is especially true at certain commercial and high-density residential areas.

Table 3-10. Bus Stop Spacing Guidelines

Measure	Downtown Core	Urban	Suburban	Rural
Bus stops per mile	10 to 12	5 to 10	4 to 6	As needed
Typical spacing (feet)	450	750	1,000	As needed

Source: Maryland Transit Guidelines, Maryland Transit Administration, May 2002, Page 14

In the case of a rural, small urban area bus system such as BABS, the rural service guidelines developed by the MTA are most applicable.

The bus stop locations for BABS bus routes appear to be located on the basis of the identified major transit demands of the service areas. Most of the stops are located near the entrances of business concentrations, shopping centers, and transit-dependent facilities (e.g., schools and hospitals). Those stops located in more well-developed residential areas of the Town of Blackstone appear to be spaced appropriately near street corners.

All of the stops in the Town proper appear to be designated by bus stop signs. Some, but not all, of those stops in the surrounding counties and smaller communities that are designated time points on the route maps and schedules are also designated by bus stop signs. Other passenger pick up and drop off locations outside of the Town of Blackstone, particularly those along the rural routes, appear to be operated on a "flag stop" basis, where a passenger will wait at the side of the street for a vehicle and wave to the bus driver indicating a desire to board the vehicle.

Overall, the bus stop spacing guideline is being satisfied at this time. However, consideration should be given in the future to the installation of additional bus stop signs at all of the designated time points on the individual route schedules.

Directness. In order for any public transportation system to attract a substantial number of riders, transit services must be able to provide a reasonably direct trip. If a trip by public transportation is long and circuitous, riders may find an alternative mode of transportation and potential riders may be discouraged. In contrast, a more direct transit route will be considered more convenient, thereby attracting riders. As shown in **Table 3-11**, the guidelines indicate that a transit trip should take no more than an hour and should not take more than twice as

much time as the identical trip by automobile. The maximum scheduled time for any transfer is 15 minutes.

Table 3-11. Transit Travel Time Guidelines

Measure	Urban	Suburban	Rural
Maximum trip length with transfers (minutes)	60	60	60
Maximum transit/automobile time ratio	2:1	2:1	2:1
Maximum schedule time for any transfer (minutes)	15	15	15

Source: Maryland Transit Guidelines, Maryland Transit Administration, May 2002, Page 15

In the case of a rural, small urban area bus system such as BABS, the rural service guidelines developed by the MTA are most applicable.

Most of the riders of BABS do not need transfers in order to reach their destination. In most cases, the BABS transit service is the direct service. The scheduled times from end to end of each of the routes operated by the system are less than 60 minutes. Based on the distances and service areas of the BABS routes, the transit travel times are similar to the travel time by automobile, particularly within the Town of Blackstone proper. **Thus, the transit/automobile time ratio is reasonable and appropriate for this system, and this service guideline is being satisfied.**

Dependability. Transit agencies must provide the transit patron with a reasonable guarantee that the scheduled service will operate and provide service according to the published timetable. This guideline gauges whether transit service is operated as scheduled and whether or not the transit trip is operated at all. The dependability of the transit service is important to those that typically plan trips around the availability of the service. Moreover, riders associate a time penalty with unreliable transit service, which reduces the attractiveness of public transportation.

Dependability of transit service is typically measured in two ways: schedule adherence and trip availability. The first is a measure of how closely the service conforms to the established and published schedule. The second is the percentage of scheduled service that fails to operate (i.e., missed trips). These two criteria are each summarized in the accompanying tables.

- *Schedule Adherence* – Schedule adherence measures the difference between scheduled times and the time the vehicle actually passes a particular location. The schedule adherence service guideline consists of two parts: (1) the definition of "on-time" and (2) the proportion of buses that operate within the "on-time" range. "On-time" is defined here as zero minutes early to five minutes late. This criteria allows the bus reasonable latitude for encountering general delays without unduly inconveniencing the waiting patron. Vehicles should never be early, since it would cause patrons to miss the bus entirely, and often subjects riders to an excessive wait for the next scheduled bus. **The "on-time" percentage for this service guideline is 85 percent for urban, suburban, and**

rural transit service. The on-time performance can be measured from the route terminals, time points along the route, or at points where the route intersects with other transit routes.

- *Trip Availability* – It is inevitable that difficulties will occur occasionally that will disrupt operations and require trips to be cancelled. While at times delays cannot be avoided, the transit operator should take steps to ensure that they are not compounded by preventable disruptions in bus service. **In terms of the allowable disparity between the service scheduled and operated, this guideline has been established at 0.5 percent, which permits only one trip in 200 to be missed.** In view of the frequency of service operated in many rural and small urban areas, as well as the possible need to transfer between buses to complete many trips, a rigorous guideline is appropriate.

In the case of a rural, small urban area bus system such as BABS, the rural service guidelines developed by the MTA are most applicable.

The "on-time" performance rate of Blackstone Area Bus appears to be relatively high. The feedback of bus "on-time" performance by passengers as part of the on-board ridership survey described in Appendix E indicated that passengers gave BABS a good rating for this performance. Almost 90 percent of the passengers were satisfied with the Blackstone Area Bus "on-time" performance. **Although the system does not regularly monitor on-time performance along each route, the results of the on-board survey, combined with general service data, suggests that the "on-time" performance rate of BABS is better than 85 percent.**

A more regular process of monitoring on-time performance on all of the routes operated by the system should be implemented in the future, with field data collected at least once or twice a year.

The transit services provided by Blackstone Area Bus appear to be very consistent. The transit system always follows the published bus schedules to provide the services, weather permitting. **Based on general information provided by Jennifer Beck and staff, the "trip availability" service guideline is being satisfied at this time. A more formal process of monitoring this factor should be implemented in the future.**

Financial. This criterion specifies acceptable values for system farebox recovery, which is the ratio of revenue to operating cost expressed as a percentage. To ensure consistency with other related DRPT legislation and operating guidelines, revenue includes fares paid by patrons along with ancillary revenue such as advertising.

Farebox recovery is a measure that provides transit agencies with a broad gauge of the financial condition of the transit system. The suggested guidelines for public transit systems vary by the service area type, and they are listed in **Table 3-12**. The range of 10 to 40 percent for total revenue and 5 to 20 percent for passenger revenues reflect the increased intensity of transit system use in larger and more densely populated urban areas.

Table 3-12. Financial Guidelines

Measure	Urban	Suburban	Rural
System farebox recovery (total)	40%	20%	10%
Passenger fares	20%	10%	5%

Source: Adapted from Maryland Transit Guidelines, Maryland Transit Administration, May 2002, Page 17

In the case of a rural, small urban area bus system such as BABS, the rural service guidelines developed by the MTA are most applicable.

The revenue for BABS includes passenger fares only. Based on the latest available system operating statistics for FY2008, the annual passenger fare revenue is $14,814 for the entire system. This value represents approximately 4.1 percent of the total reported system annual operating cost of $361,194.

While this value is slightly below the five percent figure cited in **Table 3-12**, it should be noted that the local governments that operate and support BABS view it as a valuable local public service. The local governments have been willing and able to provide the necessary operating assistance funding to not only maintain but to regularly expand the service since its initiation. The community leaders also recognize that a large portion of the transit system's ridership have relatively low personal incomes, such that a base boarding fare of $0.50 per trip ($1.00 for a single round trip) represents a noticeable portion of their personal disposable income. **Therefore, while these financial guidelines are viewed as important, they are not as critical in this community as they might be in others.**

Productivity. The most useful measure of a public transportation system's productivity is passengers per revenue hour. It measures the number of passengers that, on average, board a transit vehicle for every service hour the vehicle is operated. This measure is useful because it provides the operating agency with a method to measure service without focusing on operating costs. Similar to the farebox recovery ratio, this service guideline for transit systems will vary by the service area type. It reflects the increased intensity of transit system use in larger and more densely populated urban areas. **Table 3-13** lists the productivity guidelines.

Table 3-13. Productivity Guidelines

Measure	Urban	Suburban	Rural
Passengers per revenue hour	20	10	5

Source: Maryland Transit Guidelines, Maryland Transit Administration, May 2002, Page 17

In the case of a rural, small urban area bus system such as BABS, the rural service guidelines developed by the MTA are most applicable.

Based on the latest available BABS operating statistics for FY2008, the number of annual passenger is 30,764 and annual revenue hours are 13,744 for the entire system. The associated passengers per revenue hour for the system are approximately 2.24.

While this value is lower than the value of five shown in the table above, it should be noted that Virginia DRPT has not yet formally adopted a set of transit operating guidelines for statewide application as has the Maryland Transit Administration. **BABS is a relatively new transit system, having existed only since early 2003, and since that time, it has been regularly expanding beyond its original town-focused route to provide service to a number of surrounding counties. As system ridership continues to grow over time, the above data suggests that this service factor will need to be regularly monitored.**

3.8 Potential Solutions to Gaps or Service Deficiencies

As described above, BABS is generally providing services in an efficient and cost-effective manner. As evidenced by the results of the on-board ridership survey, the current passengers appear to be pleased and supportive of the provided transit services.

The feedback from the on-board ridership survey, combined with input from Jennifer Beck and the analysis by the consultant team, suggest two potential near-term service improvements that BABS may wish to consider. The details of each improvement are described below:

Improvement 1: One Additional Bus for Blackstone Area Bus Line

The Blackstone Area Bus Line is the initial route in the system that began service in January 2003 and has maintained the same basic routing since that date. The service frequency is one bus every hour following a large circular routing through the Town of Blackstone. The comments from the on-board surveys indicate that this service frequency is too low and that passengers have to wait for a long time for the next bus to make their trip. The passengers' suggestion is to add one more bus to run in the opposite direction of the current service. This change would mean that one bus runs the service loop clockwise and the other bus runs the service loop counterclockwise. It is expected that the effective service frequency at any point along the route can be improved to one bus per 30 minutes if this improvement can be implemented.

Improvement 2: Friday Services for Brunswick Express and Crewe-Burkeville Express

Currently, the days of operation for both the Brunswick Express and Crewe-Burkeville Express routes are Mondays through Thursdays. From the feedback of the on-board surveys, some passengers complain that it is not convenient that the transit system does not provide Friday service. Passengers must find other means of transport to meet their travel needs on Fridays. Thus, the passengers suggested that BABS provide Friday services for Brunswick Express and Crewe-Burkeville Express. Note that the basic operating philosophy of most small urban area transit systems is that routes should be operated over the entire course of the regular service week (Monday through Friday).

Note that while the Friday service is desired by both BABS and the community, it is not currently feasible due to the unavailability of local funds.

3.9 Potential Remedies for Equipment and Facility Deficiencies

The current BABS operations and maintenance facility located at 101 BABS Lane, Blackstone, Virginia, was completed and opened for use in June 2008. The facility is the single maintenance site for all Town-owned and operated vehicles. The staff in the facility are all employees of the Town of Blackstone. The facility is relatively new and no facility deficiencies are reported.

With respect to bus stops, BABS has installed a system bus stop sign at each designated bus stop location in the Town of Blackstone. Accessibility issues have been identified at some of the bus stops. Based on the limited field observations by consultant team staff, neither sidewalks nor waiting pads are available at many of the sites. At these locations, appropriate facilities should be installed, such as sidewalk extensions, waiting pads, and shelters. A more extensive site by site review should be made of the current bus stop locations in the Town of Blackstone and in the surrounding communities, such as Crewe, Burkeville, and Brunswick, to make a better determination of the potential physical improvements that may be needed.

3.10 Title VI Report and FTA Quadrennial Review

As a designated subrecipient of FTA capital and operating assistance funding through the Virginia Department of Rail and Public Transportation (DRPT) whose services are provided in a rural portion of the Commonwealth, BABS is not required to prepare and submit its own separate Title VI report or the associated FTA Quadrennial Review. The statewide Title VI Report and Quadrennial Review prepared by DRPT satisfies this FTA requirement. However, BABS is still required to follow the Title VI and Title VI-dependent guidelines for Federal Transit Administration recipients as described in FTA Circular C 4702.1A.

4.0 SERVICE EXPANSION PROJECT DESCRIPTIONS

This chapter presents a description of potential service and facility improvement needs over the multi-year duration of the transit plan. This discussion should be viewed not as a "wish list" but rather as documentation of those reasonable potential actions to improve the existing transit system from how it exists today to what it might look like five to seven years into the future. The contents of this chapter include the following elements:

- Demographic analysis that identifies anticipated changes in population and employment within the service area.

- A description of potential needs based on the work undertaken to date in connection with the TDP development. This work reflects inputs from the transit agency staff, other regional stakeholders, and the technical analysis undertaken by the members of the consultant team.

- Preliminary capital and operating cost estimates associated with each of the various identified potential needs and a discussion of potential policy, funding, or operating issues associated with the defined needs. This data will include estimates of potential ridership response to the various service improvements.

Each of these topics is discussed in more detail below.

4.1 Demographic Analysis of Anticipated Population and Employment Changes

BABS currently operates six fixed routes. The service area includes portions of Amelia County, Brunswick County, Buckingham County, Cumberland County, Lunenburg County, Nottoway County, and Prince Edward County. The majority of the service is located in the Town of Blackstone proper and surrounding portions of Nottoway County. These counties are in the south central portion of the Commonwealth of Virginia. Most of the land areas of these counties are primarily agricultural and forest. As shown in **Table 4-1,** the estimated present day population of the BABS service area (based on 2008 data) is approximately 106,691 persons, spread across a total land area for the seven counties of approximately 2,914 square miles. The resulting average population density is approximately 36.61 persons per square mile.

Recent estimates assembled by the Virginia Employment Commission show that the total employment within these seven counties is approximately 44,400 jobs.

Table 4-1. Present Day Population and Employment Summary

Counties	2000 Population	2008 Population Estimate	County Area (Sq. Miles)	2000 Population Density (Persons/ Sq.Mi.)	2008 Population Density (Persons/ Sq.Mi.)	2009 Employment
Amelia County	11,400	12,808	356.5	31.98	35.93	6,176
Brunswick County	18,419	17,580	569.6	32.34	30.86	6,590
Buckingham County	15,623	15,977	586.5	26.64	27.24	6,857
Cumberland County	9,017	9,670	298.8	30.18	32.36	4,301
Lunenburg County	13,146	12,941	433.2	30.35	29.87	5,180
Nottoway County	15,725	15,892	316.9	49.62	50.15	6,126
Prince Edward County	19,720	21,823	352.5	55.94	61.91	9,122
Total	**103,050**	**106,691**	**2914**	**35.36**	**36.61**	**44,352**

Sources:
2000 Population and County Area – 2000 Census
2008 Population Estimates – http://quickfacts.census.gov/qfd/states/
2009 Employment Data (Average: January –June 2009) - Virginia Employment Commission

Information obtained from the Virginia Employment Commission presents future year forecasts of population for each of the seven counties in the BABS service area for the years 2010, 2020, and 2030. For the purposes of the BABS TDP, a future plan horizon year of 2015 has been identified, six years from the current base transit operations year of 2009. **Table 4-2** presents estimates of future population for the years 2010, 2015, and 2020 for each of the BABS service area counties. The 2015 estimates represent the mid-point of the 2010 and 2020 estimates.

Table 4-2. Future Year BABS Service Area Population Estimates (All Ages)

Counties	2008	2010	2015	2020	2030	Change, 2010-2015	
						Number	Percent
Amelia County	12,808	13,255	14,189	15,123	17,104	934	7.05%
Brunswick County	17,580	18,263	18,261	18,258	18,258	-3	-0.01%
Buckingham County	15,977	16,525	16,987	17,448	18,395	462	2.79%
Cumberland County	9,670	9,847	10,269	10,690	11,793	422	4.28%
Lunenburg County	12,941	13,172	13,231	13,290	13,478	59	0.45%
Nottoway County	15,892	15,229	15,135	15,041	15,032	-94	-0.62%
Prince Edward County	21,823	21,194	21,957	22,719	24,285	763	3.60%
Service Area Total	**106,691**	**107,485**	**110,027**	**112,569**	**118,345**	**2,542**	**2.36%**

Source: 2000 Census and Virginia Employment Commission Community Profiles for each county.

As **Table 4-2** shows, these seven counties are projected to experience modest increases in population from 2010 to 2015. The total estimated resident population increase is projected to be 2,542 persons from 2010 to 2015 or a percentage change over this period of 2.36 percent. On an average annual basis, this equates to approximately 0.47 percent per year.

Table 4-3 illustrates the current and projected future service area population of persons age 65 or older.

Table 4-3. Future Year BABS Service Area Population Estimates of Elderly Persons (65 or Older)

Counties	2008	2010	2015	2020	2030	Change, 2010-2015	
						Number	Percent
Amelia County	1,806	2,123	2,440	2,757	3,478	317	14.93%
Brunswick County	2,602	2,959	3,289	3,619	4,360	330	11.15%
Buckingham County	2,173	2,412	2,770	3,127	4,060	358	14.82%
Cumberland County	1,489	1,654	1,794	1,933	2,259	140	8.43%
Lunenburg County	2,303	2,281	2,477	2,672	3,012	196	8.57%
Nottoway County	2,781	2,553	2,603	2,653	2,970	50	1.96%
Prince Edward County	3,012	3,004	3,367	3,729	4,489	363	12.07%
Service Area Total	**16,166**	**16,986**	**18,738**	**20,490**	**24,628**	**1,752**	**10.31%**

Source: 2000 Census and Virginia Employment Commission Community Profiles for each county.

As shown in **Table 4-3**, the population of elderly persons is projected to increase from 2010 to 2015 in these seven counties. The total number of elderly persons is projected to increase from approximately 16,986 in 2010 to 18,738 in 2015. This change in the number of elderly residents of 1,752 persons from 2010 to 2015 represents a percentage change of about 10.31 percent, or 2.1 percent per year. **Figure 4-1** presents the existing population and the projected total and elderly populations for the BABS service jurisdictions in the years 2010, 2015, 2020, and 2030.

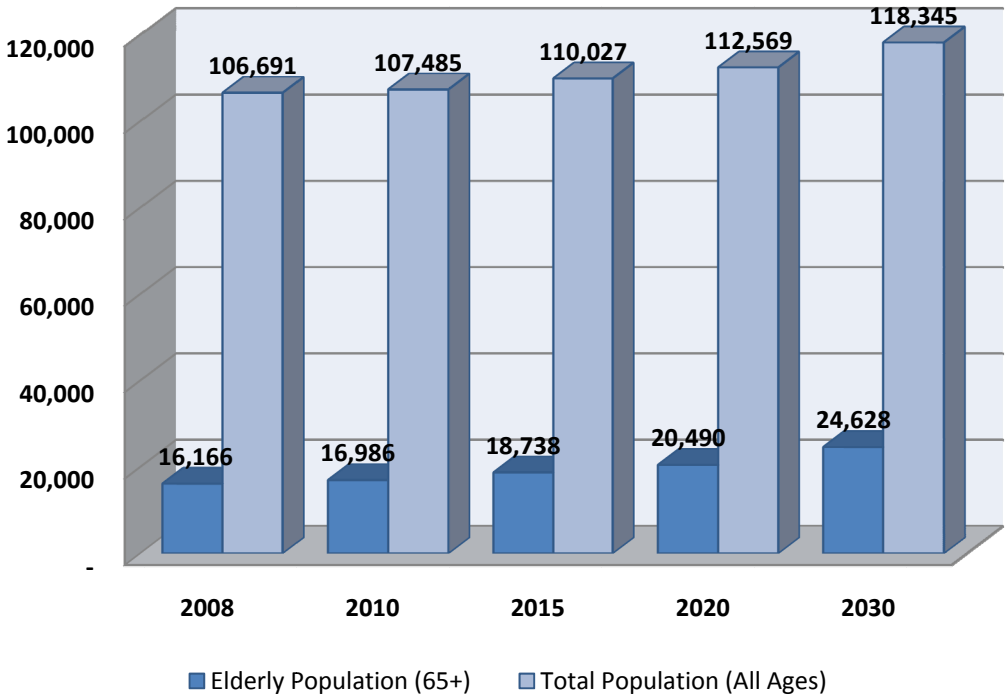


Figure 4-1. Projected Population (All BABS Service Jurisdictions)

4.2 Potential Service Expansion and Facility Needs

The fundamental question facing BABS is how best to improve upon the current system. Based on interviews with Jennifer Beck, BABS manager, and local stakeholders, the current service fits most of the perceived transit service needs in the region. There does not appear to be an immediate need for any significant system expansion across the entire service area. However, six potential new services were identified and are included in the TDP for reevaluation and consideration if funding were to become available in the future. These six services are described briefly later in this section.

In addition, based on the feedback from current riders obtained through the on-board ridership survey conducted in early 2009, two improvements have been suggested by the passengers. One is to provide an additional bus to the primary Blackstone Area Bus Line to run a reverse trip on the current one-way circular loop route. The other is to provide Friday service for the Brunswick Express and Crewe-Burkeville Express routes that currently operate only four days a week from Monday through Thursday. *Costs were estimated for these two improvements and they are provided in Section 4.3.*

Improvement 1: One Additional Bus for Blackstone Area Bus Line:

The Blackstone Area Bus Line is the initial route in the system that began service in January 2003 and has maintained the same basic routing since that date. The service frequency is

one bus every hour following a large circular routing through the Town of Blackstone. The comments from the on-board surveys indicate that service frequency is too low and passengers have to wait for a long time for the next bus. The passengers' suggestion is to add one more bus to run the opposite direction of service, which means that one bus runs the service loop clockwise and the other bus runs the service loop counterclockwise. It is expected that the service frequency can be improved to one bus per 30 minutes if this improvement can be implemented.

Improvement 2: Friday Services for Brunswick Express and Crewe-Burkeville Express:

Currently, the days of operation for both the Brunswick Express and Crewe-Burkeville Express routes are Mondays through Thursdays. From the feedback of the on-board surveys, some passengers complain that it is not convenient that the transit system does not provide Friday service. Passengers must find other means of transport to meet their travel needs on Fridays. The passengers suggested that BABS provide Friday services for the Brunswick Express and Crewe-Burkeville Express. Note that the basic operating philosophy of most small urban area transit systems is that routes should be operated over the course of the regular service week (Monday through Friday).

Note that while the Friday service is desired by both BABS and the community, it is not currently feasible due to the unavailability of local funds.

The six suggestions received from local stakeholders for expanded service are described further below. *Note that costs were not developed for these options.*

1. Lunenburg to the Southside Virginia Community College/Keysville

The Orange Line currently travels from Kenbridge to Lunenburg to Southside VA Community College just outside of Keysville in the morning (first run of the day) and late afternoon (last run of the day); service to the Community College is not provided in the middle of the day.

Given the amount of idle time at the end of each direction throughout the day, two potential options were identified for extending the route to service the College mid-day from Lunenburg County Courthouse:

a) Currently, the Orange Line terminates its route at 4:15 PM and the Green Line terminates its route at 4:45 PM. This option would lengthen the operating period of the Orange Line by about an hour, so that the last run ends at about 5:15 PM, and lengthen the operating period of the Green Line by approximately 75-90 minutes, to end at about 6:00 to 6:15 PM. This extension would allow the service to maintain 5 loops as it currently does and serve the college throughout the day.

b) Alternatively, instead of choosing a longer duration, the route could be served by two buses, one in each direction, i.e., one leaves the college at the same time the other

leaves Ken Care Family Practice (Orange) or Wal-Mart (Green). This choice would require purchasing a new bus.

2. Keysville to Charlotte Court House

There are several options to provide this desired service:

a) Based on the extra travel time of about 25-30 minutes per direction from the Community College through Keysville to Charlotte Court House, one option would extend the Orange and Green Lines and operate two buses, starting at opposite ends at the same time and running a continuous loop. (Currently, the first run of the Orange Line takes about 2 hours for a full loop back to its starting point, and with the extension to Charlotte Court House, it would be three hours. Thus the need for two buses.)

b) Alternatively, this option could be combined with Potential Route #1 above as follows: Run the Orange/Green Lines only as far as Lunenburg Courthouse. This location may serve as a transfer point for some. The second route would begin here at Lunenburg Courthouse to go to the College, through Keysville, then onto Charlotte Court House. Each route would then need one bus, but a transfer hub would be needed (simply a two-bay bus stop), maybe with a shelter.

3. A route in Nottoway County, as per the KFH/Coordinated Human Services Study

The KFH study listed eight potential destinations in Nottoway County (see **Table 4-4** below). Currently, BABS' Crewe-Burkeville Express route runs through Nottoway County, but this route does not serve seven of these potential destinations (Destination E is the only located being served). This existing route could be modified to reach some or all of the locations identified in the KFH study, as opposed to starting a new route to hit those locations that are not currently served.

Table 4-4. Potential Destinations in Nottoway County

KFH Study Destination		Address	City	County	The Nearest Existing Stop on Crewe-Burkeville Express	How far is KFH Study Destination from the Nearest Existing Stop and in which Direction?
A*	VA Tech Conservation Management	200 West 10th Street	Blackstone	Nottoway	(1A) Magnolia Place (on W. 10th Street)	4.2 miles to the east
B*	SVCC Truck Driver Training School	1041 West 10th Street	Blackstone	Nottoway	(1A) Magnolia Place (on W. 10th Street)	4.2 miles to the east
C	Reiss Manufacturing, Inc.	1 Polymer Place	Blackstone	Nottoway	(1A) Magnolia Place (on Military Road)	3.6 miles to the east
D	Wal-Mart Supercenter Store	1451 South Main Street	Blackstone	Nottoway	(1) Food Lion (on South Main Street)	0.8 mile to the north
E	Nottoway County Department of Social Service	288 West Courthouse Road	Nottoway	Nottoway	*Service is provided.*	
F	Nottoway Correctional Center	650 Schutt Road	Burkeville	Nottoway	(4) Nottoway Emergency Squad (on Schutt Road)	2.8 miles to the southwest
G	Piedmont Senior Resources Area Agency on Aging, Inc.	939 Inverness Road	Burkeville	Nottoway	(8) Burkeville Market (on State Route 624)	1 mile to the east
H	Piedmont Geriatric Hospital	5001 East Patrick Henry Highway	Burkeville	Nottoway	(8) Burkeville Market (on East Patrick Henry Hwy)	2.2 miles to the northeast

**Destinations A and B are very close. In the map, only location B is shown.*

4. Dinwiddie County/Route 460 route that was recommended in the Dinwiddie County Fixed Route Analysis

Two routes were proposed in the Dinwiddie County Fixed Route Analysis report, as shown in **Figure 4-2**. One (#1) travelled from McKenney to the Wal-Mart distribution center via Blackstone. The other (#2) travelled from Alberta to Commerce Park via McKenney. The existing Dinwiddie Express started operation on April 9, 2009. It operates from 6:00 AM to 6:14 PM. This route runs from Petersburg to Blackstone via McKenney and overlaps some sections of both proposed routes in the Dinwiddie County Fixed Route Analysis report.

The areas that are not being served are the section from McKenney to Southside Virginia Community College from the (#1) route and the section from the intersection of Rt. 460 and Rt. 642 to Petersburg from the (#2) route. Thus, the transit service on Rt. 460 between Petersburg and Blackstone may be a potential additional improvement for Dinwiddie County.

The distance between Blackstone and Petersburg is approximate 40 miles. Assuming one vehicle runs the service, four round trips per day (plus 5% deadhead mileage), 250 days of annual service, with the service starting in FY 2015, the annual operating cost of this potential route is estimated as:

40 mi * 2 (round trip) * 4 round trips* 1.05 (deadhead) * $1.43 cost/rev mi (FY2015) * 250 days = $120,120

With the capital cost of a vehicle at $63,700 in FY2015, the total cost of this potential route is estimated at $120,120 + $63,700 = $183,820.

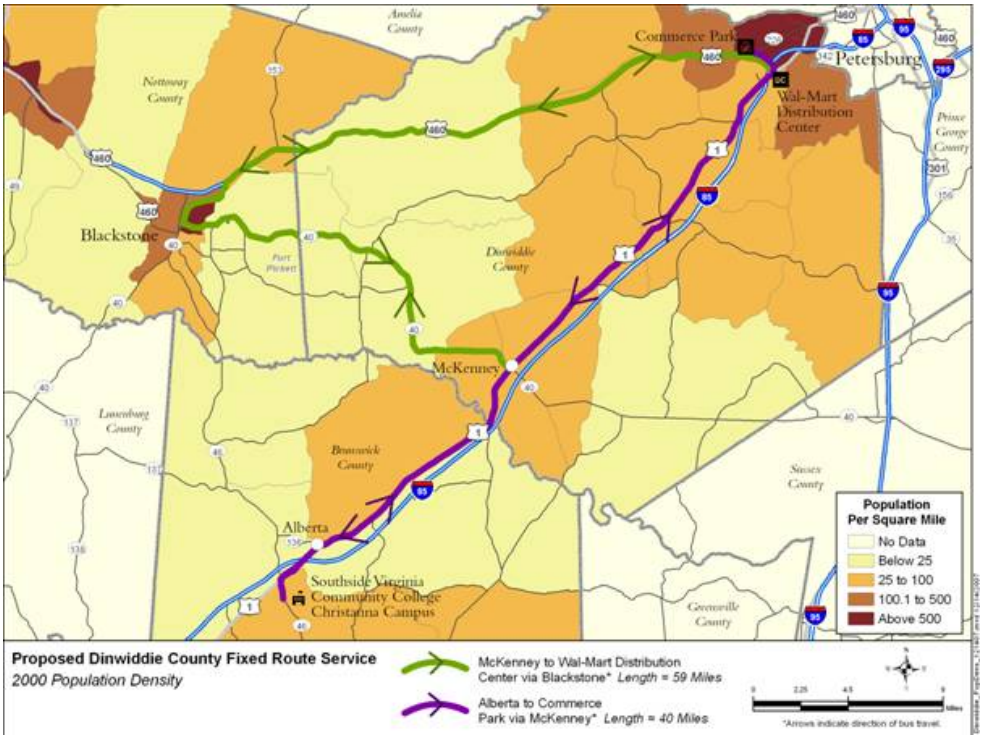


Figure 4-2. Proposed Dinwiddie County Fixed-Route Service

5. Fort Pickett and Chase City

DRPT is currently sponsoring a study for bus service to Chase City in Mecklenburg County and Fort Pickett. The *Public Transportation Feasibility Study for Town of Chase City and Fort Pickett* is being prepared by HNTB and will be completed by January 2010.

6. Extension of Brunswick Express Route

A need was identified to expand the Brunswick Express Route, which currently serves the community college in Alberta and Saint Paul's College in Lawrenceville, to additional areas of Brunswick. Based on the current schedules, Alberta is only served two times a day. In order to further address this option in the future, additional information would need to be gathered on whether the service expansion should include serving Alberta throughout the day or if the desire would be to serve additional locations.

In addition to the service improvements identified above, a basic facility need is the continuation of the historical transit vehicle replacement for the BABS bus fleet. Currently, BABS' routes employ 13 vehicles. The average vehicle age is 5.85. This average vehicle age is over the normal four-year service life / 100,000 miles of revenue service criteria designed for the useful life of the transit bus. Therefore, the buses that are over or will reach the end of their designated useful life should be replaced gradually. It is assumed that BABS replaces one vehicle per year over the TDP's six-year time period. **Table 4-5** illustrates the total passenger fleet size and the anticipated average vehicle age between 2009 and the TDP horizon year of 2015.

Table 4-5. BABS Fleet Replacement Program, FY2008-FY2015

Passenger Vehicle Fleet									
Model Year	**No. of Vehicles**	**FY2008**	**FY2009**	**FY2010**	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
1998	1	1	1	0	0	0	0	0	0
1999	1	1	1	1	0	0	0	0	0
2000	0	0	0	0	0	0	0	0	0
2001	0	0	0	0	0	0	0	0	0
2002	1	1	1	1	1	0	0	0	0
2003	2	2	2	2	2	2	1	0	0
2004	1	1	1	1	1	1	1	1	0
2005	1	1	1	1	1	1	1	1	1
2006	3	3	3	3	3	3	3	3	3
2007	2	2	2	2	2	2	2	2	2
2008	1	1	1	1	1	1	1	1	1
2009	-	0	0	0	0	0	0	0	0
2010	-	0	0	1	1	1	1	1	1
2011	-	0	0	0	1	1	1	1	1
2012	-	0	0	0	0	1	1	1	1
2013	-	0	0	0	0	0	1	1	1
2014	-	0	0	0	0	0	0	1	1
2015	-	0	0	0	0	0	0	0	1
Total Vehicles	13	13	13	13	13	13	13	13	13
Avg. Age		**4.846**	**5.846**	**5.923**	**6.000**	**6.231**	**6.462**	**6.615**	**6.769**

Assumptions *Current fleet size remains relatively constant; one vehicle to be acquired each year beginning in 2010.*

Based on the information associated with the Federal Recovery Act stimulus funding allocation to the rural transit system in Virginia, the anticipated average cost of each of these additional required vehicles is approximately $56,500. Applying the average annual inflation rate of 2.0 percent to the average vehicle acquisition cost of $56,500 in the current year (2009) over the period of 2010 to 2015, the typical average annual cost associated with the acquisition of one replacement vehicle each year over this period is shown in **Table 4-6**.

Table 4-6. Estimated Cost of Base Fleet Vehicle Replacement Program, FY2009-FY2015

Model Year	Avg. Vehicle Cost	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015	Total Cost
2009	$56,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2010	$57,600	$ -	$57,600	$ -	$ -	$ -	$ -	$ -	$57,600
2011	$58,800	$ -	$ -	$58,800	$ -	$ -	$ -	$ -	$58,800
2012	$60,000	$ -	$ -	$ -	$60,000	$ -	$ -	$ -	$60,000
2013	$61,200	$ -	$ -	$ -	$ -	$61,200	$ -	$ -	$61,200
2014	$62,400	$ -	$ -	$ -	$ -	$ -	$62,400	$ -	$62,400
2015	$63,600	$ -	$ -	$ -	$ -	$ -	$ -	$63,600	$63,600
	Totals	$ -	$57,600	$58,800	$60,000	$61,200	$62,400	$63,600	$363,600

Note: Average Vehicle Cost each year assumes 2.0 percent inflation rate

As illustrated in **Table 4-6**, the average vehicle cost today of $56,500 could increase to approximately $63,600 by the year 2015 assuming an average annual inflation rate of 2.0 percent and with the average vehicle cost rounded to the nearest $100. The total estimated cost of acquiring one vehicle each year for a period of six years would be approximately $363,600.

Table 4-7 and **Table 4-8**, respectively, illustrate the anticipated operating statistics and operating assistance funding levels associated with the continuing operation of BABS at present day service levels. It should be noted that a new fixed route service of Dinwiddie Express started operation on April 6, 2009. All of the operating statistics thus include this route in 2009 and all subsequent years. The following tables assume that the currently observed vehicle miles and hours of service would remain basically unchanged over the next several years, with the anticipated increase in service area population defining the magnitude of the anticipated passenger growth. Operating expenses are assumed to experience an average annual increase of approximately 2.0 percent over the period through 2015.

Table 4-7. Operating Statistics of Blackstone Transit, FY2008-FY2015

	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
Annual Passengers	30,764	32,118	32,278	32,440	32,602	32,765	32,929	33,093
Annual Operating Costs ($)	$361,194	$574,600	$585,650	$597,363	$609,310	$621,496	$633,926	$646,605
Annual Revenue Miles	364,025	451,625	451,625	451,625	451,625	451,625	451,625	451,625
Annual Revenue Hours	13,744	15,544	15,544	15,544	15,544	15,544	15,544	15,544
Passengers per Revenue Mile	0.0845	0.0711	0.0715	0.0718	0.0722	0.0725	0.0729	0.0733
Passengers per Revenue Hour	2.24	2.07	2.08	2.09	2.10	2.11	2.12	2.13
Cost per Passenger	$11.74	$17.89	$18.14	$18.41	$18.69	$18.97	$19.25	$19.54
Cost per Revenue Mile	$0.99	$1.27	$1.30	$1.32	$1.35	$1.38	$1.40	$1.43
Cost per Revenue Hour	$26.28	$36.97	$37.68	$38.43	$39.20	$39.98	$40.78	$41.60

Note:

1. The Dinwiddie Express starts operating in FY2009, and a ridership of 1,200 passengers per year is projected for this service during this first year.

2. FY2010 Operating Cost obtained from DRPT FY2010 district budget data. Beginning in FY2011, the Annual Operating Cost calculated assuming a 2.0%/year inflation rate .

*3. The Dinwiddie Express starts operating in FY2009. The annual revenue miles are estimated to be 87,600 (7,300*12) for this service. After FY2009, Annual Revenue Miles assumed to be constant through the life of the TDP period.*

*4. The Dinwiddie Express starts operating in FY2009. The annual revenue hours are estimated to be 1,800 (150*12) for this service. After FY2009, the Annual Revenue Hours are assumed to be constant through the life of the TDP period.*

5. FY2010 Passenger Fare and Contract Revenue Total obtained from DRPT FY2010 district budget data and assumed to be constant through the life of the TDP period.

6. Federal Operating Assistance reflects estimated FTA Section 5311 and FTA 5316 funds; assumed to remain flat at FY2010 levels.

7. The big increase in FY2009 State Operating Assistance is because of the new route operation of the Dinwiddie Express. The State has contributed $72,390 for this new route, which represented 95% of operating cost of this new route.

8. FY2010 State Operating Assistance obtained from DRPT FY2010 district budget data. The increase in State Operating Assistance, as per DRPT, is assumed to be 1.77% in FY2011, 2.90% in FY2011-FY2012, 3.50% in FY2012-FY2013, 3.16% in FY2013-FY2014, and 3.16% in FY2014-FY2015 .

9. Net Operating Cost calculated as Total Cost less Passenger Fares and Contract Revenues.

Table 4-8. System Revenues and Operating Assistance of Blackstone Transit, FY2008-FY2015

	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
Passenger Fares Contract Revenues	$14,814	$20,450	$21,250	$21,250	$21,250	$21,250	$21,250	$21,250
Local Operating Assistance	$108,026	$171,100	$201,090	$211,404	$220,911	$230,138	$239,760	$249,594
State Operating Assistance	$65,163	$144,100	$81,110	$82,546	$84,939	$87,912	$90,690	$93,556
Federal Operating Assistance	$173,191	$239,000	$282,200	$282,200	$282,200	$282,200	$282,200	$282,200
Totals	*$361,194*	*$574,600*	*$585,700*	*$597,400*	*$609,300*	*$621,500*	*$633,900*	*$646,600*
Net Operating Cost	$346,380	$554,150	$564,450	$576,150	$588,050	$600,250	$612,650	$625,350

Note:

1. The Dinwiddie Express starts operating in FY2009, and a ridership of 1,200 passengers per year is projected for this service during this first year.

2. FY2010 Operating Cost obtained from DRPT FY2010 district budget data. Beginning in FY2011, the Annual Operating Cost calculated assuming a 2.0%/year inflation rate.

*3. The Dinwiddie Express starts operating in FY2009. The annual revenue miles are estimated to be 87,600 (7,300*12) for this service. After FY2009, Annual Revenue Miles assumed to be constant through the life of the TDP period.*

*4. The Dinwiddie Express starts operating in FY2009. The annual revenue hours are estimated to be 1,800 (150*12) for this service. After FY2009, the Annual Revenue Hours are assumed to be constant through the life of the TDP period.*

5. FY2010 Passenger Fare and Contract Revenue Total obtained from DRPT FY2010 district budget data and assumed to be constant through the life of the TDP period.

6. Federal Operating Assistance reflects estimated FTA Section 5311 and FTA 5316 funds; assumed to remain flat at FY2010 levels.

7. The big increase in FY2009 State Operating Assistance is because of the new route operation of the Dinwiddie Express. The State has contributed $72,390 for this new route, which represented 95% of operating cost of this new route.

8. FY2010 State Operating Assistance obtained from DRPT FY2010 district budget data. The increase in State Operating Assistance, as per DRPT, is assumed to be 1.77% in FY2011, 2.90% in FY2011-FY2012, 3.50% in FY2012-FY2013, 3.16% in FY2013-FY2014, and 3.16% in FY2014-FY2015.

9. Net Operating Cost calculated as Total Cost less Passenger Fares and Contract Revenues.

4.3 Estimates of Capital and Operating Costs for Identified Improvements

The previous section identified the potential improvement needs for BABS. In this section, the capital and operating costs associated with two of these improvements are evaluated and estimated.

The cost of one additional bus for Blackstone Area Bus Line: The costs of the additional bus for the Blackstone Area Bus Line include the capital cost for the acquisition of the necessary additional vehicles and the estimated annual operating cost of these services. The operating cost includes all of the expenses for the operation of the transit system, such as the salaries of BABS staff, motor fuels, motor tires and parts, etc. The latest available budget information for FY2009 was used to estimate both future capital and operating cost. All cost estimations are based on this current year budget information with the application of an assumed 2.0 percent annual inflation rate for each of the future years through the TDP horizon year of 2015.

It is assumed that the proposed new bus required for assignment to this route will be acquired in FY2012 and the new bus services will be operated by using the current Blackstone Area Bus Line schedule, which is six days per week, Monday through Saturday. The total number of operating days assumed for the new bus is 300 days per year.

Based on the information associated with the Federal Recovery Act stimulus funding allocation to the rural transit system in Virginia, the anticipated average cost of each of these additional required vehicles is approximately $56,500.

The methodology to determine the operating cost of the new bus is based on the annual operating miles and the cost per revenue mile. The annual number of revenue miles associated with the operation of this new second bus on the basic Blackstone Area Bus Line route is the product of the daily operating miles of the proposed new bus and the assumed number of service days per year.

Table 4-9 summarizes the annual operating miles of the proposed improvement option described above. It should be noted that a five percent deadhead mileage factor has been added to the initially estimated annual revenue miles of service to arrive at the estimated total annual operating miles.

Table 4-9. Estimated Annual Operating Miles of the Proposed New Bus

	Annual Operating Miles of the Proposed New Bus					
	FY2010	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Improvement 1	0	0	40,950	40,950	40,950	40,950

Note: Total annual operating miles = total estimated revenue miles plus 5 percent deadhead mileage.

Based on the FY2009 BABS budget information, the average cost per revenue mile of operation is $1.23 per mile. By applying an annual inflation rate of 2.0 percent, the cost per revenue mile for each of the future years is summarized in **Table 4-10**.

Table 4-10. Estimated Cost per Revenue Mile of the Proposed New Bus

	Cost per Revenue Mile ($)					
	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
Improvement 1	1.30	1.32	1.35	1.37	1.40	1.43

Note: Present (FY2009) cost per revenue mile = 1.23 dollar/mile. Assumed annual inflation rate is 2 percent.

By multiplying the estimated number of annual operating miles by the average cost per revenue mile, the annual operating cost for the new bus is determined. **Table 4-11** summarizes the estimated annual operating costs for the new bus.

Table 4-11. Operating Cost of the Proposed New Bus

	Operating Cost					
	FY2010	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Improvement 1	$ -	$ -	$ 55,200	$ 56,300	$ 57,400	$ 58,600

For the proposed new bus, the anticipated need for new vehicle purchases is the capital cost for the system. It is assumed that the new bus will be acquired in FY2012 and that replacement vehicles will be purchased in FY2015 to conform to normal four-year service life / 100,000 miles of revenue service criteria. **Table 4-12** summarizes the capital cost of the proposed new bus.

Table 4-12. Capital Cost of the Proposed New Bus

	Operating Cost					
	FY2010	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Improvement 1	$ -	$ -	$ 60,000	$ -	$ -	$ 63,600

Notice: Present (FY2009) vehicle purchase cost is $56,500 per vehicle. Assumed annual inflation rate is 2 percent.

By adding together the estimated annual operating cost and the capital cost in the year in which it is expected to occur, the total estimated cost of the proposed new bus to be assigned to the basic Blackstone Area Bus Line route would be as summarized in **Table 4-13**.

Table 4-13. Total Annual Cost of the Proposed New Bus

		Total Cost					
		FY2010	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Improvement 1	Operating Cost	$ -	$ -	$ 55,200	$ 56,300	$ 57,400	$ 58,600
	Capital Cost	$ -	$ -	$ 60,000	$ -	$ -	$ 63,600
Total Improvement 1 Cost		**$ -**	**$ -**	**$ 115,200**	**$ 56,300**	**$ 57,400**	**$122,200**

With this additional bus operating on the Blackstone Area Bus Line route, **Table 4-14** summarizes the annual passenger estimate for BABS with and without consideration of this service expansion.

Table 4-14. Annual Passenger Estimation for BABS' Blackstone Area Bus Line Base Route Service Expansion

	Annual Passenger Estimation for Bay Transit					
	FY2010	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Annual Passengers w/o an additional bus for BABS Line	32,278	32,440	32,602	32,765	32,929	33,093
Annual Passengers w/ an additional bus for BABS Line	32,278	32,440	35,256	35,593	35,772	35,952

Note: It is assumed that the additional new bus starts service in FY2012.

The cost of Friday services for Brunswick Express and Crewe-Burkeville Express: The same methodology is used to determine the cost of Friday services for Brunswick Express and Crewe-Burkeville Express. If the same bus schedule on Monday through Thursday is used on Fridays for Brunswick Express and Crewe-Burkeville Express, no new bus purchase is needed for this improvement. The only cost associated with this improvement is the operating cost on Fridays for the two routes. The operating cost for the Friday services of the two routes is based on the operating miles and the cost per revenue mile. The annual number of additional revenue miles associated with the initiation of Friday services on both of these two routes is estimated as a 25 percent increase in the current annual revenue miles of service associated with the Monday to Thursday operation of the routes.

Table 4-15 summarizes the annual operating miles of the proposed improvement for the initiation of Friday services for both the Brunswick Express and Crewe-Burkeville Express routes. It should be noted that a five percent deadhead mileage factor has been added to the initially estimated annual revenue miles of service to arrive at the estimated total annual operating miles.

Table 4-15. Estimated Annual Operating Miles of the Friday Services for Brunswick Express and Crewe-Burkeville Express

	Annual Operating Miles of New Buses					
	FY2010	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Brunswick Express	0	0	10,238	10,238	10,238	10,238
Crewe-Burkeville Express	0	0	10,500	10,500	10,500	10,500

Note: Total annual operating miles = total estimated revenue miles plus 5% deadhead mileage

Based on the FY2009 BABS budget information, the average cost per revenue mile of operation is $1.23 per mile. By applying an annual inflation rate of 2.0 percent, the cost per revenue mile for each of the future years is summarized in **Table 4-16**.

Table 4-16. Estimated Cost per Revenue Mile of the Friday Services for Brunswick Express and Crewe-Burkeville Express

	Cost per Revenue Mile					
Brunswick Express	**FY2010**	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Crewe-Burkeville Express	1.30	1.32	1.35	1.37	1.40	1.43

Note: Present (FY2009) cost per revenue mile = 1.23 dollar/mile. Assuming annual inflation rate is 2%.

By multiplying the estimated number of additional annual operating miles by the average cost per revenue mile, the estimated additional annual operating cost for the initiation of Friday services for the Brunswick Express and Crewe-Burkeville Express routes was determined, as shown in **Table 4-17**.

Table 4-17. Operating Cost of the Friday Services for Brunswick Express and Crewe-Burkeville Express

	Operating Cost					
	FY2010	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Brunswick Express	$ -	$ -	$13,800	$14,000	$14,300	$14,600
Crewe-Burkeville Express	$ -	$ -	$14,200	$14,400	$14,700	$15,000
Total	**$ -**	**$ -**	**$28,000**	**$28,400**	**$29,000**	**$29,600**

The impact of the Friday services for these two routes on the annual passenger estimates for BABS is summarized in **Table 4-18**.

Table 4-18. Annual Passenger Estimation for BABS

	Annual Passenger Estimation for Bay Transit					
	FY2010	**FY2011**	**FY2012**	**FY2013**	**FY2014**	**FY2015**
Annual Passengers w/o Friday services for Brunswick Express and Crewe-Burkeville Express	32,278	32,440	32,602	32,765	32,929	33,093
Annual Passengers w/o Friday services for Brunswick Express and Crewe-Burkeville Express	32,278	32,440	33,866	34,197	34,369	34,541

Notice: It is assumed that the Friday services start in FY2012.

5.0 SERVICE AND FACILITY RECOMMENDATIONS

This chapter identifies service and facility needs that are recommended for implementation over the multi-year duration of the transit plan. A more comprehensive listing of potential services and facility needs were identified in the prior chapter of this TDP. The recommended service and facility improvements that are presented in this chapter are based on the anticipated funding availability levels during the TDP time period.

Where sufficient federal, state, and local funding has been identified for either the estimated capital or operating costs associated with a specific recommendation, the activity has been categorized as achievable under the fiscally "constrained" transit development plan. Where a substantial portion or the total required amount of estimated capital or operating costs for a specific action cannot be easily identified, the activity has been identified as being in need of additional funding and has been considered to be achievable only under the fiscally "unconstrained" transit development plan. This designation does not mean that the action cannot be accomplished during the six-year TDP cycle ending in FY2015, but rather that additional sources of federal, state, or local funding beyond those currently anticipated to be available to BABS will need to be identified and committed to the specific project.

5.1 Service Recommendations

Chapter 4 of this TDP identified the following potential service improvements for consideration over the TDP's six-year time period of FY2010 to FY2015. These service improvements would be in addition to the continuation of the current BABS level of operations:

- One Additional Bus for Blackstone Area Bus Line
- Friday Services for Brunswick Express and Crewe-Burkeville Express

As noted in Chapter 4, the additional bus for the Blackstone Area Bus Line will provide more frequency of transit service and consequently reduce the riders' waiting time for the bus at the bus stops along the route. It was assumed that this new bus would start service in FY2012. The initial cost of this improvement will include the capital cost of one additional bus purchase and the annual operating cost of the new vehicle. It is also assumed that the replacement vehicle for this new bus would be purchased in FY2015 to conform to the normal four-year service life / 100,000 miles of revenue service vehicle replacement criteria for small buses of this type.

The estimated annual total costs of this improvement would thus be approximately $115,200 (FY2012), $56,300 (FY2013), $57,400 (FY2014) and $122,200 (FY2015). The costs in FY2012 and FY2015 would include both a single body-on-chassis bus acquisition and the annual operating cost, while the costs in FY2013 and FY2014 would only be the operating cost of this additional vehicle assigned to the Blackstone Area Bus Line.

The other recommended improvement was the provision of Friday Services for both the Brunswick Express and Crewe-Burkeville Express routes. Currently, the days of operation for both the Brunswick Express and Crewe-Burkeville Express routes are only Mondays through Thursdays. It is not convenient for the regular riders of either route that the transit system does not provide Friday service. Therefore, the initiation of Friday services for Brunswick Express and Crewe-Burkeville Express are suggested for BABS.

It is assumed that the same bus schedule that is currently being operated Monday through Thursday would be used on Fridays for both routes. The only cost associated with this improvement would be the additional annual operating cost for the provision of service on Fridays for the two routes. The estimated additional annual operating costs of this improvement are approximately $28,000 (FY2012), $28,400 (FY2013), $29,000 (FY2014) and $29,600 (FY2015).

Taking into consideration the current BABS financial condition and anticipated funding levels in the near-term future, it appears to be unlikely that BABS would be able to obtain sufficient funding to implement both of these two recommended service improvements. As was described in Chapter 3, the total annual passenger fares generated by BABS operations in FY2008 represented only 4.1% of the total annual operating costs. The remaining net operating costs were funded during that year through a combination of local government (31%), state government (19%), and federal government (50%) funds.

Because of the recent economic downturn, it is expected that the local government tax base will not be growing at a significant rate for at least the next few years. In addition, future federal and state funding levels are somewhat uncertain at this point, with the level of state operating assistance support having recently experienced a reduction in funding. Recent estimates prepared by DRPT indicate that the annual allocation of state operating assistance may remain essentially constant over the next several years, with little if any adjustments anticipated to account for general inflationary cost increases.

With respect to potential physical facility improvement needs beyond the regular vehicle replacement process, no specific projects were identified in Chapter 4. The current BABS operations and maintenance facility as provided within the Town of Blackstone's vehicle maintenance complex is both new and well equipped. Other than the normal budgeted replacement costs for bus tires, lubricants, and other maintenance items, there do not appear to be any significant facility needs at this time.

Similarly, there is a sufficient supply of bus stop signs to allow for their installation and replacement on a regular basis as necessary. An enclosed passenger waiting area is available at the new medical center in Blackstone; however, there are no other enclosed passenger waiting shelters at any of the designated bus stops. A number of bus stops either provide passenger waiting benches or riders are able to wait beneath building overhangs or awnings for weather protection. Unless the volume of passengers at any specific stop increases substantially, it does

not appear that the service guidelines threshold for the installation of passenger waiting shelters will be reached for some years to come.

Unlike some other rural transit systems in Virginia, which have been identified as the recipients of funding from American Recovery and Reinvestment Act (ARRA), BABS was not cited as one of the rural and small urban public transit systems in Virginia to receive Federal Recovery Act stimulus funding. Thus, no dedicated new sources of capital funding are anticipated to be made available for BABS.[5]

Therefore, it is suggested that BABS' top priority as defined in this TDP be a focus on maintaining the current fixed-route service levels in the near term. The proposed service improvements should only be considered an element of the "unconstrained" TDP program of projects. Should additional operating assistance funds become available from federal, state, or local sources, one or both of the two service improvements could be designated as an element of the "constrained" TDP program of projects with the suggested prioritization as follows:

- Friday Services for Brunswick Express and Crewe-Burkeville Express
- One Additional Bus for BABS Line

In addition, six additional services were identified in Chapter 4 for consideration and study if funding were to become available in the future.

5.2 Facility Recommendations

Chapter 4 of this TDP also identified the continuation of the transit vehicle replacement program as the facility improvement for consideration over the TDP's six-year time period.

The current average vehicle age for the BABS fleet is 5.85. Some of BABS' buses that are over or have reached the end of their designated useful life of four years should be replaced gradually. Assuming that during the TDP's six-year time period, the typical vehicle replacement schedule is continued, from FY2010 to FY2015, BABS should expect to be able to acquire one new/replacement vehicle each year. **This historically observed vehicle replacement schedule is thus viewed as an element of the "constrained" TDP program of projects.**

5.3 Other Recommendations

The comments received from the on-board survey conducted for BABS in February and March of 2009 included suggestions that BABS extend their service hours to offer weekend service. These riders must currently seek other means of transport to meet their travel needs on weekends. This potential service improvement should be studied by BABS in future years. No

[5] *In September 2009, a second round of ARRA funding was completed. At the time of publication of this TDP document, the final decision of funding for BABS from this second round was pending.*

specific timeframe has been identified for this study effort, and no local government funding has been assumed in the TDP's financial plan.

Based on the conversations with staff and stakeholders of BABS, there are a number of transit demand requests for additional service between the Blackstone area and the adjacent jurisdictions of Cumberland County and Amelia County, and for potential new service in Charlotte County. The purposes of these requested trips include work, school, medical appointments, etc. BABS can improve their system in the future with potential expansion into these service areas. Based on the current BABS financial condition, anticipated funding levels in the near-term future, and the expected high initial investment costs of any such new routes, this potential service expansion should not be the highest prioritization of the improvements that BABS should consider. Again, no specific timeframe has been identified for this study effort, and no local government funding has been assumed in the TDP's financial plan.

6.0 CAPITAL IMPROVEMENT PROGRAM

This chapter describes capital programs (vehicles, facilities, and equipment) required to carry out the operations and services set forth in the TDP service and facility recommendations that were presented in the prior chapter.

6.1 Vehicle Replacement Program

As was noted in prior chapters of this TDP, BABS presently has a fleet of 13 vehicles. Nine (9) vehicles have diesel engines and the other four (4) vehicles have gasoline engines. Among these 13 vehicles, 11 vehicles in the active fleet are 14 to 19 passenger body on chassis-type buses, one vehicle is the system's spare bus, and one vehicle is the administrative vehicle.

The model years of buses in BABS' fleet range from 1998 through 2008 and the current average vehicle age is 5.85. Some of these buses are over the designated useful life of four years and should be replaced gradually. With no fleet expansion proposed during the TDP time period, the capital improvement plan calls for replacing one vehicle per year in BABS' fleet. Assuming that this typical vehicle replacement cycle is continued over the next several years through available funding from Federal, State, and Local governments, **Table 4-5** illustrates the total passenger fleet size and the anticipated average vehicle age between 2008 and the TDP horizon year of 2015.

6.2 Facility Improvement Program

With respect to potential physical facility improvement needs beyond the regular vehicle replacement process, no specific projects were identified in Chapter 4. The current BABS operations and maintenance facility as provided within the Town of Blackstone's vehicle maintenance complex is both new and well equipped. Other than the normal budgeted replacement costs for bus tires, lubricants, and other maintenance items, there do not appear to be any significant facility needs at this time.

Similarly, there is a sufficient supply of bus stop signs to allow for their installation and replacement on a regular basis as necessary. While no passenger shelters currently exist along the system's routes, a number of bus stops either provide passenger waiting benches or building overhangs or awnings for weather protection. Unless the volume of passengers at any specific stop increases substantially, it does not appear that the service guidelines threshold for the installation of passenger waiting shelters will be reached for some years to come.

7.0 FINANCIAL PLAN

The financial plan is a principal product of the TDP. It is in this chapter that an agency demonstrates its ability to provide a sustainable level of transit service over the TDP time period, including the rehabilitation and replacement of capital assets. This chapter identifies potential funding sources for annual operating and maintenance costs, funding requirements and funding sources for bus purchases, and funding requirements and sources for other facility improvements.

7.1 Operation and Maintenance Costs and Funding Sources

Based on the latest budget information available from BABS, the system's operating budget was approximately $574,600 in FY2009. Funding sources for the adopted FY2009 operating budget were as follows:

- Federal Funds - $239,000 (42%)
- State Funds - $144,100 (25%)
- Local Government Funds - $171,100 (30%)
- Passenger Fares and Other Revenues - $20,450 (4%)

This TDP's financial plan begins with these costs and funding sources and those in the currently proposed FY2010 system budget as the "base year" values for the estimation of future year operating costs and revenue streams. Annual operation and maintenance (O&M) costs during the TDP time period are projected to grow from approximately $575,000 in the FY2009-FY2010 period to over $645,000 by FY2015. It is assumed that a two percent annual inflation rate is applied to these "base year" costs to estimate the annual O&M costs over the TDP time period.

Federal operating assistance funds are assumed to remain at essentially a constant amount during the TDP time period. In FY2010, the presently budgeted federal operating assistance fund level of $282,200 is projected to cover 48 percent of BABS' total annual net O&M costs. This percentage is projected to decrease each year during the TDP time period since the total O&M costs are assumed to increase at a rate of 2.0 percent each year due to inflationary factors, and the amount of annual Federal operating assistance funds are assumed to remain at a constant level of approximately $282,000 from FY2011 through FY2015.

The Virginia Department of Rail and Public Transportation (DRPT) has identified $81,110 in state operating assistance for BABS in FY2010 in its Transportation Improvement Program (TIP). The DRPT's TIP reflects a 19 percent growth in state operating allocations from its Mass Transit Trust Fund on a statewide basis between FY2010 and FY2015. Based on the information from DRPT, a little growth in the allocation of state operating assistance funding to BABS has been assumed beyond the FY2010 budgeted amount over the duration of this TDP cycle. The percentage increases in the anticipated annual state operating assistance are 1.77% in FY2010-

FY2011, 2.90% in FY2011-FY 2012, 3.50% in FY2012-FY2013, 3.16% in FY2013-FY2014, and 3.16% in FY2014-FY2015. The funding level will be increased by these percentage increases from the FY2010 funding level (approximately $81,000) through the TDP time period.

State formula assistance grants for public transportation operating expenses are awarded on the basis of the total annual amount of state funds available expressed as a percentage of the total annual amount of transit operating expenses, subject to a cap of 95% of eligible expenditures. Eligible expenditures are defined as costs of administration, fuel, tires, and maintenance parts and supplies (payroll costs of mechanics and drivers are excluded). Projections for state operating assistance, as identified in the TDP financial plan, have been provided for planning purposes and may fluctuate up or down based on the aforementioned parameters.

State capital program grants from the Mass Transit Trust Funds (MTTF) are awarded to all public transportation capital projects deemed to be eligible, reasonable, and appropriate at a uniform level of state participation. The goal is to reach the maximum state share of capital expenses of 95%, but there have not been sufficient funds to support transit capital projects at this level since the Mass Transit Trust Fund was created in 1986. This level of participation or "state share" of capital project expenses is calculated by dividing the amount of state funds available for capital projects each year by the amount needed to support the non-federal share of all eligible transit capital projects for the year. Beginning in FY2008, additional capital funds from the Transportation Capital Projects bond proceeds authorized under Chapter 896 of the 2007 Acts of Assembly have been available annually at a maximum state matching share of 80% in the Transit Capital Fund.

The estimated annual farebox and other revenues for BABS are assumed to remain essentially the same between FY2010 and FY2015. This assumption reflects the modest changes in service area population that are anticipated during this period of less than 1.0 percent each year and no anticipated change in the annual revenue vehicle-hours of operation to be provided across the BABS service area.

Table 7-1 presents the TDP financial plan for the funding of the annual O&M costs through the TDP six-year time period. Using the assumptions identified above of the level of Federal and State operating assistance funding, the required local government funding requirements are anticipated to steadily increase through the TDP time period, from about $201,090 in FY2010 to about $249,799 in FY2015. As a percentage of the total estimated system operating costs, the local government share is anticipated to increase from about 34% of the total annual cost in FY2010 to about 39 % of the total annual cost in FY2015.

Table 7-1. TDP Financial Plan for Funding Annual O&M Costs

TDP Financial Plan for: Service O&M Costs	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
Annual Service-Hours	13,744	15,544	15,544	15,544	15,544	15,544	15,544	15,544
Projected O&M Costs ($)	$361,194	$574,600	$585,650	$597,363	$609,310	$621,496	$633,926	$646,605
Anticipated Funding Sources ($)								
Federal	$173,191	$239,000	$282,200	$282,000	$282,000	$282,000	$282,000	$282,000
State	$65,163	$144,100	$81,110	$82,546	$84,939	$87,912	$90,690	$93,556
Farebox	$14,814	$20,450	$21,250	$21,250	$21,250	$21,250	$21,250	$21,250
Farebox Recovery Ratio	4%	4%	4%	4%	3%	3%	3%	3%
Other (advertising, misc.)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Local Government Funding Required	$108,026	$171,100	$201,090	$211,567	$221,121	$230,334	$239,986	$249,799
Local Government Funding Percentage	30%	30%	34%	35%	36%	37%	38%	39%

Notes:

1. The Dinwiddie Express starts operating in FY2009. The annual revenue hours are estimated to be 1,800 (150*12) for this service. After FY2009, the Annual Revenue Hours are assumed to be constant through the life of the TDP period.
2. FY2010 Operating Cost obtained from DRPT FY2010 district budget data. Beginning in FY2011, the Annual Operating Cost calculated assuming a 2.0%/year inflation rate .
3. Federal Operating Assistance reflects estimated FTA Section 5311 and FTA 5316 funds; assumed to remain flat at FY2010 levels.
4. The big increase in FY2009 State Operating Assistance is because of the new route operation of the Dinwiddie Express. The State has contributed $72,390 for this new route, which represented 95% of operating cost of this new route.
5. FY2010 State Operating Assistance obtained from DRPT FY2010 district budget data. The increase in State Operating Assistance, as per DRPT, is assumed to be 1.77% in FY2011, 2.90% in FY2011-FY2012, 3.50% in FY2012-FY2013, 3.16% in FY2013-FY2014, and 3.16% in FY2014-FY2015 .
6. FY2010 Passenger Fares obtained from DRPT FY2010 district budget data and assumed to be constant through the life of the TDP period.

7.2 Bus Purchase Costs and Funding Sources

As noted in Chapter 6 of this TDP, no service expansion has been proposed that would increase BABS' bus fleet size. The bus purchases during the TDP time period are only for bus replacements. It is assumed that BABS can replace one vehicle per year between 2010 and the TDP horizon year of 2015 through FTA's Section 5311 Program. This assumption anticipates a continuation of the traditional shared allocation of costs with 80 percent funding provided by the Federal Government, 10 percent funding by the State Government, and 10 percent funding by the Local Governments. For the bus purchase prices, a two percent annual inflation rate is applied.

Table 7-2 presents the suggested TDP financial plan for funding bus purchases through the TDP six-year time period.

Table 7-2. TDP Financial Plan for Funding Bus Purchases
(All Costs in Year of Expenditure Dollars)

TDP Financial Plan for Bus Replacements	FY2009	FY2010	FY2011	FY2012	FY2013	FY2014	FY2015
Bus Replacements	0 bus	1 bus	1 bus	1 bus	1 bus	1 bus	1 bus
Bus Replacement Costs	$ -	$57,600	$58,800	$60,000	$61,200	$62,400	$63,600
Anticipated Funding Sources							
Federal - ARRA	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Federal - FTA 5311 Program (80%)	$ -	$46,100	$47,000	$48,000	$49,000	$49,900	$50,900
State (10%)	$ -	$ 5,800	$ 5,900	$ 6,000	$ 6,100	$ 6,200	$ 6,400
Local Government Funding Required (10%)	$ -	$ 5,800	$ 5,900	$ 6,000	$ 6,100	$ 6,200	$ 6,400

Notes:

1. Bus replacements by year identified in Chapter 6 of TDP.

2. Bus replacement costs assumed to be $56,500 in current year (FY2009) dollars.

3. Table reflects 2.0 percent per year inflation in bus acquisition costs.

4. All buses assume 80 percent funding through FTA Section 5311 program, 10 percent funding from State, and remaining 10 percent from local governments.

7.3 Facility Improvement Costs and Funding Sources

As stated in previous chapters, no specific projects were identified with respect to potential physical facility improvement needs beyond the regular vehicle replacement process.

8.0 TDP MONITORING AND EVALUATION

Similar to any other multi-year duration planning document, the transit development plan (TDP) for a specific public transit system must be regularly monitored and evaluated in order to maintain its usefulness over time. The previous chapters of this TDP have presented a comprehensive evaluation of BABS' service and cost characteristics. The key elements that have been addressed in this TDP effort include:

- The development of suggested goals, objectives, and general performance standards that can be used to help guide the further development of BABS' services.
- A detailed evaluation of existing service characteristics, with a discussion of the system's current strengths and weaknesses.
- A peer agency review that compares the recent service and financial characteristics of BABS to those of other similar small urban and rural fixed route bus systems operating in the Commonwealth of Virginia.
- An on-board ridership survey that identified the primary socioeconomic characteristics of the current riders, their satisfaction with the existing services, and potential service improvements that are desired by the riders.
- A description of potential service and facility improvements for consideration in the TDP.
- A series of recommended service and facility improvements for inclusion in the TDP, with the year of the improvements identified as appropriate.
- A discussion of the funding requirements and potential funding sources for the capital and operating costs associated with the recommended service and facility improvements.

This TDP represents an initial step in the future service and facility improvements for BABS. In order to ensure the relevance of the TDP over time, it will be important for BABS to regularly coordinate with other transportation and land use planning efforts across its multijurisdictional service area, to continue to monitor service performance, and to provide DRPT with annual updates regarding implementation of the ultimately adopted TDP service and facility improvements program.

8.1 Coordination with Other Plans and Programs

The completion of this TDP requires that it be coordinated with a variety of other ongoing land use and transportation planning efforts at the county, regional, and statewide levels. For example, the public transit-oriented goals and objectives suggested by this TDP should be reviewed and incorporated into the transportation-related goals and objectives sections of each of the town and county comprehensive plans for the seven counties that are currently being served to some degree by BABS. The multijurisdictional long-range regional transportation plans developed by the Commonwealth Regional Council (the regional planning district

commission) and the Nottoway Planning Council, in cooperation with the Virginia Department of Transportation (VDOT) and the Department of Rail and Public Transportation (DRPT), should also include appropriate references to the BABS TDP.

At the statewide level, the TDP recommendations for BABS should be incorporated into the public transportation elements of the DRPT-developed six-year state transportation improvement program (SYTIP) and the statewide multimodal long-range transportation plan VTrans2035.

8.2 Service Performance Monitoring

In prior chapters of this TDP, a group of specific system-wide performance measures and operating guidelines have been identified for application to a small municipal and rural fixed-route bus public transit system such as BABS. The adoption of these operating guidelines will allow for the system's management to regularly monitor the performance of BABS to help ensure that existing performance characteristics do not degrade over time.

Where changes in performance are identified, appropriate corrective measures should be investigated. These corrective actions might involve route realignment adjustments for local fixed route services, modifications to service frequency (headway), and/or span of service adjustments. BABS presently has a basic performance monitoring program in place, with an emphasis on tracking ridership, service-hours, service-miles, and operating costs and revenues on a monthly basis at the route-specific and system-wide levels. These reports are presented monthly by the system manager to the Blackstone Town Manager and the members of the Town Council. Operational reports are also presented to county planning and the Board of Supervisors, if requested. As the system continues to grow and develop, this process should be expanded as necessary.

An important element of this performance monitoring process should be an update of the on-board ridership survey conducted as part of this TDP process. In order to comply with current DRPT guidelines, a new on-board survey should be undertaken at least once during each six-year TDP cycle. With the initial system-wide survey being conducted in the spring of 2009, the next such survey should be conducted no later than during the spring of 2015.

8.3 Annual TDP Monitoring

The current TDP guidelines issued by DRPT require the submittal of an annual update letter that describes the progress being taken towards implementing the TDP's recommendations and any significant changes to the currently adopted TDP. These changes should include, but not be limited to, system expansions or reductions, new services or facilities being planned or implemented, organizational/governance changes, changes to the current fare structure, or other actions. The recommended contents of this "TDP Update" letter include the following:

- A summary of ridership trends at the system and service area/local route level for each of the previous 12 months.

- A description of those TDP goals and objectives that have been advanced over the previous 12 months.

- A description of any service and facility improvements that have been implemented in the previous 12 months, including the identification of those that were identified in this TDP.

- An update to the TDP's list of recommended service and facility improvements. This update should specifically identify those service or facility improvements that are being shifted to a new year, are being eliminated, and/or are being added. This update of recommended improvements should be extended one more fiscal year into the future in order to maintain a six-year TDP planning period.

- A summary description of current fiscal year capital and operating costs and the associated federal, state, and local funding sources.

- Updates to the capital and operating financial plan tables presented in Chapter 7 of this TDP. These tables should be extended one more fiscal year into the future in order to maintain a six-year TDP planning period.

APPENDIX C.
FLEET INVENTORY
From DRPT's On-Line Grant Application (OLGA) System

Blackstone Area Bus Inventory Vehicles Data – December 2008*

Grantee	FTA Code	VIN	Number of Passengers	Model Year	Description	Engine Type	Purchase Date	Purchased New?	Purchase Price	Wheelchair Accessible?	Total Mileage	Primary Route Type	Average Hours operated per week	Average Miles Traveled per week	Location of Item	Comments
Blackstone Area Bus	11.12.15 - Vans	1FDWE45P77DA59249	14	2007	# 54L - Ford Supreme (BOC)	No. 2 Grade Diesel Fuel	6/4/2007	Yes	48000	Yes	59152	Rural	40	2000	Lunenburg County	Blackstone Area Bus
Blackstone Area Bus	11.12.15 - Vans	1GBJG31G911221805	19	2002	# 4 - Ford Supreme (BOC)	Gasoline	8/28/2006	No	1800	Yes	179283	Rural	10	100	Nottoway County	Blackstone Area Bus
Blackstone Area Bus	11.12.15 - Vans	1FDXE45P66HA97837	15	2006	# 5 - Ford Supreme (BOC)	No. 2 Grade Diesel Fuel	10/5/2006	Yes	44680	Yes	76083	Rural	40	500	Nottoway County	Blackstone Area Bus
Blackstone Area Bus	11.12.15 - Vans	1FDWE35P06HA98097	14	2006	# 109 - Ford Supreme (BOC)	No. 2 Grade Diesel Fuel	10/1/2007	No	25350	Yes	144483		0	0	Nottoway County	Blackstone Area Bus
Blackstone Area Bus	11.12.15 - Vans	1FDWE35P86HA93634	14	2006	# 110 - Ford Supreme (BOC)	No. 2 Grade Diesel Fuel	10/1/2007	No	25350	Yes	172986	Rural	40	4000	Nottoway County	Blackstone Area Bus
Blackstone Area Bus	11.12.15 - Vans	1GBJG31K681156426	15	2008	Chevy BOC	Gasoline	4/8/2008	Yes	48349	Yes	36745	Rural	40	2000	Nottoway County	
Blackstone Area Bus	11.12.15 - Vans	1FDXE45F23HA02645	15	2003	# 1 - Ford Supreme (BOC)	No. 2 Grade Diesel Fuel	1/2/2003	Yes	46383	Yes	151082	Rural	15	400	Nottoway County	Blackstone Area Bus
Blackstone Area Bus	11.12.15 - Vans	1FDWE45F73HB77906	14	2003	# 79L - Ford Supreme (BOC)	No. 2 Grade Diesel Fuel	1/28/2003	Yes	50222	Yes	174451	Rural	10	100	Lunenburg County	Blackstone Area Bus-spare bus
Blackstone Area Bus	11.12.15 - Vans	1FDXE40S8WHB56575	19	1998	# 2 - Ford Supreme (BOC)	Gasoline	2/5/2003	No	2500	Yes	199599	Rural	5	200	Nottoway County	Blackstone Area Bus
Blackstone Area Bus	11.12.15 - Vans	1FDXE45P75HA61024	15	2005	# 3 - Ford Supreme (BOC)	No. 2 Grade Diesel Fuel	1/14/2005	Yes	43010	Yes	85503	Rural	40	2000	Nottoway County	Blackstone Area Bus
Blackstone Area Bus	11.12.15 - Vans	1FDWE30FOXHB04173	14	1999	# CVT - Ford Supreme (BOC)	No. 2 Grade Diesel Fuel	1/2/1999	No	18565	Yes	178780		0	0	Lunenburg County	Will be sold soon
Blackstone Area Bus	11.12.15 - Vans	1GNDXO3EX4D187757	5	2004	2004 Chevy Venture Minivan	Not Available	12/5/2004	Yes	17300	No	38506		20	0	Nottoway County	Jennifer uses the minivan mainly.
Blackstone Area Bus / Town & County Transit	11.12.04 - Bus < 30 FT	1FDXE45P77DA59249	14	2007	Ford BOC	Not Available	6/4/2007	Yes	48000	Yes	13011		24	0	Lunenburg County	

* *Note that the September 2009 inventory was made available just before this TDP was finalized; refer to the OLGA system and/or DRPT for this data. All analysis was conducted using the December 2008 data.*

APPENDIX D.
OPERATING AND CAPITAL EXPENSES AND REVENUES
A 3-Year Retrospective

HISTORICAL OPERATING STATISTICS
BLACKSTONE AREA BUS

Operating Statistics	2006	2007	2008
Annual Passengers	13,963	27,962	30,764
Annual Operating Costs	$ 115,152	$ 428,423	$ 361,194
Annual Revenue Miles	38,816	313,904	364,025
Annual Revenue Hours	4,932	12,613	13,744
Passengers per Revenue Mile	0.36	0.09	0.08
Passengers per Revenue Hour	2.83	2.22	2.24
Cost per Passenger	$8.25	$15.32	$11.74
Cost per Revenue Mile	$2.97	$1.36	$0.99
Cost per Revenue Hour	$23.35	$33.97	$26.28

System Revenues and Operating Assistance	2006	2007	2008
Passenger Fares	$ 10,016	$ 18,745	$ 14,814
Contract Revenues	$ -	$ -	$ -
Local Operating Assistance	$ 34,457	$ 112,691	$ 108,026
State Operating Assistance	$ 22,454	$ 99,173	$ 65,163
Federal Operating Assistance	$ 48,225	$ 166,099	$ 173,191
Totals	$ 115,152	$ 396,708	$ 361,194
Net Operating Cost	$ 105,136	$ 377,963	$ 346,380

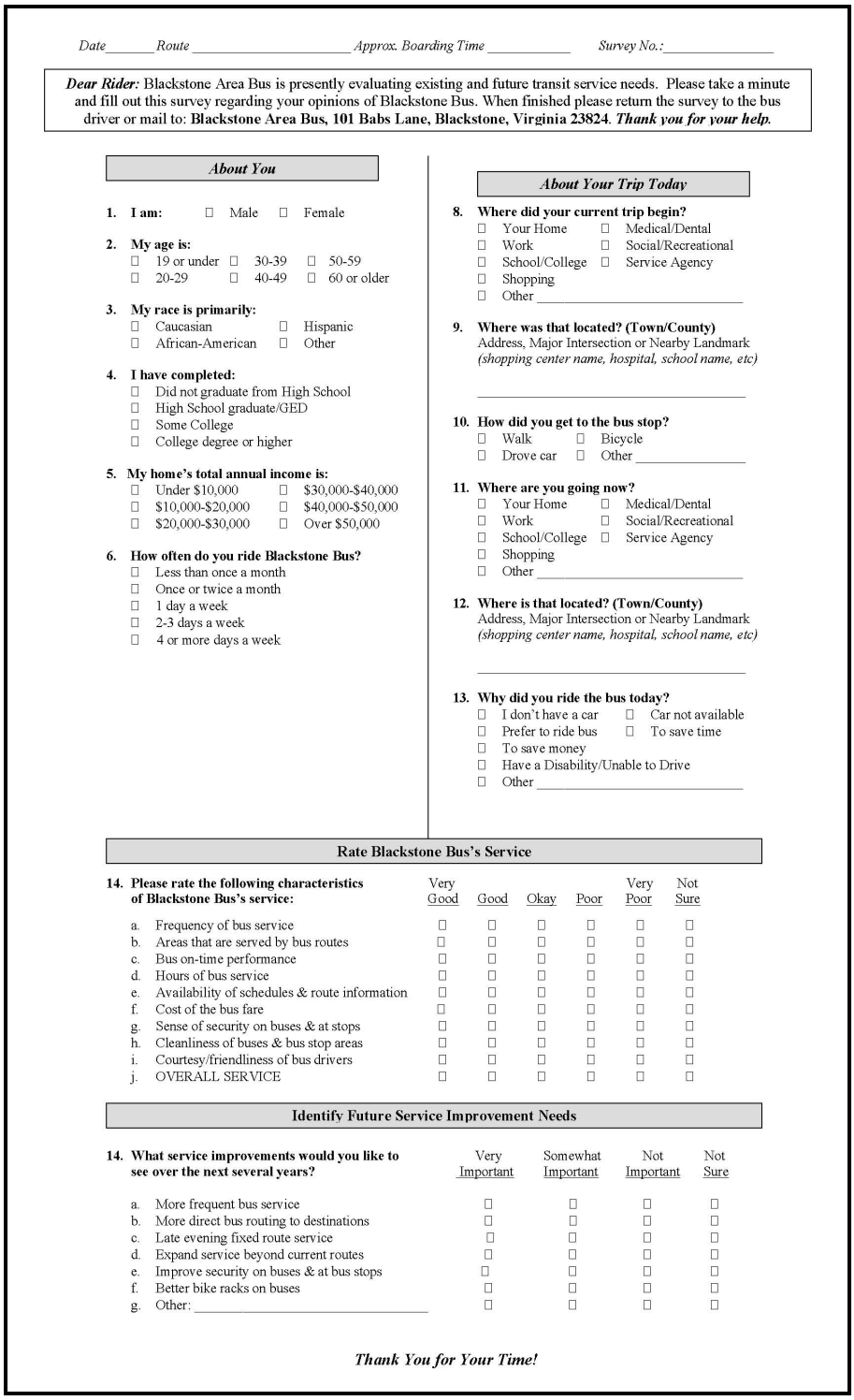
Allocation of Net Operating Cost Funding Source	2006	2007	2008
Local Governments	32.8%	29.8%	31.2%
State Government	21.4%	26.2%	18.8%
Federal Government	45.9%	43.9%	50.0%
Totals	100.0%	100.0%	100.0%
Pass Fares % of Opns Cost	8.7%	4.7%	4.1%

APPENDIX E.
TRANSIT RIDER ON-BOARD SURVEY RESULTS

E.1 ON-BOARD SURVEY PROCESS

A comprehensive on-board passenger survey was conducted for the Blackstone Area Bus System (BABS) in February and March of 2009 to collect up-to-date information on the demographic and travel characteristics of current riders. This survey included four basic groups of questions dealing with: rider's demographic information, specific trip information, a rating by the passengers of the current day service being provided, and passenger suggestions as to the importance of future service improvement needs. The summary results are used as one element of the service evaluation process.

A copy of the survey questionnaire is presented as **Figure E-1**. The summary results of the on-board ridership survey are presented in the tables and charts in the following sections. The compiled raw survey data from the returned surveys is contained in the Data Input Sheets at the end of this Appendix. This summary data presents all of the written comments provided on the various survey forms. The contents of this appendix also include the detailed ridership survey tables compiled for each of the individual routes currently operated by BABS.



Date_____ Route _____ Approx. Boarding Time _____ Survey No.:_____

Dear Rider: Blackstone Area Bus is presently evaluating existing and future transit service needs. Please take a minute and fill out this survey regarding your opinions of Blackstone Bus. When finished please return the survey to the bus driver or mail to: **Blackstone Area Bus, 101 Babs Lane, Blackstone, Virginia 23824. *Thank you for your help.***

About You

1. I am: ☐ Male ☐ Female

2. My age is:
☐ 19 or under ☐ 30-39 ☐ 50-59
☐ 20-29 ☐ 40-49 ☐ 60 or older

3. My race is primarily:
☐ Caucasian ☐ Hispanic
☐ African-American ☐ Other

4. I have completed:
☐ Did not graduate from High School
☐ High School graduate/GED
☐ Some College
☐ College degree or higher

5. My home's total annual income is:
☐ Under $10,000 ☐ $30,000-$40,000
☐ $10,000-$20,000 ☐ $40,000-$50,000
☐ $20,000-$30,000 ☐ Over $50,000

6. How often do you ride Blackstone Bus?
☐ Less than once a month
☐ Once or twice a month
☐ 1 day a week
☐ 2-3 days a week
☐ 4 or more days a week

About Your Trip Today

8. Where did your current trip begin?
☐ Your Home ☐ Medical/Dental
☐ Work ☐ Social/Recreational
☐ School/College ☐ Service Agency
☐ Shopping
☐ Other _____

9. Where was that located? (Town/County)
Address, Major Intersection or Nearby Landmark
(shopping center name, hospital, school name, etc)

_____

10. How did you get to the bus stop?
☐ Walk ☐ Bicycle
☐ Drove car ☐ Other _____

11. Where are you going now?
☐ Your Home ☐ Medical/Dental
☐ Work ☐ Social/Recreational
☐ School/College ☐ Service Agency
☐ Shopping
☐ Other _____

12. Where is that located? (Town/County)
Address, Major Intersection or Nearby Landmark
(shopping center name, hospital, school name, etc)

_____

13. Why did you ride the bus today?
☐ I don't have a car ☐ Car not available
☐ Prefer to ride bus ☐ To save time
☐ To save money
☐ Have a Disability/Unable to Drive
☐ Other _____

Rate Blackstone Bus's Service

14. Please rate the following characteristics of Blackstone Bus's service:	Very Good	Good	Okay	Poor	Very Poor	Not Sure
a. Frequency of bus service	☐	☐	☐	☐	☐	☐
b. Areas that are served by bus routes	☐	☐	☐	☐	☐	☐
c. Bus on-time performance	☐	☐	☐	☐	☐	☐
d. Hours of bus service	☐	☐	☐	☐	☐	☐
e. Availability of schedules & route information	☐	☐	☐	☐	☐	☐
f. Cost of the bus fare	☐	☐	☐	☐	☐	☐
g. Sense of security on buses & at stops	☐	☐	☐	☐	☐	☐
h. Cleanliness of buses & bus stop areas	☐	☐	☐	☐	☐	☐
i. Courtesy/friendliness of bus drivers	☐	☐	☐	☐	☐	☐
j. OVERALL SERVICE	☐	☐	☐	☐	☐	☐

Identify Future Service Improvement Needs

14. What service improvements would you like to see over the next several years?	Very Important	Somewhat Important	Not Important	Not Sure
a. More frequent bus service	☐	☐	☐	☐
b. More direct bus routing to destinations	☐	☐	☐	☐
c. Late evening fixed route service	☐	☐	☐	☐
d. Expand service beyond current routes	☐	☐	☐	☐
e. Improve security on buses & at bus stops	☐	☐	☐	☐
f. Better bike racks on buses	☐	☐	☐	☐
g. Other: _____	☐	☐	☐	☐

Thank You for Your Time!

Figure E-1. On-Board Survey Questionnaire for BABS

E.2 SURVEY RESPONSE RATES

A total of 169 on-board surveys were distributed by BABS. The total number of returned surveys was 88, which equates to a return rate of approximately 52 percent. **Table E-1** presents the number of surveys distributed and returned on each of the individual routes. The following tables summarize the system-wide results of the on-board ridership survey.

Table E-1. Distribution of Passenger Surveys and Return Rate by Service Area

Service Area	Number of Surveys Distributed	Number of Surveys Returned	Percent Return Rate
Brunswick	25	12	48.0 %
Blackstone	75	33	44.0 %
Crewe	25	14	56.0 %
Town & County	10	9	90.0 %
Cumberland	15	10	66.7 %
Amelia	19	10	52.6 %
Total	**169**	**88**	**52.1 %**

E.3 DEMOGRAPHIC SURVEY INFORMATION

Table E-2 and **Figures E-2 to E-7** summarize the passenger characteristics of the current BABS ridership based upon the information contained in the returned surveys. General conclusions drawn from the information in this table are listed below, with details in the following paragraphs.

- The majority of the passengers are female (63.6 percent).
- The passengers' ages are relatively well-distributed across each of the different ranges.
- African-American and Caucasian are the top two races using BABS.
- With respect to the reported educational level, approximately 78 percent of the passengers indicated that they either possessed a high school degree (43.0 percent) or had not graduated from high school (34.9 percent).
- Persons with low income are the major users of BABS.
- Most of the riders that participated in this survey reported using BABS services on a regular basis.

Figure E-2. Survey Results: Gender

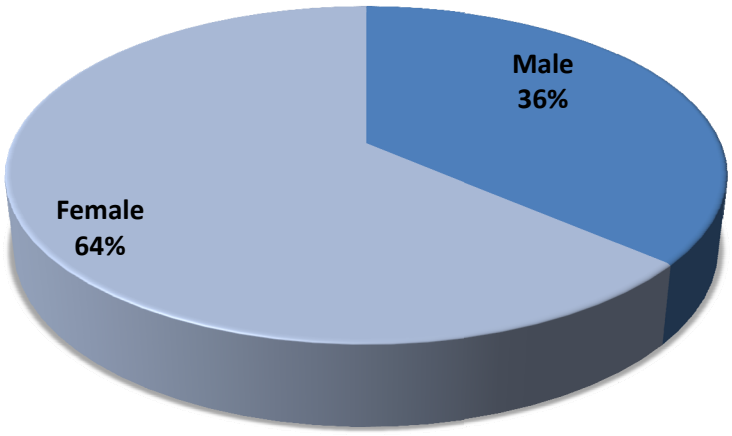


Figure E-3. Survey Results: Age

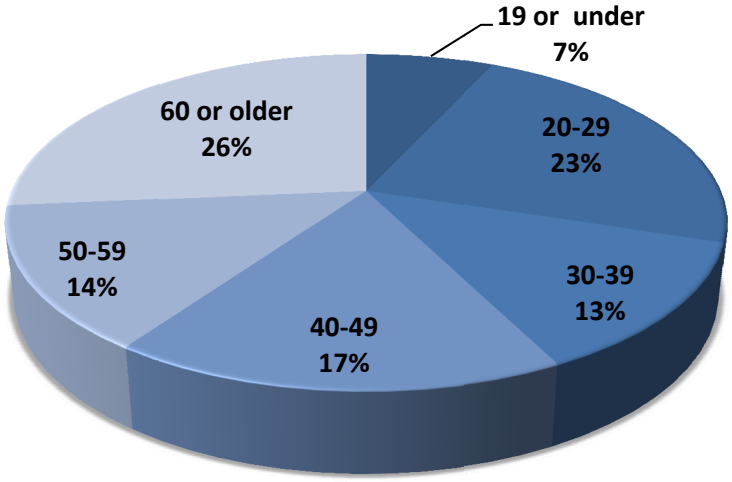


Figure E-4. Survey Results: Race

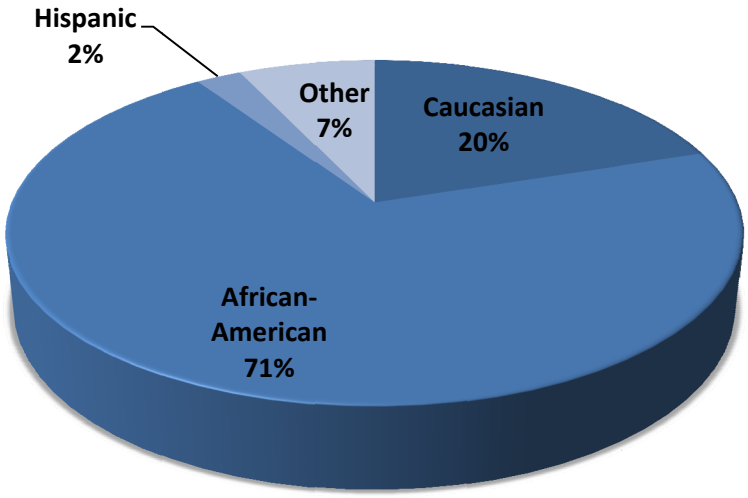


Figure E-5. Survey Results: Education Level

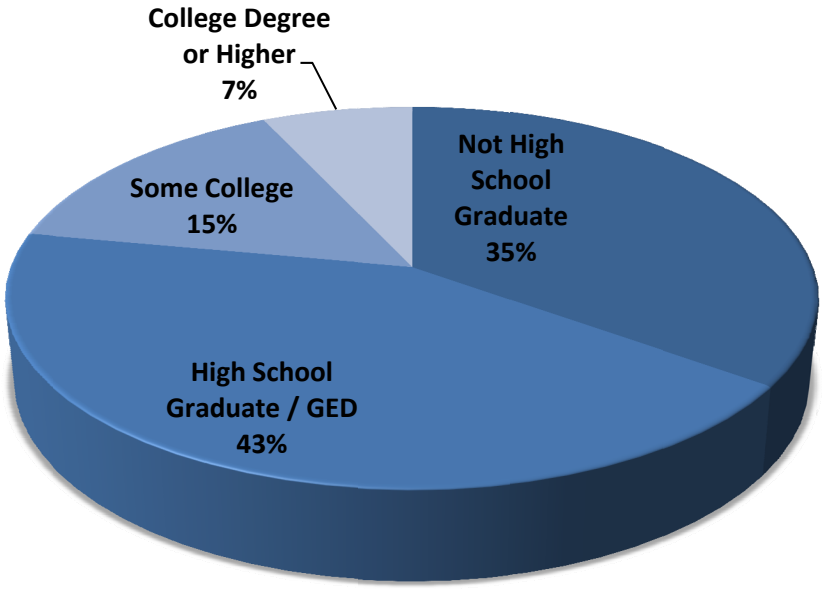


Figure E-6. Survey Results: Annual Household Income

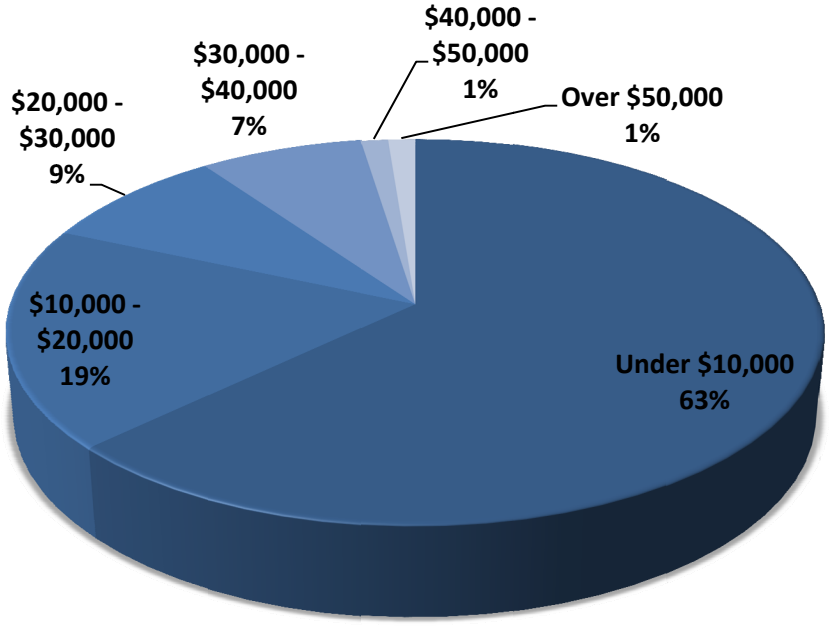


Figure E-7. Survey Results: Frequency of Ridership

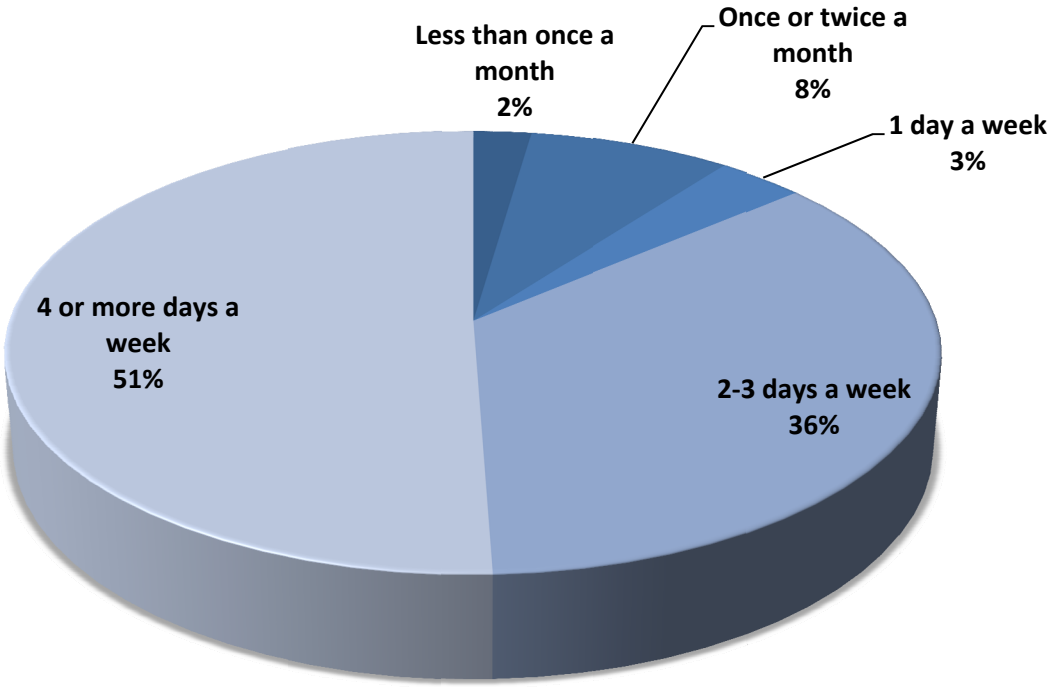


Table E-2. Summary of Blackstone Area Bus Passenger Characteristics

Gender	Number	Percent
Male	32	36.4%
Female	56	63.6%
No Response	0	
Total Responding	**88**	**100.0%**

Age	Number	Percent
19 or under	6	6.9%
20-29	20	23.0%
30-39	11	12.6%
40-49	15	17.2%
50-59	12	13.8%
60 or older	23	26.4%
No Response	1	
Total Responding	**87**	**100.0%**

Race	Number	Percent
Caucasian	17	20.0%
African-American	60	70.6%
Hispanic	2	2.4%
Other	6	7.1%
No Response	3	
Total Responding	**85**	**100.0%**

Educational Level	Number	Percent
Not High School Graduate	30	34.9%
High School Graduate / GED	37	43.0%
Some College	13	15.1%
College Degree or Higher	6	7.0%
No Response	2	
Total Responding	**86**	**100.0%**

Household Annual Income	Number	Percent
Under $10,000	51	63.0%
$10,000 - $20,000	15	18.5%
$20,000 - $30,000	7	8.6%
$30,000 - $40,000	6	7.4%
$40,000 - $50,000	1	1.2%
Over $50,000	1	1.2%
No Response	7	
Total Responding	**81**	**100.0%**

Frequency of Ridership	Number	Percent
Less than once a month	2	2.3%
Once or twice a month	7	8.0%
1 day a week	3	3.4%
2-3 days a week	31	35.6%
4 or more days a week	44	50.6%
No Response	1	
Total Responding	**87**	**100.0%**

As the table and figures shows, female passengers represent the largest portion of the total ridership at 63.6 percent, with male ridership reported at 36.4 percent.

The passengers' ages are relatively well-distributed across each of the different ranges. Based on the ridership survey results, those riders age 60 or older are the major users of BABS and represent 26.4 percent of the total ridership, the highest single percentage for any of the age categories.

Among the younger riders, 31.0 percent were in the 40-49 and 50-59 age brackets, while 35.6 percent were in the 20-29 and 30-39 age brackets. Those passengers who reported their age as 19 or under represent 6.9 percent of the total ridership. These findings indicate that BABS is providing basic mobility services to a broad cross-section of the service area population and is not, as some might perceive, a system transporting only elderly residents.

African-American and Caucasian are the top two races using BABS. The combined percentage of these two races is 90.6 percent, with 20.0 percent being Caucasian and 70.6 percent being African-American. Hispanic and Other races represented 9.5 percent of the reported ridership.

With respect to the reported educational level, approximately 78 percent of the passengers indicated that they either possessed a high school degree (43.0 percent) or had not graduated from high school (34.9 percent). Approximately 15.1 percent of the riders reported having attended some college, while 7.0 percent reported having earned at least a college level bachelor's degree.

Persons with low income are the major users of BABS. A total of 81.5 percent of the total BABS passengers reported less than $20,000 for their household annual income, with 63.0 percent of the passengers reporting a household income level of less than $10,000 per year. Approximately 8.6 percent of riders reported an annual income of between $20,000 and $30,000, while an additional 7.4 percent reported annual incomes between $30,000 and $40,000 per year. Those reporting annual household income levels of between $40,000 and $50,000 were 1.2 percent of the total ridership, while those with reported incomes of over $50,000 per year also were 1.2 percent. The system is transporting primarily low income riders, but persons representing all of the income levels found in the BABS service area are using the system.

Most of the riders that participated in the survey reported using BABS services on a regular basis. A total of 50.6 percent of the riders reported a ridership frequency of four or more days a week, with an additional 35.6 percent reporting use of the system two to three days a week. Combining these two values indicates that 86.2 percent of the total passengers surveyed use BABS services more than two days per week, and can thus be classified as "regular" rather than occasional riders. This high level of repeat ridership further indicates that BABS is providing an essential mobility service to a broad cross-section of its passengers.

E.4 TRIP-SPECIFIC SURVEY RESULTS

Table E-3 and **Figures E-8 to E-11** summarize the responses to the on-board survey questions related to the trip being made at the time of the survey. General conclusions drawn from the information in this table are listed below, with details in the following paragraphs.

- The majority (58.6 percent) of the passengers started their trips from their home.
- The top three trip destinations, comprising 79.1 percent of the responses, were Home, Shopping, and Work.
- The majority of passengers (75.9 percent) arrived at the bus stops by walking.
- The principal reasons given for riding the bus were "Did Not Have a Car" (55.8 percent) and "Disability/Unable to Drive" (16.3 percent). These responses indicate that the current ridership can be classified as "transit captives".

Figure E-8. Survey Results: Trip Origin

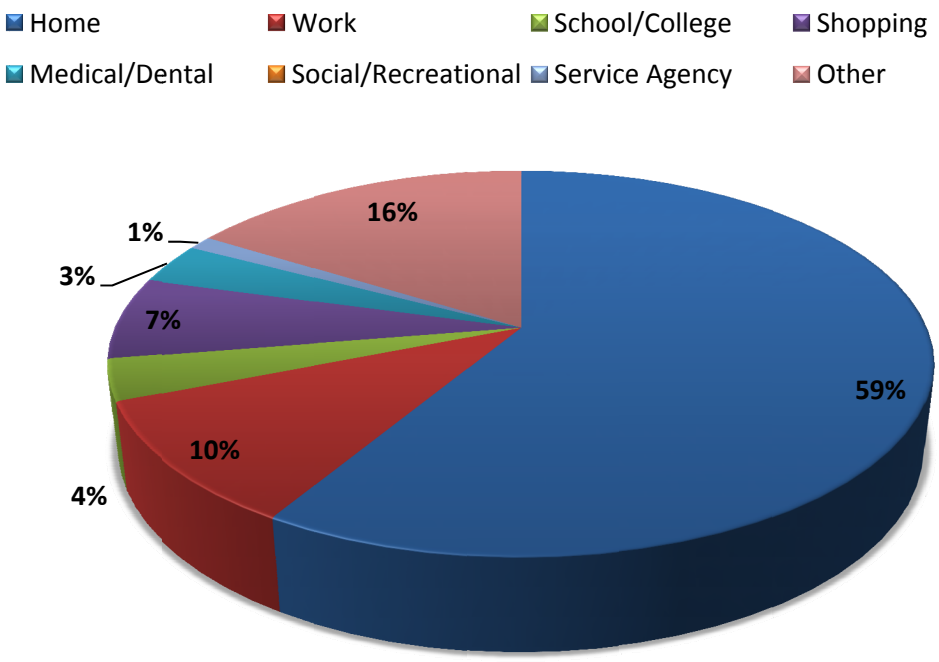


Figure E-9. Survey Results: Trip Destination

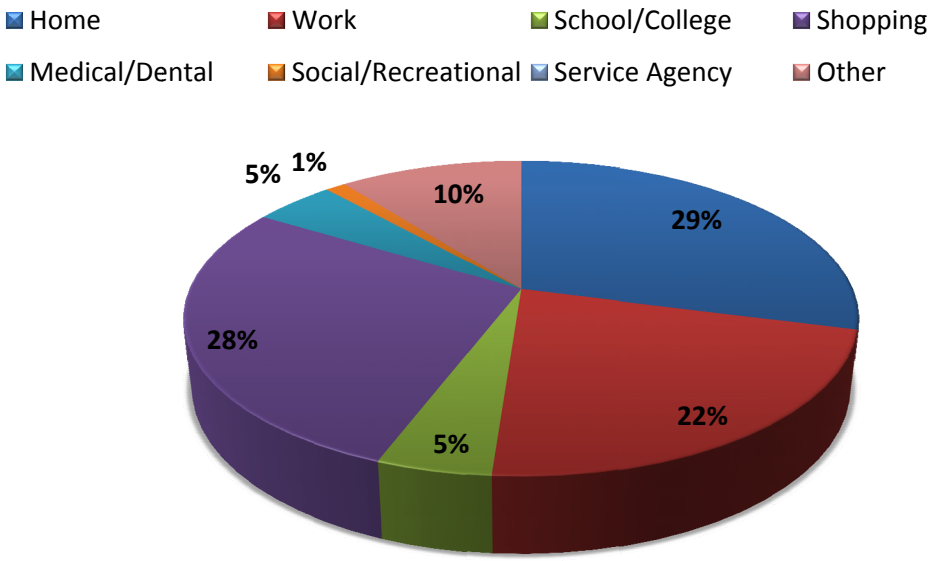


Figure E-10. Survey Results: Bus Stop Access

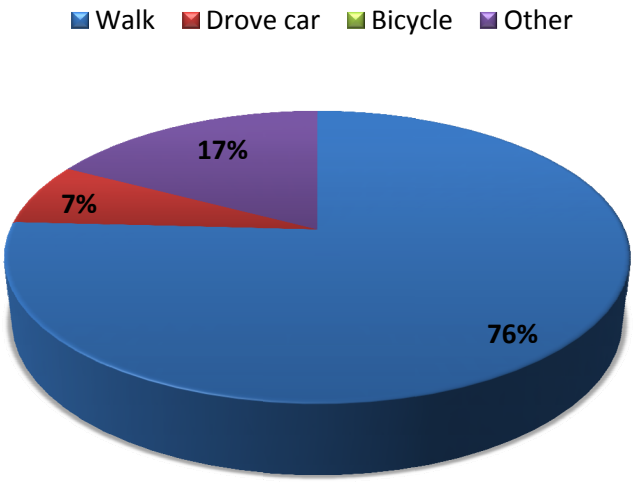


Figure E-11. Survey Results: Reason for Riding Transit

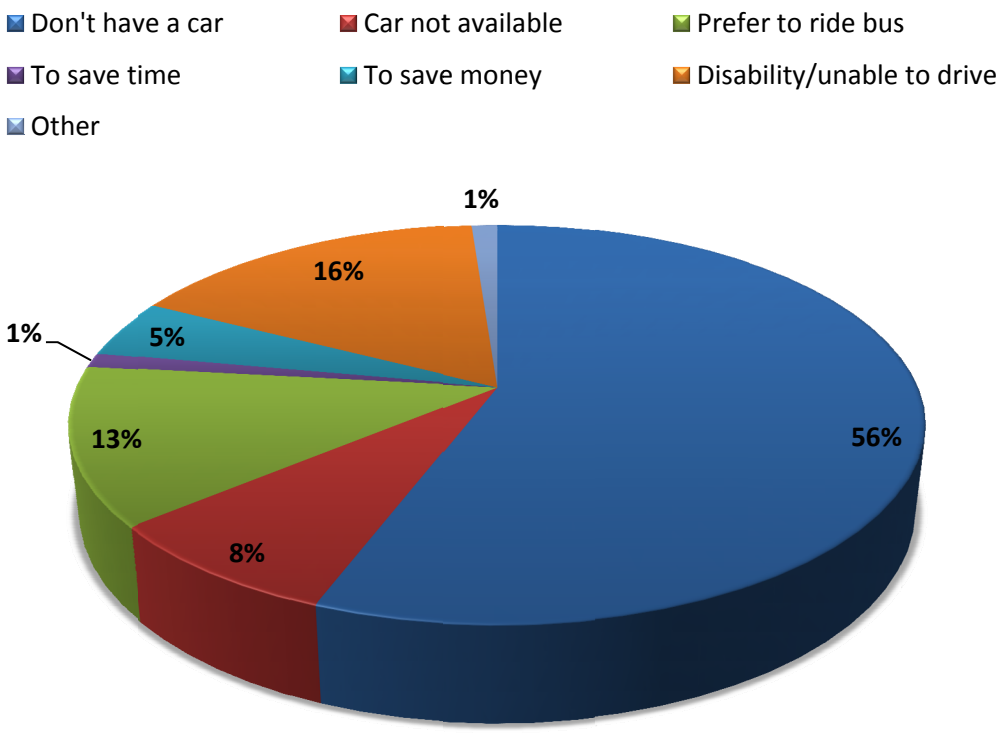


Table E-3. Results of Survey Topic - About Your Trip Today

Trip Origin Type	Number	Percent
Home	51	58.6%
Work	9	10.3%
School/College	3	3.4%
Shopping	6	6.9%
Medical/Dental	3	3.4%
Social/Recreational	0	0.0%
Service Agency	1	1.1%
Other	14	16.1%
No Response	1	
Total Responding	**87**	**100.0%**

Trip Destination Type	Number	Percent
Home	25	29.1%
Work	19	22.1%
School/College	4	4.7%
Shopping	24	27.9%
Medical/Dental	4	4.7%
Social/Recreational	1	1.2%
Service Agency	0	0.0%
Other	9	10.5%
No Response	2	
Total Responding	**86**	**100.0%**

Bus Stop Access	Number	Percent
Walk	66	75.9%
Drove car	6	6.9%
Bicycle	0	0.0%
Other	15	17.2%
No Response	1	
Total Responding	**87**	**100.0%**

Reason for Riding	Number	Percent
Don't have a car	48	55.8%
Car not available	7	8.1%
Prefer to ride bus	11	12.8%
To save time	1	1.2%
To save money	4	4.7%
Disability/unable to drive	14	16.3%
Other	1	1.2%
No Response	2	
Total Responding	**86**	**100.0%**

As shown on the table and figures, the majority (58.6 percent) of the passengers started their trips from their home. Approximately 10.3 percent of the passengers reported starting their trips from their work location. The three next most frequent trip origins were cited as being "Other" (16.1 percent), "Shopping" (6.9 percent), "School/College" (3.4 percent), and "Medical/Dental" (3.4 percent).

The top four trip destinations were noted as being "Home" at 29.1 percent, "Shopping" at 27.9 percent, "Work" at 22.1 percent, and "Other" at 10.5 percent. These four destinations account for 89.6 percent of the total trips. "School/College" and "Medical/Dental" were both cited as destinations for 4.7 percent of the trips, followed by "Social/Recreational" (1.2 percent). These results demonstrate that the current ridership is using BABS for basic mobility purposes between their homes and their workplace or other important destinations.

With respect to the question of "Bus Stop Access", a large majority (75.9 percent) of the passengers indicated that they arrived at the bus stop by "Walking". The access modes of "Other" and "Drove Car" were the next two highest responses at 17.2 percent and 6.9 percent, respectively, and none of those who responded indicated the use of a bicycle to reach the bus stop.

When asked to identify the principal reason why they were riding the bus, the survey respondents most frequently indicated that they "Did Not Have a Car" (55.8 percent) or that they had a "Disability/Unable to Drive" (16.3 percent). Combined, these two responses accounted for 72.1 percent of the reasons for using BABS service. The factor of "Prefer to Ride Bus" was the third highest response at 12.8 percent, followed by "Car Not Available" at 8.1 percent.

Other factors such as "To save time" or "To save money" were only cited by 1.2 percent and 4.7 percent of the respondents, respectively. These responses indicate that the current ridership can be classified as "transit captives"; that is, they have few if any other travel options available and if the current transit service was not provided, the subject trip would probably not be made. With a large percentage of the trips being for work, shopping, or medical/dental purposes, the lack of basic mobility could result in significant negative effects on the ability of the study area population to obtain meaningful employment or necessary medical services.

E.5 SERVICE RATINGS SURVEY RESULTS

Table E-4 and **Figure E-12** summarize the responses to the survey questions that sought to obtain the view of the riders as to the quality of service currently being offered by BABS.

For each of these ten evaluation measurements, the responses from the riders provided combined ratings of "Very Good" or "Good" in the range of 80 to 93 percent for almost every measurement. The only two service factors whose ratings fell below this range were those for "Availability of Schedule & Route Information" (79.5 percent rated this Very Good or Good) and "Hours of Bus Service" (74.6 percent rated this Very Good or Good).

The highest positive service factor ratings were for "Cost of Bus Fare", with 93.7 percent rating this factor Very Good or Good, and for "Frequency of Bus Service", with 91.7 percent rating this factor as Very Good or Good.

The "Overall Service" rating for BABS was 90.1 percent Very Good or Good. Only 1.3 percent of the riders rated the current service as Poor, with none rating it as being Very Poor. These findings represent a very positive reaction from the passengers of BABS. They also indicate that the users are satisfied with the overall services provided by BABS.

Figure E-12. Survey Results: Service Ratings

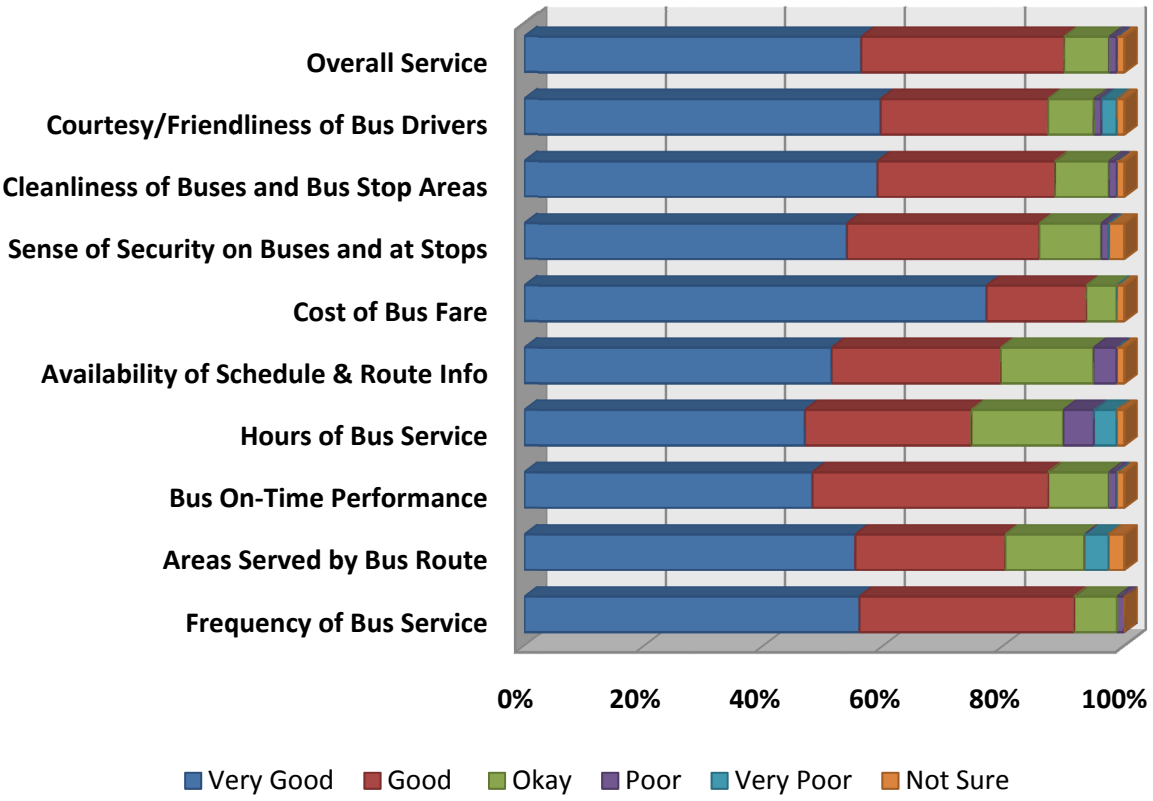


Table E-4. Service Ratings

Frequency of Bus Service	Number	Percent
Very Good	47	56.0%
Good	30	35.7%
Okay	6	7.1%
Poor	1	1.2%
Very Poor	0	0.0%
Not Sure	0	0.0%
No Response	4	
Total Responding	**84**	**100.0%**

Cost of Bus Fare	Number	Percent
Very Good	61	77.2%
Good	13	16.5%
Okay	4	5.1%
Poor	0	0.0%
Very Poor	0	0.0%
Not Sure	1	1.3%
No Response	9	
Total Responding	**79**	**100.0%**

Areas Served by Bus Routes	Number	Percent
Very Good	42	55.3%
Good	19	25.0%
Okay	10	13.2%
Poor	0	0.0%
Very Poor	3	3.9%
Not Sure	2	2.6%
No Response	12	
Total Responding	**76**	**100.0%**

Sense of Security on Buses and At Stops	Number	Percent
Very Good	42	53.8%
Good	25	32.1%
Okay	8	10.3%
Poor	1	1.3%
Very Poor	0	0.0%
Not Sure	2	2.6%
No Response	10	
Total Responding	**78**	**100.0%**

Bus On-Time Performance	Number	Percent
Very Good	38	48.1%
Good	31	39.2%
Okay	8	10.1%
Poor	1	1.3%
Very Poor	0	0.0%
Not Sure	1	1.3%
No Response	9	
Total Responding	**79**	**100.0%**

Cleanliness of Buses and Bus Stop Areas	Number	Percent
Very Good	46	59.0%
Good	23	29.5%
Okay	7	9.0%
Poor	1	1.3%
Very Poor	0	0.0%
Not Sure	1	1.3%
No Response	10	
Total Responding	**78**	**100.0%**

Hours of Bus Service	Number	Percent
Very Good	37	46.8%
Good	22	27.8%
Okay	12	15.2%

Courtesy/Friendliness of Bus Drivers	Number	Percent
Very Good	47	59.5%
Good	22	27.8%
Okay	6	7.6%

Table E-4. Service Ratings

Poor	4	5.1%		Poor	1	1.3%
Very Poor	3	3.8%		Very Poor	2	2.5%
Not Sure	1	1.3%		Not Sure	1	1.3%
No Response	9			No Response	9	
Total Responding	**79**	**100.0%**		**Total Responding**	**79**	**100.0%**
Availability of Schedules & Route Information	Number	Percent		**Overall Service**	Number	Percent
Very Good	40	51.3%		Very Good	45	56.3%
Good	22	28.2%		Good	27	33.8%
Okay	12	15.4%		Okay	6	7.5%
Poor	3	3.8%		Poor	1	1.3%
Very Poor	0	0.0%		Very Poor	0	0.0%
Not Sure	1	1.3%		Not Sure	1	1.3%
No Response	10			No Response	8	
Total Responding	**78**	**100.0%**		**Total Responding**	**80**	**100.0%**

E.6 FUTURE SERVICE IMPROVEMENTS SURVEY RESULTS

Table E-5 and **Figure E-13** summarize the responses to those survey questions pertaining to potential service improvements that BABS might wish to consider. The ratings for the four suggested areas of potential service improvement were as follows:

	Percent Rating this Service Improvement as Very Important or Somewhat Important
• Later Service	87.5 percent
• Expand Hours / Days of Service	87.2 percent
• Direct Routing	85.1 percent
• More Frequent Service	84.3 percent
• Improve Security on Buses	77.4 percent
• Bike Racks	39.3 percent

Riders also offered written comments on the survey forms for the "Other" category; these comments are summarized in the original survey Data Input Sheets at the end of this Appendix.

Figure E-13. Survey Results: Future Service Improvements

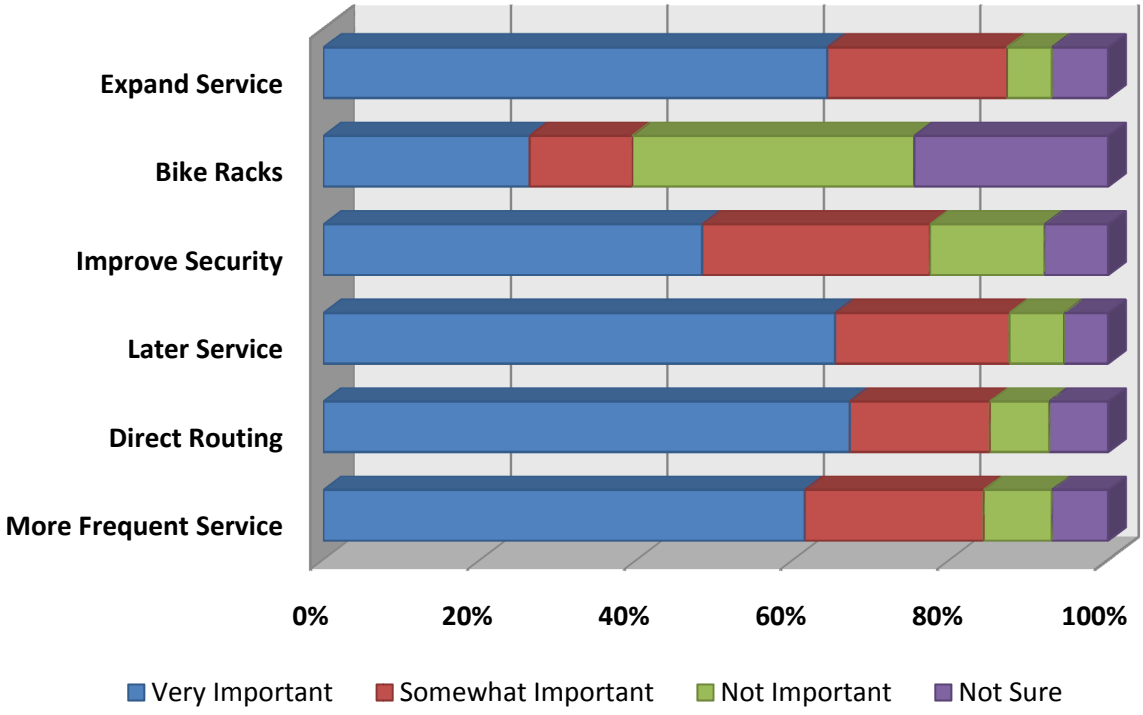


Table E-5. Results of Survey Questions Regarding Improvements Needed

More Frequent Service	Number	Percent
Very Important	43	61.4%
Somewhat Important	16	22.9%
Not Important	6	8.6%
Not Sure	5	7.1%
No Response	18	
Total Responding	**70**	**100.0%**

Improve Security	Number	Percent
Very Important	30	48.4%
Somewhat Important	18	29.0%
Not Important	9	14.5%
Not Sure	5	8.1%
No Response	26	
Total Responding	**62**	**100.0%**

Direct Routing	Number	Percent
Very Important	45	67.2%
Somewhat Important	12	17.9%
Not Important	5	7.5%
Not Sure	5	7.5%
No Response	21	
Total Responding	**67**	**100.0%**

Bike Racks	Number	Percent
Very Important	16	26.2%
Somewhat Important	8	13.1%
Not Important	22	36.1%
Not Sure	15	24.6%
No Response	27	
Total Responding	**61**	**100.0%**

Later Service	Number	Percent
Very Important	47	65.3%
Somewhat Important	16	22.2%
Not Important	5	6.9%
Not Sure	4	5.6%
No Response	16	
Total Responding	**72**	**100.0%**

Expand Service	Number	Percent
Very Important	45	64.3%
Somewhat Important	16	22.9%
Not Important	4	5.7%
Not Sure	5	7.1%
No Response	18	
Total Responding	**70**	**100.0%**

On-Board Ridership Survey (Fixed Routes) - Data Input Sheet
System Name: Blackstone Area Bus
Survey Date: 2/9/09 ~ 2/19/09
Note: "0" or "Blank" = No Response to question

			About You							About Your Trip Today							Service Characteristics Rating									Future Improvement Needs						Comment
System ID (01-06)	Serial Number (1001 or greater)	Route or Service Area	Boarding Time	Sex (1-2)	Age (1-6)	Race (1-4)	Education (1-4)	Household Income (1-6)	Ride Frequency (1-5)	Trip Origin (Type 1-8)	Trip Origin (Place)	Access Mode (1-4)	Destination (Type 1-8)	Destination (Place)	Ride Reason (1-7)	Frequency (1-6)	Areas Served (1-6)	Bus On-time (1-6)	Hours of Service (1-6)	Info Availability (1-6)	Bus Fare (1-6)	Security (1-6)	Cleanliness (1-6)	Courtesy (1-6)	Overall Rating (1-6)	More frequent (1-4)	Direct Routing (1-4)	Later service (1-4)	Expand Service (1-4)	Improve Security (1-4)	Bike Racks (1-4)	Other (1-4)	
2	1012	Brunswick	2/9/2009 PM	1	2	1	1	1	5	7	Library, Crewe	1	1	Town	1	1	1	0	3	3	1	1	1	1	1	1	1	1	1	3	0	
2	1013	Brunswick	2/9/09 16:15	2	4	2	1	1	5	2	Blackstone	1	1	Crewe	1	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	0	
2	1014	Brunswick	2/9/2009 PM	1	6	2	2	0	4	3	Food Lion	1	1	Buatxville	1	1	1	1	1	1	1	1	1	1	1	0	0	0	2	0	4	0	
2	1015	Brunswick	2/9/2009 PM	1	1	2	2	1	4	1	East Bread Street	1	3	Alberta	1	3	3	2	4	1	2	2	2	3	2	2	1	1	1	3	3	1	Hours of bus services
2	1016	Brunswick	2/9/2009 PM	2	5	2	2	2	5	1	Blackstone Church Street	1	1	Blackstone Church Street	3	1	1	1	1	1	1	1	1	1	1	0	0	1	1	0	0	0	
2	1017	Brunswick	2/9/09 15:50	2	2	1	3	1	5	2	Alberta	1	1	Farmville	1	3	1	4	5	4	1	2	1	5	4	3	4	1	1	3	1	0	
2	1018	Brunswick	02/09/09	1	0	2	1	4	4	8		1	1	509 Stokes Street	1	2	2	2	1	1	1	1	1	1	1	1	2	1	1	1	1	1	
2	1019	Brunswick	2/9/09 9:45	2	6	2	2	1	5	1	Alberta	1	2	SVCC	1	4	2	2	4	0	2	2	2	1	0	2	2	2	2	2	3	0	
2	1020	Brunswick	2/9/2009 PM	2	6	2	1	2	5	8	Town	4	3	Alberta	3	1	1	1	2	1	1	2	2	1	1	2	2	1	1	2	1	0	2
2	1021	Brunswick	2/9/09 15:30	1	1	4	0	1	5	1		2	2	Crewe	6	2	5	3	4	1	1	3	4	2	3	1	1	1	1	1	0	0	
2	1022	Brunswick	2/9/09 15:30	2	1	3	3	3	4	3	Food Lion	2	1	Blackstone	2	2	3	3	3	2	3	3	2	2	2	2	1	3	1	3	3	0	
2	1024	Brunswick	02/16/09	2	6	2	1	1	2	8	Lawrenceville	4	0	Blackstone	6	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1	1	1	
2	1026	Blackstone	2/10/09 6:30	2	4	2	2	1	5	1	Mangolia Place Apartment	1	8	Easy Laundry (Blackstone)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	
2	1027	Blackstone	2/10.09 6:30	1	3	2	2	1	5	8	Mangolia Place Apartment	1	8	Town of Blackstone	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	
2	1029	Blackstone	02/10/09	1	2	2	3	2	4	1	Sullivan and Taylor	1	3	Alberta	2	2	1	2	2	4	1	1	1	2	2	1	1	1	1	2	2	0	
2	1030	Blackstone	2/10.09 8:10	2	2	2	2	1	4	1	Sullivan Street	1	4	Shopping Center	1	1	1	1	1	1	2	1	1	1	1	1	1	1	1	1	1	2	
2	1031	Blackstone	02/10/09	2	3	2	1	1	4	1	413 Sullivan Street	1	2	Goodwill	7	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	
2	1033	Blackstone	2/10.09 8:00	1	3	2	1	1	1	1		1	4		1	1	1	1	2	2	1	1	2	2	2	2	2	2	2	2	0	3	
2	1034	Blackstone	2/10.09 8:55	1	1	2	1	1	4	8	Raceend	1	4	Wal-Mart	1	1	5	1	5	3	5	1	1	3	3	1	1	1	1	3	3	3	
2	1035	Blackstone	2/10.09 8:40	2	4	2	1	1	5	1	Main Street	1	4	Wal-Mart	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	
2	1036	Blackstone	2/10.09 8:55	2	2	2	1	1	4	8	Racein	1	4	Wal-Mart	1	1	5	1	5	3	1	3	1	4	3	1	1	1	1	3	3	3	
2	1037	Blackstone	02/10/09	2	6	2	1	2	4	4	Wal-Mart	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2	1038	Blackstone	2/10.09 9:30	2	2	2	3	1	5	1	Shopping Center	1	4	Freedmor Church	3	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	4	0	
2	1039	Blackstone	2/10.09 9:30	2	2	2	2	2	5	4	Wal-Mart	1	1	Wal-Mart	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	4	0	
2	1043	Blackstone	02/11/09	2	3	2	3	2	5	1	Shopping Center	0	1	Blackstone	0	1	1	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	0	
2	1044	Blackstone	02/17/09	2	6	2	4	1	5	1		1	4	Main Street	6	2	6	3	2	1	1	6	3	1	3	4	1	2	1	1	4	0	More than one bus circulaing bus route. Going both ways and sides of town.
2	1045	Blackstone	02/20/09	1	6	2	1	1	4	1	Vumac	1	4	Wal-Mart	6	1	1	1	1	1	1	1	1	1	1	4	4	4	4	4	4	0	
2	1046	Blackstone	2/10.09 12:30	2	6	2	1	1	5	1	701 Church Street	1	1	701 Church Street	2	1	2	2	0	1	3	2	0	3	1	1	1	2	0	2	3	0	
2	1047	Blackstone	2/10.09 12:30	2	4	2	2	1	5	1	701 Church Street	1	1	701 Church Street	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3	0	
2	1050	Blackstone	02/10/09	2	6	2	2	2	4	1	Blackstone	1	1	Blackstone	1	2	2	2	2	2	2	2	2	2	2	0	0	1	1	0	0	0	
2	1051	Blackstone	02/10/09	2	6	2	4	3	4	1	Peele Manor BLK	1	4	Wal-Mart	1	1	2	2	3	1	3	2	2	3	2	1	3	1	0	2	4	0	
2	1052	Blackstone	2/10.09 11:29	2	5	2	4	2	5	1	Mann Street at Cryars Road	1	8	Lake Street	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	2	
2	1055	Blackstone	02/10/09	2	6	2	3	1	4	5		1	4	Wal-Mart	5	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	
2	1056	Blackstone	02/10/09	2	6	4	4	3	0	1		1	4	Wal-Mart	3	1	1	1	1	1	1	1	1	1	1	0	0	0	1	0	0	0	
2	1057	Blackstone	2/10.09 14:00	1	5	2	2	2	4	1	Food Lion	1	4		5	1	1	2	3	0	1	2	2	2	2	1	2	1	1	1	2	0	
2	1058	Blackstone	02/11/09	1	4	2	2	1	4	1	Taylor Street	1	5	Town	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2	1059	Blackstone	2/10.09 8:15	2	4	0	3	4	2	1	Taylor Street	1	5	Main Street	1	2	3	2	3	2	1	2	2	2	2	1	1	1	1	2	4	0	
2	1060	Blackstone	2/10.09 10:30	1	6	2	2	1	4	1	Pealee	1	4	Wal-Mart	1	2	2	2	1	1	1	1	2	2	1	1	2	1	1	2	3	0	
2	1061	Blackstone	02/18/09	2	6	1	0	0	3	0		0	4		0	1	1	2	2	1	1	1	1	1	1	0	0	0	0	0	0	0	
2	1063	Blackstone	2/11.09 13:30	1	5	2	2	2	5	1	Town	1	1	Town	5	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	
2	1064	Blackstone	02/12/09	2	3	2	3	1	3	4	Wal-Mart	1	1	Wal-Mart	1	1	1	1	2	2	1	1	1	1	1	2	1	1	2	4	0	0	
2	1066	Blackstone	2/13.09 9:30	1	6	2	1	2	4	1	Freelnar Street	6	2	Wal-Mart	6	2	2	2	3	1	1	1	2	1	2	1	2	3	3	3	3	0	
2	1067	Blackstone	2/19.09 9:00	1	5	2	1	1	5	4	Wal-Mart	1	1	Wal-Mart	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	
2	1068	Blackstone	2/17.09 15:35	2	5	2	2	0	1	5	Blackstone Family Center	1	1	County	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	
2	1100	Blackstone	2/17.09 15:35	2	5	2	3	0	2	5	Blackstone Family	1	1	County	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	3	0	
2	1003	Crewe	2/11.09 9:00	2	4	1	3	1	5	2	Blackstone	1	1	Crewe	1	2	0	3	3	2	1	1	1	5	0	3	1	1	1	3	1	0	
2	1101	Crewe	2/10.09 9:35	2	4	1	1	1	5	1	Crewe	6	1	Blackstone	6	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	0	Need bus on Friday for the weekend
2	1102	Crewe	2/10.09 9:35	1	1	1	2	1	4	1	Crewe	1	4	Blackstone	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	3	2	Would like the bus to run on Friday
2	1103	Crewe	02/10/09	2	5	1	1	2	2	1	49 & 460 - East VA Avenue	1	5	Nottoway Courthouse	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	
2	1104	Crewe	02/10/09	2	5	1	1	2	4	1	49 and East VA Avenue	1	4	Nottoway- Wal-Mart	1	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	
2	1105	Crewe	02/10/09	1	2	2	2	1	4	2	Crewe	1	2	Blackstone	1	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
2	1106	Crewe	02/10/09	2	2	1	1	1	2	1	49 and East VA Avenue	1	4	Nottoway	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	
2	1108	Crewe	02/11/09	2	4	3	2	1	5	1	607 Rocky Force Road	1	3	Alberta	1	2	3	1	1	2	1	1	3	3	1	1	0	0	1	2	0	0	
2	1109	Crewe	2/10.09 9:40	2	6	2	1	2	4	1	Deerfield Apartment	1	4	Wal-Mart	1	2	1	1	1	1	1	1	1	1	2	0	1	0	2	0	0	0	
2	1110	Crewe	2/10.09 10:40	2	6	2	2	1	2	1	Crewe Medical Center	4	5	Nottoway Courthouse	6	2	2	2	3	3	1	3	2	1	1	2	2	2	2	2	2	0	0	
2	1111	Crewe	2/11.09 7:20	1	5	4	1	1	4	2	Hardee	4	1	Burkville Market	5	3	3	2	2	3	1	3	2	1	2	2	0	2	2	4	4	0	Bus service between 12 and 3
2	1112	Crewe	2/9/09 6:45	1	2	1	3	2	5	1	Mangolia	1	2	Piedmont Hospital	1	0	0	0	0	0	0	0	0	0	0	4	0	0	1	1	0	0	0	
2	1113	Crewe	2/11.09 12:10	2	1	1	2	1	4	1	Deerfield Apartment	2	8	Blackstone	2	1	0	1	3	2	1	0	3	2	2	0	2	0	0	0	0	0	0	
2	1114	Crewe	02/10/09	2	6	1	2	1	2	1	Crewe	4	4	Food Lion	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
2	1126	Town and County	02/10/09	2	6	2	4	1	4	1		1	4		1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	
2	1128	Town and County	2/10.09 15:12	2	3	2	2	1	5	1	Town	1	8		1	1	1	2	2	2	1	1	1	1	1	1	0	1	1	1	1	2	0	
2	1129	Town and County	2/10.09 15:12	1	2	0	2	1	5	4	Town	1	8		3	1	1	2	2	2	2	0	1	1	1	1	1	1	1	1	1	1	1	
2	1130	Town and County	02/10/09	1	4	2	1	1	5	1	Town	1	1	Town	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	
2	1131	Town and County	2/11.09 8:11	2	2	2	2	3	5	1	Victoria	4	2	Kenbridge	4	2	2	1	2	2	1	2	2	2	2	1	2	1	2	2	4	4	0	
2	1132	Town and County	2/11.09 8:11	2	2	2	2	3	5	1	Victoria	1	1	Kenbridge	3	2	3	2	1	2	1	2	3	2	1	2	1	1	1	2	3	0	
2	1133	Town and County	2/10.09 9:13	2	2	2	2	1	5	1	Village Estates	1	8	Library	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	
2	1134	Town and County	02/10/09	2	4	2	1	1	4	1	Town	1	6	Town	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	1135	Town and County	2/10.09 16:10	2	4	2	3	3	5	1	Kenbridge	2	1	Victoria	2	1	6	6	6	6	6	6	6	6	6	2	3	1	4	4	4	4	
2	1136	Cumberland	2/10.09 6:05	2	3	1	2	4	4	8	Dillwyn-Lucky's	4	2	Farmville	6	2	0	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	
2	1137	Cumberland	2/10.09 6:30	2	4	1	1	0	5	8	Cumberland Library	4	2	Farmville	6	1	1	3	1	1	4	1	4	2	2	2	4	2	2	1	3	0	
2	1138	Cumberland	2/11.09 6:30	1	4	2	1	4	5	8	Cumberland Library	4	0	Cumberland store (Marions bi-rite)	1	2	3	2	2	2	2	2	2	1	2	2	1	2	2	1	2	0	
2	1139	Cumberland	2/10.09 7:00	2	2	1	2	5	5	1	1303 Osborn Road, Farmville	1	2	STEPS, Inc., Farmville	1	2	2	2	2	2	2	2	2	1	2	3	3	3	3	3	3	1	Media notification when bus is not running
2	1140	Cumberland	02/10/09	1	3	2	2	1	5	3	Cumberland Library	4	2	STEPS, Inc., Farmville	3	1	1	1	1	1	1	1	1	1	1	1	1	2	2	1	4	4	
2	1141	Cumberland	2/11.09 6:40	1	3	1	2	1	4	8	Cumberland Co on Rt. 60	4	8	Prince Edward Co to Farmville Rt. 460 W	6	1	1	2	1	3	1	1	1	1	1	1	1	1	1	4	2	4	1	Cell phones on buses we could call drivers if I am sick or not going to be riding.
2	1142	Cumberland	2/12.09 7:45	2	6	4	1	1	4	8	Lucky's Diners	2	1	Dillwyn	3	2	3	3	3	3	3	3	3	3	3	1	0	0	0	0	0	0	0	
2	1143	Cumberland	2/11.09 14:15	1	6	2	1	1	5	2	Town Longwood	1	2	Town Longwood	1	2	2	2	3	3	1	2	2	2	2	1	1	1	1	1	2	0	
2	1144	Cumberland	02/10/09	2	6	0	1	1	4	2		4	2		1	2	0	2	0	3	1	0	0	0	0	4	4	4	0	0	0	2	
2	1145	Cumberland	2/12.09 14:30	2	6	4	1	1	4	8	Lucky's	3	2	Dillwyn	3	2	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	4	
2	1151	Amelia	2/10.09 5:40	2	2	2	2	4	5	8	Chula Junction Restaurant	4	2	STEPS, Inc., Farmville	6	2	0	2	4	3	1	2	2	2	2	0	0	0	0	1	0	0	0	
2	1152	Amelia	2/10.09 5:55	1	2	1	1	4	5	4	North 9000 Five Forks Road	4	2	STEPS, Inc., Farmville	6	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	
2	1153	Amelia	2/10.09 6:11	1	3	2	2	1	5	2	19741 Poor Road, Amelia	1	2	19741 Poor Road, Amelia	1	1	1	1	1	1	1	1	1	1	1	4	4	4	3	0	4	4		
2	1154	Amelia	2/10.09 6:40	2	2	2	2	3	5	1	Prince Edward 460 & 607	1	2	STEPS, Inc., Farmville	2	2	2	2	2	2	2	2	3	2	2	2	2	1	2	1	2	0		
2	1156	Amelia	2/11.09 6:38	1	2	2	2	6	5	8	Bucen Court	4	2	STEPS, Inc., Farmville	6	2	2	3	2	2	2	2	2	3	3	3	3	3	3	3	3	1	Consistent in-time	
2	1157	Amelia	2/11.09 6:50	2	3	1	2	0	5	1	3rd Street & Persisimmon Tree Road	1	1	3rd Street & Persisimmon Tree Road	6	2	2	2	2	2	2	2	2	2	2	3	3	3	3	2	3	0		
2	1158	Amelia	2/12.09 7:06	2	5	2	4	0	5	1	4th & Main Street	2	1	Piedmont Hospital	3	2	3	2	2	3	1	3	3	2	2	2	1	2	2	2	3	1	Safer area for pick up	
2	1161	Amelia	2/12.09 12:45	1	5	2	3	1	5	4	Kroeger Shopping Center, Farmville	1	1	Rice	1	3	3	3	3	3	1	2	1	1	1	2	1	2	2	1	1	3	0		
2	1164	Amelia	2/11.09 16:00	2	4	2	2	1	5	2	Longwood	1	1	Farmville & Rice	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	3		
2	1165	Amelia	2/11.09 14:45	1	2	2	2	1	3	1	Rice 756 N 460 Prince Edward County	1	1	Rice 756 N 460 Prince Edward County	1	2	2	2	2	2	2	2	2	2	2	3	4	4	4	4	4	4		